



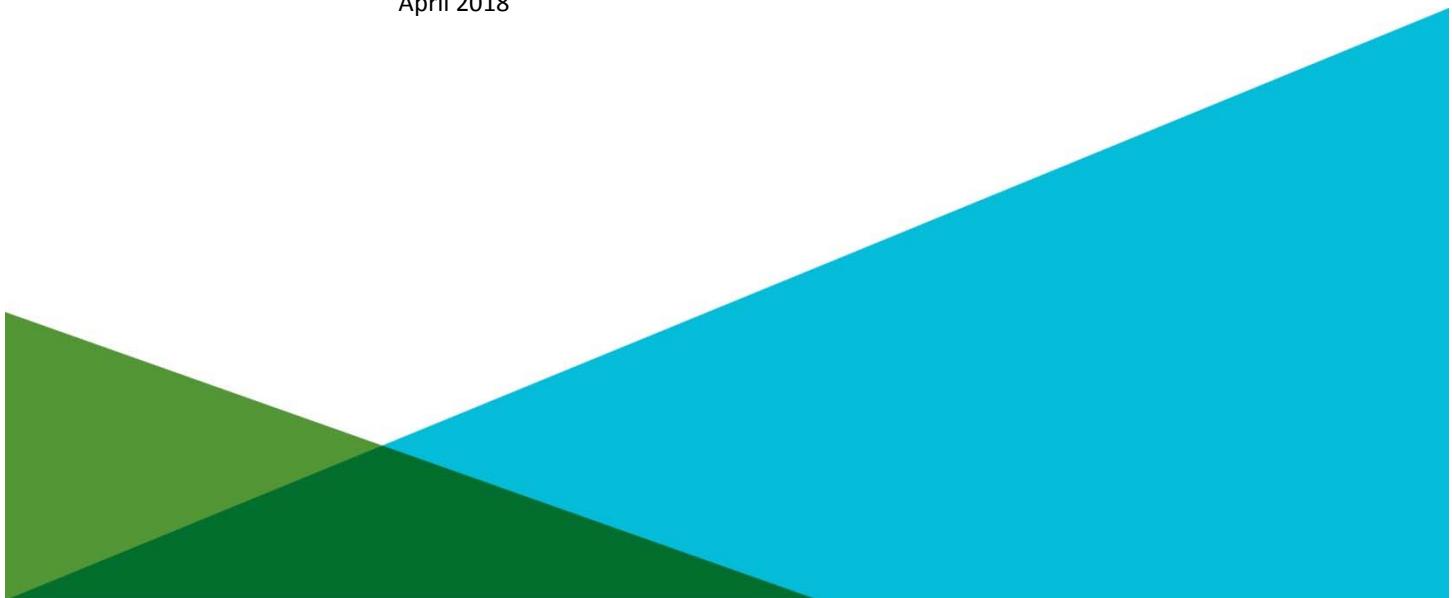
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REPORT ON
SEMIANNUAL PROGRESS REPORT #8
FORMER GENERAL TIME FACILITY
ATHENS, GEORGIA

by Haley & Aldrich, Inc.
Greenville, South Carolina

for Carpenter Technology Corporation
Reading, Pennsylvania

File No. 128752-006
April 2018





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16 April 2018
File No. 128752-006

Georgia Environmental Protection Division
Response and Remediation Program; Release Notification Unit
2 Martin Luther King Jr. Drive, SE
Suite 1462 East
Atlanta, Georgia 30334

Attention: Allan C. Nix, P.G.

Subject: April 2018 Semiannual Progress Report #8
Former General Time Facility
100 Newton Bridge Road- Athens, Georgia
HSI Site Number 10355

Dear Mr. Nix:

Carpenter Technology Corporation (CTC) was accepted into the Georgia Voluntary Remediation Program (VRP) in April 2014, HSI site number 10355. Consistent with the VRP, CTC has submitted Semiannual Progress Reports to the Georgia Environmental Protection Division (EPD) describing activities that have been conducted during the prior six months. This report is the eighth progress report being submitted since being accepted into the VRP.

As a condition of approval, the EPD requested that CTC conduct routine groundwater and surface water sampling events. The results of this sampling effort, which are contained in this report, continue to corroborate the conceptual site model (CSM), as well as to document stable or contracting groundwater plume(s) on and off the property, no unacceptable off-site vapor intrusion risks, and no adverse effects to potential ecological or human receptors in the North Oconee River. As indicated in previous progress reports, CTC continues to evaluate Enhanced In-Situ Bioremediation (EISB) as a remediation technology to address affected groundwater beneath the former manufacturing building and has implemented an expanded pilot test to further evaluate the efficacy of enhanced in-site bioremediation. Field activities associated with this pilot program are summarized in this report.

If you have any questions or need additional information, please contact Sean McGowan at 610.334.2701 or Mark Miesfeldt at 864.214.8751.

Sincerely yours,
HALEY & ALDRICH, INC.

Mark Miesfeldt
Project Manager

Jeffrey A. Klaiber, P.E.
Principal Consultant
Georgia Registration No. PE019857

16 April 2018

Page 2

PROFESSIONAL ENGINEER CERTIFICATION

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

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



Jeffrey A. Klaiber, P.E.
Principal Consultant
Georgia Registration No. PE019857

16 April 2018

Date

Table of Contents

	Page
List of Tables	ii
List of Figures	ii
1. Introduction	1
2. Activities Conducted During Previous Six Months	2
3. Groundwater Monitoring Activities	3
3.1 SUMMARY OF GROUNDWATER FLOW	3
3.2 SUMMARY OF ESTIMATED VERTICAL GROUNDWATER GRADIENTS	3
3.3 SUMMARY OF GROUNDWATER MONITORING RESULTS	4
3.4 REMEDIATION PROGRAM	5
3.5 IN-SITU SODIUM LACTATE INJECTIONS	6
4. Conclusions	7

Tables

Figures

Appendix A - Analytical Reports

Appendix B - Field Sampling Forms

Appendix C - Historical Summary of VOC Concentrations

Appendix D - Labor Summary

List of Tables

Table No.	Title
I	Groundwater Monitoring Parameters
II	Groundwater and Surface Water Analytical Results
III	Potentiometric Surface Data
IV	Injection Groundwater Monitoring Parameters
V	Injection Log
VI	Project Milestone Schedule

List of Figures

Figure No.	Title
1	Site Location Map
2	Site Map Showing Sample Locations and Suspected Source Areas
3	Potentiometric Surface March 2018
4	Distribution of TCE in Shallow Groundwater – March 2018
5	Distribution of TCE in Intermediate Groundwater – March 2018
6	Injection Points and Baseline Post-Remediation Monitoring Wells

1. Introduction

The Site is located in an industrial park at 100 Newtown Bridge Road, in Athens, Georgia as shown on Figure 1. The Site is approximately 35 acres with a 325,000-square foot manufacturing building. Additional structures include outbuildings constructed of corrugated metal with concrete slab bases and a security building at the rear of the facility. The topography of the Site slopes gently from northwest to southeast.

The Former General Time facility was accepted into the Georgia Voluntary Remediation Program (VRP) in April 2014, HSI site number 10355.

2. Activities Conducted During Previous Six Months

The following activities were conducted at the Site since the submittal of Semiannual Progress Report #7 in October 2017:

- Collected surface water and groundwater samples in March 2018. Surface water samples were collected from the North Oconee River. Groundwater samples were collected on and off the site to document current conditions and corroborate the Conceptual Site Model (CSM).
- Expanded the Enhanced In-Situ Bioremediation (EISB) pilot program by installing 9 additional injection points on the north end of the existing array and 9 additional injection points on the south end of the existing array. Consistent with previous testing, the injection points were laid out on 15-foot centers.
- Conducted an in-situ injection event during March 2018 in 34 injection wells to stimulate biodegradation of chlorinated solvent contamination present in the subsurface beneath the former manufacturing building.
- Baseline (pre-injection) groundwater samples were collected from existing wells MP-3, MP-7, MP-8, MW-16I, and MW-16D, and new wells MP-9, MP-10, MP-11 and MP-12 in January 2018. Performance (post-injection) groundwater samples will be collected in May, July, and September 2018. Performance monitoring results will be included in the October 2018 Progress Report.

3. Groundwater Monitoring Activities

This section of the report includes a summary of the semiannual groundwater monitoring activities conducted during March 2018 as well as the corresponding analytical results, field parameters, water elevations, and groundwater flow information. A Site map, which includes sampling locations, is provided as Figure 2.

Groundwater samples were collected between March 19th and March 22nd. In addition to the field indicator parameters (pH, temperature, specific conductivity, dissolved oxygen, oxidation reduction potential, and turbidity) the samples were analyzed in the laboratory for the site-specific Constituents of Concern (COCs). A summary of the analytical program is provided in Table I.

Consistent with the previous site-wide monitoring event, groundwater samples were collected from wells constructed on and off the Site. Wells included in the previous sampling event were located, confirmed to be in good repair, and sampled. Analytical results are summarized in Table II and laboratory reports are provided in Appendix A.

During the sampling event the depth to groundwater was measured in each well. This information was used to construct potentiometric surface maps, calculate horizontal and vertical groundwater gradients, and assess groundwater flow direction and rate. Groundwater field sampling forms are provided in Appendix B.

3.1 SUMMARY OF GROUNDWATER FLOW

The depth to groundwater was measured in the monitoring wells both on- and off-Site during this sampling event. The water table elevations were subsequently calculated using the surveyed well casing elevations and the measured depth to groundwater. The data are summarized in Table III.

The March 2018 groundwater elevations from intermediate wells were used to construct the potentiometric surface shown on Figure 3. Consistent with previous interpretations, the potentiometric surface shows the groundwater flow direction is east towards the North Oconee River. The average horizontal hydraulic gradient is approximately 0.011 feet/foot, also consistent with previous calculations. The estimated groundwater flow velocity, utilizing the average hydraulic conductivity of the intermediate zone of 5.2 feet/day and an effective porosity of 25 percent, is approximately 0.23 feet/day or 85 feet/year.

3.2 SUMMARY OF ESTIMATED VERTICAL GROUNDWATER GRADIENTS

Vertical groundwater gradients were calculated, where possible, using the March 2018 water elevation data. There is a low magnitude downward flow potential in the vicinity of the MW-2 well cluster and between MW-11S and MW-11I wells. The MW-9 and MW-16 well clusters and between MW-11D and MW-11I wells indicated an upward vertical gradient. The MW-9 well cluster indicated an upward vertical gradient, reversed from previous events. The calculated vertical gradients are provided in the table below.

Well Pair	Estimated Vertical Gradient*
MW-2S & MW-2I	-0.0185 feet/feet
MW-2I & MW-2D	-0.0426 feet/feet
MW-9I & MW-9D	0.0591 feet/feet
MW-11S & MW-11I	-0.0500 feet/feet
MW-11I & MW-11D	0.0059 feet/feet
MW-16I & MW-16D	0.0019 feet/feet

Negative gradient indicates downward groundwater flow potential

* Results were calculated using the EPA's vertical gradient calculator

* The estimated vertical gradient was calculated at the mid-point of the screen

3.3 SUMMARY OF GROUNDWATER MONITORING RESULTS

As indicated in the approved VRP application, the only potentially completed exposure pathways to site COCs are vapor intrusion into indoor air on-site and discharge of affected groundwater to the North Oconee River off-site. Because the on-site building is unoccupied and could not be re-occupied without significant improvements to the roof, the vapor intrusion pathway on-site is deemed incomplete. Potential vapor intrusion at off-site properties was evaluated using the Johnson & Ettinger (J&E) groundwater to indoor air model. These results were presented in the June 2015 Semiannual Progress Report. While EPD's calculated thresholds differed, EPD agrees that off-site groundwater concentrations are significantly lower than the values calculated using J&E regardless of sampling interval; therefore, the vapor intrusion risk at off-site downgradient properties is negligible. As a result, the only potential exposure pathway to Site-related groundwater contamination is discharge of groundwater to surface water at the North Oconee River, with subsequent exposure to the surface water by aquatic organisms. To date site COCs have not been detected in surface water. Distribution of TCE in shallow and intermediate groundwater is provided on Figures 4 and 5.

Consistent with historical sampling results, provided in Appendix C, the highest VOC concentrations, primarily TCE and its degradation products, cis-1,2-dichloroethene (cis-1,2-DCE), and vinyl chloride (VC), continue to be detected in intermediate wells MW-2I and RW-3. Historically, the highest detection of TCE was observed at monitoring well MW-16I at a concentration of up to 25,100 µg/L. Enhanced In-Situ Bioremediation pilot testing in the vicinity of MW-16I has significantly reduced the concentration of TCE. In December 2016 the TCE levels measured in this well were below detection. Significant findings from the March 2018 sampling event include:

- TCE was detected during the sampling event in monitoring well MW-16I at 59 µg/L. Concentrations were biologically degraded to below detection levels in December 2016 and were detected again in September 2017. Prior to implementation of the field scale EISB pilot study the TCE concentration in well MW-16I was 25,100 µg/L.
- In the vicinity of the EISB pilot treatment area, the production of TCE daughter products continues to exceed the parent TCE. At well MW-16I, cis-1,2-DCE was detected at a concentration of 5,800 µg/L. The concentration of the daughter product cis-1,2-DCE indicates that biodegradation is occurring in the subsurface.

- TCE and degradation products continue to be detected in the samples collected from the intermediate wells MW-2I and RW-3 located immediately downgradient of the former cistern and TCE spill area. TCE concentrations of 16,000 µg/L and 8,300 µg/L were detected in MW-2I and RW-3, respectively.
- TCE concentrations have remained stable or are decreasing in off-site monitoring locations. For example, TCE levels continue to be below detection in well MW-7I supporting the conclusion that the plume emanating from the site is disconnected from the groundwater impacts detected at the MW-11 cluster. TCE concentrations have remained consistent since the last sampling event in MW-6I from 300 ug/L in September 2017 to 290 ug/L in the most recent sampling event. While the concentrations of VOCs detected at this location vary between sampling events, the values measured during this sampling event fall within the historical ranges. Similarly, TCE concentrations have remained constant in MW-9I from 1,000 ug/L in 2016 to 1,100 ug/L in the most recent sampling event. The historical high concentration in MW-9I was 1,900 ug/L in 2007 and all subsequent results have been within the historical ranges. The concentration of MW-9I well below the final indoor exposure risk concentration of 7,980 ug/L, calculated by EPD.
- In the MW-11 well cluster, located on the western side of the North Oconee River, TCE was detected in well MW-11I at a concentration of 290 µg/L, while at MW-11S, TCE was detected at a concentration of 24 µg/L. TCE was not detected in MW-11D during the most recent sampling event. While the concentrations of VOCs detected at this location vary between sampling events, the values measured during this sampling event fall within the historical ranges.
- Semiannual groundwater sampling continues to show no adverse effects to human health or the environment from offsite groundwater.

3.4 REMEDIATION PROGRAM

As reported in the October 2017 semiannual progress report, CTC installed an injection array to evaluate the effectiveness of EISB to address the TCE groundwater hot-spot under the former manufacturing building in the vicinity of the MW-16 well pair. The results from the sampling event indicate that the electron donor (lactate) is being depleted at the northern and southern ends of the treatment zone slowing the rate of biodegradation. To reduce the concentration of site COCs in groundwater, CTC expanded the existing injection array by installing 9 injection points on the north end of the existing array and 9 injection points on the south end of the existing array. Injection points were installed between December 18, 2017 and December 20, 2017. The injection points were installed using ¾-in PVC with 10-feet of pre-packed screen advanced using 3-inch diameter casing equipped with a disposable tip to 30-feet below ground surface, consistent with previous installations. Sand was then added to the annulus extending from total depth to two feet above the screen. The sandpack was sealed by placing an additional two to three feet of bentonite above the sandpack. The remaining annulus was filled with a neat cement grout to ground surface. Slight field modifications were made to several IP locations due to proximity to walls and overhead obstructions. All injection points were finished with a flush mount cover and threaded caps. Injection points and monitoring points are shown on Figure 6.

Nine monitoring wells (existing wells MP-3, MP-7, MP-8, MW-16I, and MW-16D, and new wells MP-9, MP-10, MP-11 and MP-12) were sampled in January 2018 prior to the in-situ injection event. In addition

to the field indicator parameters (pH, temperature, specific conductance, dissolved oxygen (DO), oxidation/reduction potential (ORP), and turbidity), baseline sampling included the site-specific COCs, sulfate, total organic carbon (TOC), and ferrous iron. Post injection, these monitoring points will be monitored for the same suite of analytes, plus volatile fatty acids (VFAs). Monitoring points MP-9 and MP-10 were installed at the north and south ends of the expanded array while MP-11 and MP-12 were installed further downgradient of the array to provide additional information on the efficacy and influence of the remedial program. The baseline groundwater quality data is presented in Table IV. The post-remediation groundwater quality data will be presented in the October 2018 semi-annual progress report.

3.4.1 In-Situ Sodium Lactate Injections

Between March 19 and April 2, 2018, Haley & Aldrich and its in-situ injection contractor, GeoLab Drilling Inc., conducted an additional in-situ injection event to stimulate biodegradation of chlorinated solvent contamination present in the subsurface. The Georgia EPD was notified of this injection event with a Pilot Test Injection Well Notification Form. The notification was submitted and accepted by EPD on March 1, 2018.

The injection event successfully emplaced 25,500 gallons of a sodium lactate and sodium bicarbonate solution within the 34 injection points. The in-situ injection program utilized 21,500 gallons of potable water, 4,000 gallons of a 60% sodium lactate solution, and 1,350 pounds of sodium bicarbonate, a pH buffer, to rapidly create anaerobic conditions and provide an organic hydrogen and carbon donor for stimulated biodegradation.

The injection event started at the northern and southern ends at the most down gradient locations and proceeded towards the MW-16 well cluster where VOC concentrations have historically been the highest. This configuration was chosen to mitigate any plume migration due to the injection process as any contaminated groundwater would pass through a treated area. The injections were conducted using individual dedicated pumps and separate mix tanks so that injection pressures and volumes could be precisely controlled. Each injection point received approximately 675 gallons of the remedial solution with some variation due to heterogeneities in the subsurface. An injection log summarizing the injection event is provided in Table V.

4. Conclusions

Data from the most recent sampling effort documents stable or contracting groundwater plume(s) on and off the property and no unacceptable off-site vapor intrusion risks.

The EISB pilot study confirms the efficacy of this remedial approach documenting the significant positive influence lactate injections have had on the TCE hot spot. While the sampling results from September 2017 appear to indicate that the electron donor (lactate) is being depleted at the northern and southern ends of the treatment zone slowing the rate of biodegradation, CTC continued the pilot program by expanding the existing injection array to a target treatment area of approximately 9,000 square feet (180-feet by 50-feet). The results of the ongoing pilot will be reported in the October 2018 semiannual progress report. An updated milestone schedule, including semiannual groundwater and surface water sampling, is provided on Table VI.

As required in the VRP guidance a monthly summary of hours invoiced and description of services provided since the last submittal is provided in Appendix D.

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TABLES

TABLE I
GROUNDWATER MONITORING PARAMETERS
CARPENTER – GENERAL TIME FACILITY
ATHENS, GEORGIA

WELL ID	WELL TYPE	SEPTEMBER 2015 ANALYTICAL PROGRAM
RW-1	Recovery Well	Water Level Only
RW-2	Recovery Well	Water Level Only
RW-3	Recovery Well	VOCs
RW-4	Recovery Well	VOCs
MW-1S	Shallow Overburden	VOCs
MW-1I	Intermediate Overburden	VOCs
MW-2S	Shallow Overburden	VOCs
MW-2I	Intermediate Overburden	VOCs
MW-2D	Deep Overburden	VOCs
MW-3I	Intermediate Overburden	VOCs
MW-4I	Intermediate Overburden	Destroyed
MW-5I	Intermediate Overburden	VOCs
MW-6I	Intermediate Overburden	VOCs
MW-7I	Intermediate Overburden	VOCs
MW-8I	Intermediate Overburden	VOCs
MW-9I	Intermediate Overburden	VOCs
MW-9D	Deep Overburden	VOCs
MW-11S	Shallow Overburden	VOCs
MW-11I	Intermediate Overburden	VOCs
MW-11D	Deep Overburden	VOCs
MW-16I	Shallow Overburden	VOCs + Injection COC's
MW-16D	Deep Overburden	VOCs
MP-3	Shallow Overburden	VOCs + Injection COC's
MP-7	Shallow Overburden	VOCs + Injection COC's
MP-8	Shallow Overburden	VOCs + Injection COC's
MP-9	Shallow Overburden	VOCs + Injection COC's
MP-10	Shallow Overburden	VOCs + Injection COC's
MP-11	Shallow Overburden	VOCs + Injection COC's
MP-12	Shallow Overburden	VOCs + Injection COC's

Notes:

- Volatile Organic Compounds (VOCs) include: Site Specific VOCs: trichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, 1,1,2-trichloroethane, 1,1-dichloroethene, methylene chloride, and vinyl chloride
- Injection COC's: sulfate, total organic carbon (TOC), iron, ferrous iron, volatile fatty acids, ethene, ethane and methane.
- Field Parameters include: water level, pH, conductivity, dissolved oxygen, temperature and oxidation reduction potential.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	MW-1I 12/21/2011	MW-1I 9/16/2015	MW-1I 9/9/2016	MW-1I 3/6/2017	MW-1I 9/6/2017	MW-1I 3/20/2018	
			Units	mS/cm	0.053	0.065	0.069	0.061	0.022
Conductivity			mg/L	8.64	6.58	3.79	5.61	0.00	5.05
Dissolved Oxygen			mV	142.90	204	183	198	230	197
ORP			s.u.	6.25	6.58	5.84	5.83	5.60	6.32
pH			°C	18	19.44	28.76	19.87	20.53	18.38
Temperature			NTU	1.4	2.0	1.5	0.0	0.0	0.0
Turbidity									
General Chemistry (mg/L)									
Alkalinity, Total (as CaCO ₃)			mg/L	23.8	-	-	-	-	-
Nitrate			mg/L	0.66	-	-	-	-	-
Nitrite (as N)			mg/L	< 0.1	-	-	-	-	-
Nitrite/Nitrate Nitrogen			mg/L	0.66	-	-	-	-	-
Sulfate			mg/L	< 5	-	-	-	-	-
Sulfide			mg/L	< 0.1	-	-	-	-	-
Total Organic Carbon (TOC)			mg/L	< 1	-	-	-	-	-
Iron			mg/L	-	-	-	-	-	-
Iron, Ferrous			mg/L	-	-	-	-	-	-
Volatile Fatty Acids (mg/L)									
Acetic Acid			mg/L	-	-	-	-	-	-
Propionic Acid			mg/L	-	-	-	-	-	-
Pyruvic Acid			mg/L	-	-	-	-	-	-
Butyric Acid			mg/L	-	-	-	-	-	-
Lactic Acid			mg/L	-	-	-	-	-	-
Dissolved Gases (ug/L)									
Ethane			ug/L	-	-	-	-	-	-
Ethene			ug/L	-	-	-	-	-	-
Methane			ug/L	< 10	-	-	-	-	-
Volatile Organic Compounds (ug/L)									
1,1,2-Trichloroethane	457	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	
1,1-Dichloroethene	13571	ug/L	< 1	-	< 1	< 1	< 1	< 1	
cis-1,2-Dichloroethene	-	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	
Methylene chloride	328571	ug/L	< 2	< 4	< 4	< 4	< 4	< 1	
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	
Trichloroethene	371	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	
Vinyl chloride	386	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	MW-1S 12/21/2011	MW-1S 9/16/2015	MW-1S 3/6/2017	MW-1S 9/6/2017	MW-1S 3/20/2018	
			Units	mS/cm	0.036	0.042	0.028	0.032
Conductivity			mg/L	8.32	0.86	1.08	2.24	3.19
Dissolved Oxygen			mV	149	84	199	203	236
ORP			s.u.	5.97	5.17	5.22	5.14	4.38
pH			°C	17.4	21.31	21.27	22.61	16.94
Temperature			NTU	5.1	14.6	83.4	26.3	36.1
Turbidity								
General Chemistry (mg/L)								
Alkalinity, Total (as CaCO ₃)			mg/L	16.2	-	-	-	-
Nitrate			mg/L	0.56	-	-	-	-
Nitrite (as N)			mg/L	< 0.1	-	-	-	-
Nitrite/Nitrate Nitrogen			mg/L	0.56	-	-	-	-
Sulfate			mg/L	< 5	-	-	-	-
Sulfide			mg/L	< 0.1	-	-	-	-
Total Organic Carbon (TOC)			mg/L	< 1	-	-	-	-
Iron			mg/L	-	-	-	-	-
Iron, Ferrous			mg/L	-	-	-	-	-
Volatile Fatty Acids (mg/L)								
Acetic Acid			mg/L	-	-	-	-	-
Propionic Acid			mg/L	-	-	-	-	-
Pyruvic Acid			mg/L	-	-	-	-	-
Butyric Acid			mg/L	-	-	-	-	-
Lactic Acid			mg/L	-	-	-	-	-
Dissolved Gases (ug/L)								
Ethane			ug/L	-	-	-	-	-
Ethene			ug/L	-	-	-	-	-
Methane			ug/L	< 10	-	-	-	-
Volatile Organic Compounds (ug/L)								
1,1,2-Trichloroethane	457	ug/L	< 1	< 1	< 1	< 1	< 1	
1,1-Dichloroethene	13571	ug/L	< 1	-	< 1	< 1	< 1	
cis-1,2-Dichloroethene	-	ug/L	< 1	< 1	< 1	< 1	< 1	
Methylene chloride	328571	ug/L	< 2	< 4	< 4	< 4	< 1	
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 1	< 1	< 1	< 1	
Trichloroethene	371	ug/L	< 1	< 1	< 1	< 1	< 1	
Vinyl chloride	386	ug/L	< 1	< 1	< 1	< 1	< 1	

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	MW-2D 12/22/2011	MW-2D (DUP) 12/22/2011	MW-2D 2/21/2012	MW-2D 9/17/2015	MW-2D 9/8/2016	MW-2D 3/9/2017	MW-2D 9/8/2017	MW-2D 3/20/2018	
			Units	mS/cm	0.205	-	0.167	-	0.229	0.225	0.244
Conductivity			mg/L	1.08	-	1.1	-	0.56	0.99	1.89	0.2
Dissolved Oxygen			mV	-30.1	-	3.8	-	-53	-87	-10	-20
ORP			s.u.	7.89	-	8.6	-	9.85	8.97	10.04	8.73
pH			°C	18.8	-	13.6	-	21.6	19.27	19.95	20.78
Temperature			NTU	3.4	-	2.4	-	7.91	0.00	8.10	8.40
Turbidity											
General Chemistry (mg/L)											
Alkalinity, Total (as CaCO ₃)			mg/L	77.7	75.6	78.4	-	-	-	-	
Nitrate			mg/L	< 0.2	< 0.2	< 0.2	-	-	-	-	
Nitrite (as N)			mg/L	< 0.1	< 0.1	< 0.1	-	-	-	-	
Nitrite/Nitrate Nitrogen			mg/L	< 0.2	< 0.2	< 0.2	-	-	-	-	
Sulfate			mg/L	24.9	23.8	22.1	-	-	-	-	
Sulfide			mg/L	< 0.1	< 0.1	< 0.1	-	-	-	-	
Total Organic Carbon (TOC)			mg/L	1.7	1.6	1.4	-	-	-	-	
Iron			mg/L	-	-	-	-	-	-	-	
Iron, Ferrous			mg/L	-	-	-	-	-	-	-	
Volatile Fatty Acids (mg/L)											
Acetic Acid			mg/L	-	-	-	-	-	-	-	
Propionic Acid			mg/L	-	-	-	-	-	-	-	
Pyruvic Acid			mg/L	-	-	-	-	-	-	-	
Butyric Acid			mg/L	-	-	-	-	-	-	-	
Lactic Acid			mg/L	-	-	-	-	-	-	-	
Dissolved Gases (ug/L)											
Ethane			ug/L	-	-	-	-	-	-	-	
Ethene			ug/L	-	-	-	-	-	-	-	
Methane			ug/L	< 10	< 10	< 6.6	-	-	-	-	
Volatile Organic Compounds (ug/L)											
1,1,2-Trichloroethane	457	ug/L	< 1	< 1	-	-	< 1	< 1	< 1	< 1	
1,1-Dichloroethene	13571	ug/L	< 1	< 1	-	-	< 1	< 1	< 1	< 1	
cis-1,2-Dichloroethene	-	ug/L	< 1	< 1	< 1	-	< 1	< 1	< 1	< 1	
Methylene chloride	328571	ug/L	< 2	< 2	-	-	< 4	< 4	< 4	< 1	
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 1	< 1	-	< 1	< 1	< 1	< 1	
Trichloroethene	371	ug/L	< 1	1.1	< 1	-	4	2	2	5	
Vinyl chloride	386	ug/L	< 1	< 1	< 1	-	< 1	< 1	< 1	< 1	

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	MW-2I 12/21/2011	MW-2I 2/20/2012	MW-2I 9/16/2015	MW-2I 9/7/2016	MW-2I 3/7/2017	MW-2I 9/6/2017	MW-2I 3/20/2018
			Units	mS/cm	0.064	0.068	0.087	0.105	0.096
Conductivity			mg/L	2.54	1.5	4.11	0.29	1.25	1.31
Dissolved Oxygen			mV	151.9	61.4	83	109	208	191
ORP			s.u.	5.89	5.87	6.62	6.07	5.14	5.51
pH			°C	18.9	17.0	22.42	34.73	20.21	21.57
Temperature			NTU	5.1	3.0	1.0	8.2	43.9	24.8
Turbidity									37.0
General Chemistry (mg/L)									
Alkalinity, Total (as CaCO ₃)			mg/L	29.2	28.6	-	-	-	-
Nitrate			mg/L	1.5	0.44	-	-	-	-
Nitrite (as N)			mg/L	< 0.1	< 0.1	-	-	-	-
Nitrite/Nitrate Nitrogen			mg/L	1.5	0.44	-	-	-	-
Sulfate			mg/L	< 5	< 5	-	-	-	-
Sulfide			mg/L	< 0.1	< 0.1	-	-	-	-
Total Organic Carbon (TOC)			mg/L	1.8	2.2	-	-	-	-
Iron			mg/L	-	-	-	-	-	-
Iron, Ferrous			mg/L	-	-	-	-	-	-
Volatile Fatty Acids (mg/L)									
Acetic Acid			mg/L	-	-	-	-	-	-
Propionic Acid			mg/L	-	-	-	-	-	-
Pyruvic Acid			mg/L	-	-	-	-	-	-
Butyric Acid			mg/L	-	-	-	-	-	-
Lactic Acid			mg/L	-	-	-	-	-	-
Dissolved Gases (ug/L)									
Ethane			ug/L	-	-	-	-	-	-
Ethene			ug/L	-	-	-	-	-	-
Methane			ug/L	< 10	< 6.6	-	-	-	-
Volatile Organic Compounds (ug/L)									
1,1,2-Trichloroethane	457	ug/L	2.7	-	< 10	< 10	< 20	< 20	< 20
1,1-Dichloroethene	13571	ug/L	2.1	-	-	< 10	< 20	< 20	< 20
cis-1,2-Dichloroethene	-	ug/L	924	813	790	1600	1400	2000	1700
Methylene chloride	328571	ug/L	< 2	-	< 40	< 40	< 20	< 80	< 20
trans-1,2-Dichloroethene	27143	ug/L	24.1	< 100	12	25	23	34	30
Trichloroethene	371	ug/L	11500	9430	7800	12000	14000	17000	16000
Vinyl chloride	386	ug/L	1.3	< 100	< 10	< 10	< 20	< 20	< 20

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	MW-2S 12/21/2011	MW-2S 2/20/2012	MW-2S 9/16/2015	MW-2S 9/7/2016	MW-2S 3/7/2017	MW-2S 9/6/2017	MW-2S 3/20/2018
			Units	mS/cm	0.06	0.84	0.109	0.125	0.116
Conductivity			mg/L	6.86	4.00	3.41	0.67	3.35	1.78
Dissolved Oxygen			mV	156	52.1	192	131	223	199
ORP			s.u.	5.58	5.7	6.39	5.63	6.00	6.27
pH			°C	19	16.2	22.38	35.85	19.35	21.33
Temperature			NTU	2.2	4.0	0.2	38.3	11.8	0.0
Turbidity									1.0
General Chemistry (mg/L)									
Alkalinity, Total (as CaCO ₃)			mg/L	19.5	26.5	-	-	-	-
Nitrate			mg/L	0.43	1.6	-	-	-	-
Nitrite (as N)			mg/L	< 0.1	< 0.1	-	-	-	-
Nitrite/Nitrate Nitrogen			mg/L	0.43	1.6	-	-	-	-
Sulfate			mg/L	7.9	12	-	-	-	-
Sulfide			mg/L	< 0.1	< 0.1	-	-	-	-
Total Organic Carbon (TOC)			mg/L	3.7	2.7	-	-	-	-
Iron			mg/L	-	-	-	-	-	-
Iron, Ferrous			mg/L	-	-	-	-	-	-
Volatile Fatty Acids (mg/L)									
Acetic Acid			mg/L	-	-	-	-	-	-
Propionic Acid			mg/L	-	-	-	-	-	-
Pyruvic Acid			mg/L	-	-	-	-	-	-
Butyric Acid			mg/L	-	-	-	-	-	-
Lactic Acid			mg/L	-	-	-	-	-	-
Dissolved Gases (ug/L)									
Ethane			ug/L	-	-	-	-	-	-
Ethene			ug/L	-	-	-	-	-	-
Methane			ug/L	11.2	< 6.6	-	-	-	-
Volatile Organic Compounds (ug/L)									
1,1,2-Trichloroethane	457	ug/L	< 1	-	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethene	13571	ug/L	< 1	-	-	5	< 1	< 1	< 1
cis-1,2-Dichloroethene	-	ug/L	1	< 1	< 1	74	< 1	1	< 1
Methylene chloride	328571	ug/L	< 2	-	< 4	< 4	< 1	< 4	< 1
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	371	ug/L	2.9	< 1	< 1	100	< 1	4	< 1
Vinyl chloride	386	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Notes and Abbreviations:

1. Results shown in **bold** were detected.
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3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	MW-3I 12/27/2011	MW-3I 9/17/2015	MW-3I 9/8/2016	MW-3I 3/8/2017	MW-3I 9/19/2017	MW-3I 3/21/2018
			Units					
Conductivity		mS/cm	0.092	0.101	0.099	0.111	0.078	0.114
Dissolved Oxygen		mg/L	3.34	4.69	2.81	3.32	0	2.45
ORP		mV	78.6	110	70	47	173	111
pH		s.u.	6.27	7.61	6.00	6.14	5.64	5.62
Temperature		°C	18.5	21.59	24.4	20.62	23.65	20.39
Turbidity		NTU	4.8	0.2	29.5	132	9.3	184
General Chemistry (mg/L)								
Alkalinity, Total (as CaCO ₃)		mg/L	-	-	-	-	-	-
Nitrate		mg/L	-	-	-	-	-	-
Nitrite (as N)		mg/L	-	-	-	-	-	-
Nitrite/Nitrate Nitrogen		mg/L	-	-	-	-	-	-
Sulfate		mg/L	-	-	-	-	-	-
Sulfide		mg/L	-	-	-	-	-	-
Total Organic Carbon (TOC)		mg/L	-	-	-	-	-	-
Iron		mg/L	-	-	-	-	-	-
Iron, Ferrous		mg/L	-	-	-	-	-	-
Volatile Fatty Acids (mg/L)								
Acetic Acid		mg/L	-	-	-	-	-	-
Propionic Acid		mg/L	-	-	-	-	-	-
Pyruvic Acid		mg/L	-	-	-	-	-	-
Butyric Acid		mg/L	-	-	-	-	-	-
Lactic Acid		mg/L	-	-	-	-	-	-
Dissolved Gases (ug/L)								
Ethane		ug/L	-	-	-	-	-	-
Ethene		ug/L	-	-	-	-	-	-
Methane		ug/L	-	-	-	-	-	-
Volatile Organic Compounds (ug/L)								
1,1,2-Trichloroethane	457	ug/L	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethene	13571	ug/L	< 1	-	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	-	ug/L	< 1	< 1	< 1	< 1	< 1	< 1
Methylene chloride	328571	ug/L	< 2	< 4	< 4	< 4	< 1	< 1
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	371	ug/L	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl chloride	386	ug/L	< 1	< 1	< 1	< 1	< 1	< 1

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	MW-4I	MW-5I	MW-5I	MW-5I	MW-5I	MW-5I	MW-5I	MW-5I
			12/22/2011	12/27/2011	2/21/2012	9/17/2015	9/12/2016	3/7/2017	9/18/2017	3/21/2018
Conductivity		mS/cm	0.088	0.101	0.098	0.109	0.101	0.116	0.080	0.090
Dissolved Oxygen		mg/L	2.11	5.5	1.79	1.87	2.2	2.15	0.00	1.58
ORP		mV	19.5	49.1	73.2	121	92	164	191	181
pH		s.u.	6.21	6.53	6.39	6.8	6.26	6.71	5.89	6.58
Temperature		°C	17.4	20.5	21.7	24.71	26.36	22.89	26.88	22.24
Turbidity		NTU	6.3	5.1	2.3	0.0	0.0	5.4	36.7	1.6
General Chemistry (mg/L)										
Alkalinity, Total (as CaCO ₃)		mg/L	41	44.1	43.2	-	-	-	-	-
Nitrate		mg/L	0.67	0.84	0.84	-	-	-	-	-
Nitrite (as N)		mg/L	< 0.1	< 0.1	< 0.1	-	-	-	-	-
Nitrite/Nitrate Nitrogen		mg/L	0.67	0.84	0.84	-	-	-	-	-
Sulfate		mg/L	< 5	< 5	< 5	-	-	-	-	-
Sulfide		mg/L	< 0.1	< 0.1	< 0.1	-	-	-	-	-
Total Organic Carbon (TOC)		mg/L	13.6	1.5	1.6	-	-	-	-	-
Iron		mg/L	-	-	-	-	-	-	-	-
Iron, Ferrous		mg/L	-	-	-	-	-	-	-	-
Volatile Fatty Acids (mg/L)										
Acetic Acid		mg/L	-	-	-	-	-	-	-	-
Propionic Acid		mg/L	-	-	-	-	-	-	-	-
Pyruvic Acid		mg/L	-	-	-	-	-	-	-	-
Butyric Acid		mg/L	-	-	-	-	-	-	-	-
Lactic Acid		mg/L	-	-	-	-	-	-	-	-
Dissolved Gases (ug/L)										
Ethane		ug/L	-	-	-	-	-	-	-	-
Ethene		ug/L	-	-	-	-	-	-	-	-
Methane		ug/L	< 10	< 10	< 6.6	-	-	-	-	-
Volatile Organic Compounds (ug/L)										
1,1,2-Trichloroethane	457	ug/L	< 1	< 1	-	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethene	13571	ug/L	< 1	< 1	-	< 1	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	-	ug/L	< 1	2.8	2.2	3	3	3	3	3
Methylene chloride	328571	ug/L	< 2	< 2	-	< 4	< 4	< 4	< 1	< 1
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	371	ug/L	1.9	96.1	< 1	81	78	74	80	91
Vinyl chloride	386	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Notes and Abbreviations:

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TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	MW-6I 12/19/2011	MW-6I 9/17/2015	MW-6I 9/9/2016	MW-6I 3/7/2017	MW-6I 9/19/2017	MW-6I 3/21/2018	
			Units	mS/cm	0.74	0.082	0.094	0.097	0.07
Conductivity			mg/L	1.33	3.85	0.76	1.19	0.00	0.56
Dissolved Oxygen			mV	209.1	114	200	190	222	205
ORP			s.u.	5.64	6.82	5.59	5.78	5.00	5.70
pH			°C	19.3	23.84	24.21	20.54	23.29	19.69
Temperature			NTU	7.9	0.0	9.8	57.1	48.9	28.6
Turbidity									
General Chemistry (mg/L)									
Alkalinity, Total (as CaCO ₃)			mg/L	-	-	-	-	-	-
Nitrate			mg/L	-	-	-	-	-	-
Nitrite (as N)			mg/L	-	-	-	-	-	-
Nitrite/Nitrate Nitrogen			mg/L	-	-	-	-	-	-
Sulfate			mg/L	-	-	-	-	-	-
Sulfide			mg/L	-	-	-	-	-	-
Total Organic Carbon (TOC)			mg/L	-	-	-	-	-	-
Iron			mg/L	-	-	-	-	-	-
Iron, Ferrous			mg/L	-	-	-	-	-	-
Volatile Fatty Acids (mg/L)									
Acetic Acid			mg/L	-	-	-	-	-	-
Propionic Acid			mg/L	-	-	-	-	-	-
Pyruvic Acid			mg/L	-	-	-	-	-	-
Butyric Acid			mg/L	-	-	-	-	-	-
Lactic Acid			mg/L	-	-	-	-	-	-
Dissolved Gases (ug/L)									
Ethane			ug/L	-	-	-	-	-	-
Ethene			ug/L	-	-	-	-	-	-
Methane			ug/L	-	-	-	-	-	-
Volatile Organic Compounds (ug/L)									
1,1,2-Trichloroethane	457	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	
1,1-Dichloroethene	13571	ug/L	< 1	-	< 1	< 1	< 1	< 1	
cis-1,2-Dichloroethene	-	ug/L	70.6	< 1	49	41	40	30	
Methylene chloride	328571	ug/L	< 2	< 4	< 4	< 4	< 1	< 1	
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	
Trichloroethene	371	ug/L	438	7	410	290	300	290	
Vinyl chloride	386	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	

Notes and Abbreviations:

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TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	MW-7I 12/27/2011	MW-7I 2/21/2012	MW-7I 9/17/2015	MW-7I 9/12/2016	MW-7I 3/7/2017	MW-7I 9/19/2017	MW-7I 3/21/2018
			Units	mS/cm	0.122	0.124	0.126	0.118	0.138
Conductivity			mg/L	0.35	0.12	0.58	0.57	0.40	0.00
Dissolved Oxygen			mV	45.9	21	129	67	128	147
ORP			s.u.	6.2	6.19	6.46	6.15	6.59	5.70
pH			°C	18.8	19.3	23.43	26.54	19.22	23.2
Temperature			NTU	5	0.9	0.0	0.0	3.2	0.31
Turbidity									1.4
General Chemistry (mg/L)									
Alkalinity, Total (as CaCO ₃)			mg/L	57.8	46.4	-	-	-	-
Nitrate			mg/L	< 0.2	< 0.2	-	-	-	-
Nitrite (as N)			mg/L	< 0.1	< 0.1	-	-	-	-
Nitrite/Nitrate Nitrogen			mg/L	< 0.2	< 0.2	-	-	-	-
Sulfate			mg/L	< 5	< 5	-	-	-	-
Sulfide			mg/L	< 0.1	< 0.1	-	-	-	-
Total Organic Carbon (TOC)			mg/L	2.4	18.8	-	-	-	-
Iron			mg/L	-	-	-	-	-	-
Iron, Ferrous			mg/L	-	-	-	-	-	-
Volatile Fatty Acids (mg/L)									
Acetic Acid			mg/L	-	-	-	-	-	-
Propionic Acid			mg/L	-	-	-	-	-	-
Pyruvic Acid			mg/L	-	-	-	-	-	-
Butyric Acid			mg/L	-	-	-	-	-	-
Lactic Acid			mg/L	-	-	-	-	-	-
Dissolved Gases (ug/L)									
Ethane			ug/L	-	-	-	-	-	-
Ethene			ug/L	-	-	-	-	-	-
Methane			ug/L	206	135	-	-	-	-
Volatile Organic Compounds (ug/L)									
1,1,2-Trichloroethane	457	ug/L	< 1	-	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethene	13571	ug/L	< 1	-	-	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	-	ug/L	2.5	2.3	3	2	2	3	2
Methylene chloride	328571	ug/L	< 2	-	< 4	< 4	< 4	< 1	< 1
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	371	ug/L	2.3	1	< 1	< 1	< 1	< 1	< 1
Vinyl chloride	386	ug/L	< 1	< 1	5	3	3	3	3

Notes and Abbreviations:

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3. Only detected compounds are shown in table.
4. - Not analyzed.
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TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	MW-8I	MW-8I	MW-8I	MW-8I	MW-8I	MW-8I	MW-8I
			12/27/2011	10/13/2014	9/17/2015	9/12/2016	3/7/2017	9/19/2017	3/21/2018
Conductivity		mS/cm	0.312	-	0.32	0.246	0.299	0.238	0.266
Dissolved Oxygen		mg/L	7.85	-	2.1	1.32	5.1	0.00	0.08
ORP		mV	149	-	193	155	198	224	186
pH		s.u.	5.46	-	5.85	5.47	6.1	5.28	5.96
Temperature		°C	16.2	-	25.8	28.83	18.68	25.55	17.23
Turbidity		NTU	4.2	-	2.5	0.0	16.9	19.5	3.3
General Chemistry (mg/L)									
Alkalinity, Total (as CaCO ₃)		mg/L	-	-	-	-	-	-	-
Nitrate		mg/L	-	-	-	-	-	-	-
Nitrite (as N)		mg/L	-	-	-	-	-	-	-
Nitrite/Nitrate Nitrogen		mg/L	-	-	-	-	-	-	-
Sulfate		mg/L	-	-	-	-	-	-	-
Sulfide		mg/L	-	-	-	-	-	-	-
Total Organic Carbon (TOC)		mg/L	-	-	-	-	-	-	-
Iron		mg/L	-	-	-	-	-	-	-
Iron, Ferrous		mg/L	-	-	-	-	-	-	-
Volatile Fatty Acids (mg/L)									
Acetic Acid		mg/L	-	-	-	-	-	-	-
Propionic Acid		mg/L	-	-	-	-	-	-	-
Pyruvic Acid		mg/L	-	-	-	-	-	-	-
Butyric Acid		mg/L	-	-	-	-	-	-	-
Lactic Acid		mg/L	-	-	-	-	-	-	-
Dissolved Gases (ug/L)									
Ethane		ug/L	-	-	-	-	-	-	-
Ethene		ug/L	-	-	-	-	-	-	-
Methane		ug/L	-	-	-	-	-	-	-
Volatile Organic Compounds (ug/L)									
1,1,2-Trichloroethane	457	ug/L	< 1	< 5	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethene	13571	ug/L	< 1	< 5	-	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	-	ug/L	< 1	< 5	< 1	< 1	< 1	< 1	< 1
Methylene chloride	328571	ug/L	< 2	< 5	< 4	< 4	< 4	< 1	< 1
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 5	< 1	< 1	< 1	< 1	< 1
Trichloroethene	371	ug/L	< 1	< 5	< 1	< 1	< 1	< 1	< 1
Vinyl chloride	386	ug/L	< 1	< 2	< 1	< 1	< 1	< 1	< 1

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	MW-9D 12/21/2011	MW-9D 2/21/2012	MW-9D 9/17/2015	MW-9D 9/9/2016	MW-9D 3/7/2017	MW-9D 9/19/2017	MW-9D 3/21/2018		
			Units	mS/cm	0.166	0.167	0.203	0.184	0.220	0.052	0.171
Conductivity			mg/L	0.51	0.27	1.72	0.57	5.21	1.72	0.08	
Dissolved Oxygen			mV	-171	-115	51	-151	-47	-54	-103	
ORP			s.u.	8.62	8.8	7.85	8.19	9.16	8.75	8.6	
pH			°C	19.9	18.4	27.4	24.49	17.86	21.96	20.51	
Temperature			NTU	1.5	4.0	0.5	0.0	10.5	7.0	6.0	
Turbidity											
General Chemistry (mg/L)											
Alkalinity, Total (as CaCO ₃)			mg/L	84.4	84.8	-	-	-	-	-	
Nitrate			mg/L	< 0.2	< 0.2	-	-	-	-	-	
Nitrite (as N)			mg/L	< 0.1	< 0.1	-	-	-	-	-	
Nitrite/Nitrate Nitrogen			mg/L	< 0.2	< 0.2	-	-	-	-	-	
Sulfate			mg/L	9.1	9.2	-	-	-	-	-	
Sulfide			mg/L	< 0.1	< 0.1	-	-	-	-	-	
Total Organic Carbon (TOC)			mg/L	2.2	2.7	-	-	-	-	-	
Iron			mg/L	-	-	-	-	-	-	-	
Iron, Ferrous			mg/L	-	-	-	-	-	-	-	
Volatile Fatty Acids (mg/L)											
Acetic Acid			mg/L	-	-	-	-	-	-	-	
Propionic Acid			mg/L	-	-	-	-	-	-	-	
Pyruvic Acid			mg/L	-	-	-	-	-	-	-	
Butyric Acid			mg/L	-	-	-	-	-	-	-	
Lactic Acid			mg/L	-	-	-	-	-	-	-	
Dissolved Gases (ug/L)											
Ethane			ug/L	-	-	-	-	-	-	-	
Ethene			ug/L	-	-	-	-	-	-	-	
Methane			ug/L	< 10	< 6.6	-	-	-	-	-	
Volatile Organic Compounds (ug/L)											
1,1,2-Trichloroethane	457	ug/L	< 1	-	< 1	< 1	< 1	< 1	< 1	< 1	
1,1-Dichloroethene	13571	ug/L	< 1	-	-	< 1	< 1	< 1	< 1	< 1	
cis-1,2-Dichloroethene	-	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
Methylene chloride	328571	ug/L	< 2	-	< 4	< 4	< 4	< 1	< 1	< 1	
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
Trichloroethene	371	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
Vinyl chloride	386	ug/L	1.2	1.2	< 1	1	1	< 1	2		

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	MW-9I 12/21/2011	MW-9I 2/21/2012	MW-9I 9/17/2015	MW-9I 9/9/2016	MW-9I 3/7/2017	MW-9I 9/19/2017	MW-9I 3/21/2018	
			Units	mS/cm	0.122	0.129	0.137	0.169	0.147	0.124
Conductivity			mg/L	0.35	0.39	2.59	0.32	3.19	0.00	1.14
Dissolved Oxygen			mV	153.6	73.5	133	178	193	221	188
ORP			s.u.	6.18	6.23	6.72	6.11	6.27	5.62	5.54
pH			°C	19.6	18.4	24.67	25.40	18.31	21.93	19.98
Temperature			NTU	3.0	1.3	0.0	0.0	-	1.09	2.0
Turbidity										
General Chemistry (mg/L)										
Alkalinity, Total (as CaCO ₃)			mg/L	61.7	59.3	-	-	-	-	-
Nitrate			mg/L	0.48	0.48	-	-	-	-	-
Nitrite (as N)			mg/L	< 0.1	< 0.1	-	-	-	-	-
Nitrite/Nitrate Nitrogen			mg/L	0.48	0.48	-	-	-	-	-
Sulfate			mg/L	< 5	< 5	-	-	-	-	-
Sulfide			mg/L	< 0.1	< 0.1	-	-	-	-	-
Total Organic Carbon (TOC)			mg/L	2.4	3.2	-	-	-	-	-
Iron			mg/L	-	-	-	-	-	-	-
Iron, Ferrous			mg/L	-	-	-	-	-	-	-
Volatile Fatty Acids (mg/L)										
Acetic Acid			mg/L	-	-	-	-	-	-	-
Propionic Acid			mg/L	-	-	-	-	-	-	-
Pyruvic Acid			mg/L	-	-	-	-	-	-	-
Butyric Acid			mg/L	-	-	-	-	-	-	-
Lactic Acid			mg/L	-	-	-	-	-	-	-
Dissolved Gases (ug/L)										
Ethane			ug/L	-	-	-	-	-	-	-
Ethene			ug/L	-	-	-	-	-	-	-
Methane			ug/L	< 10	7.3	-	-	-	-	-
Volatile Organic Compounds (ug/L)										
1,1,2-Trichloroethane	457		ug/L	< 1	-	< 1	< 2	< 1	< 1	< 1
1,1-Dichloroethene	13571		ug/L	1.2	-	2	< 1	3	2	
cis-1,2-Dichloroethene	-		ug/L	113	91.9	34	87	62	89	76
Methylene chloride	328571		ug/L	< 2	-	< 4	< 4	< 4	< 1	< 1
trans-1,2-Dichloroethene	27143		ug/L	< 1	< 10	< 1	< 2	< 1	< 1	< 1
Trichloroethene	371		ug/L	1110	1070	420	1000	630	930	1100
Vinyl chloride	386		ug/L	< 1	< 10	< 1	< 2	< 1	< 1	< 1

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	MW-11D 12/22/2011	MW-11D 2/20/2012	MW-11D 9/18/2015	MW-11D 9/8/2016	MW-11D 3/8/2017	MW-11D 9/7/2017	MW-11D 3/22/2018
			Units	mS/cm	0.98	0.87	0.288	0.678	0.859
Conductivity			mg/L	0.69	-0.7	1.84	0.25	0.47	4.44
Dissolved Oxygen			mV	-335	-286.9	-75	-369	-339	-296
ORP			s.u.	7.03	7.3	6.99	7.7	6.89	8.34
pH			°C	16.7	15.7	18.12	19.2	14.93	15.96
Temperature			NTU	5.1	4.8	2.4	0.0	3.3	0.0
Turbidity									
General Chemistry (mg/L)									
Alkalinity, Total (as CaCO ₃)			mg/L	441	376	-	-	-	-
Nitrate			mg/L	< 0.2	< 0.2	-	-	-	-
Nitrite (as N)			mg/L	1.5	0.77	-	-	-	-
Nitrite/Nitrate Nitrogen			mg/L	< 0.2	< 0.2	-	-	-	-
Sulfate			mg/L	5.2	7.8	-	-	-	-
Sulfide			mg/L	57.8	4.6	-	-	-	-
Total Organic Carbon (TOC)			mg/L	42.8	33.7	-	-	-	-
Iron			mg/L	-	-	-	-	-	-
Iron, Ferrous			mg/L	-	-	-	-	-	-
Volatile Fatty Acids (mg/L)									
Acetic Acid			mg/L	-	-	-	-	-	-
Propionic Acid			mg/L	-	-	-	-	-	-
Pyruvic Acid			mg/L	-	-	-	-	-	-
Butyric Acid			mg/L	-	-	-	-	-	-
Lactic Acid			mg/L	-	-	-	-	-	-
Dissolved Gases (ug/L)									
Ethane			ug/L	-	-	-	-	-	-
Ethene			ug/L	-	-	-	-	-	-
Methane			ug/L	28000	13000	-	-	-	-
Volatile Organic Compounds (ug/L)									
1,1,2-Trichloroethane	457	ug/L	< 1	-	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethene	13571	ug/L	< 1	-	-	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	-	ug/L	8	7.7	< 1	1	1	2	< 1
Methylene chloride	328571	ug/L	< 2	-	< 4	< 4	< 4	< 4	< 1
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	371	ug/L	< 1	< 1	< 1	3	< 1	< 1	< 1
Vinyl chloride	386	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	MW-11I	MW-11I	MW-11I	MW-11I	MW-11I	MW-11I	MW-11I	
			12/20/2011	2/20/2012	9/18/2015	9/8/2016	3/8/2017	9/7/2017	3/22/2018	
Conductivity		Units	mS/cm	0.08	0.08	0.108	0.096	0.11	0.035	0.109
Dissolved Oxygen			mg/L	2.42	1.7	3.1	0.96	2.35	1.99	1.26
ORP			mV	154	136.4	220	246	204	218	186
pH			s.u.	5.82	5.96	5.82	5.41	6.13	8.45	6.25
Temperature			°C	16	15.3	18.74	19.45	16.61	17.18	16.48
Turbidity			NTU	4.3	2.4	2.4	0.0	-	0.0	0.0
General Chemistry (mg/L)										
Alkalinity, Total (as CaCO ₃)		mg/L	37.9	39.2	-	-	-	-	-	
Nitrate		mg/L	0.88	0.96	-	-	-	-	-	
Nitrite (as N)		mg/L	< 0.1	< 0.1	-	-	-	-	-	
Nitrite/Nitrate Nitrogen		mg/L	0.88	0.96	-	-	-	-	-	
Sulfate		mg/L	< 5	< 5	-	-	-	-	-	
Sulfide		mg/L	< 0.1	< 0.1	-	-	-	-	-	
Total Organic Carbon (TOC)		mg/L	1.8	1.8	-	-	-	-	-	
Iron		mg/L	-	-	-	-	-	-	-	
Iron, Ferrous		mg/L	-	-	-	-	-	-	-	
Volatile Fatty Acids (mg/L)										
Acetic Acid		mg/L	-	-	-	-	-	-	-	
Propionic Acid		mg/L	-	-	-	-	-	-	-	
Pyruvic Acid		mg/L	-	-	-	-	-	-	-	
Butyric Acid		mg/L	-	-	-	-	-	-	-	
Lactic Acid		mg/L	-	-	-	-	-	-	-	
Dissolved Gases (ug/L)										
Ethane		ug/L	-	-	-	-	-	-	-	
Ethene		ug/L	-	-	-	-	-	-	-	
Methane		ug/L	< 10	< 6.6	-	-	-	-	-	
Volatile Organic Compounds (ug/L)										
1,1,2-Trichloroethane	457	ug/L	< 1	-	< 1	< 1	< 1	< 1	< 1	
1,1-Dichloroethene	13571	ug/L	< 1	-	-	< 1	< 1	1	< 1	
cis-1,2-Dichloroethene	-	ug/L	50	33.4	44	44	41	44	30	
Methylene chloride	328571	ug/L	< 2	-	< 4	< 4	< 4	< 4	< 1	
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 5	< 1	< 1	< 1	< 1	< 1	
Trichloroethene	371	ug/L	766	540	490	510	340	370	290	
Vinyl chloride	386	ug/L	< 1	< 5	< 1	< 1	< 1	< 1	< 1	

Notes and Abbreviations:

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3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	MW-11S 12/20/2011	MW-11S 2/20/2012	MW-11S 9/18/2015	MW-11S 9/8/2016	MW-11S 3/8/2017	MW-11S 9/7/2017	MW-11S 3/22/2018	
			Units	mS/cm	0.035	0.053	0.161	0.056	0.077	0.018
Conductivity			mg/L	0.76	0.72	3.67	0.24	0.8	1.04	0.59
Dissolved Oxygen			mV	187	80.5	261	330	147	192	173
ORP			s.u.	5.25	5.19	4.56	4.26	5.24	4.32	4.91
pH			°C	16.3	13.6	19.83	23.84	16.93	18.27	15.24
Temperature			NTU	4.7	4.6	37.5	20.6	-	3.0	0.0
Turbidity										
General Chemistry (mg/L)										
Alkalinity, Total (as CaCO ₃)			mg/L	6.5	9.5	-	-	-	-	-
Nitrate			mg/L	0.48	< 0.2	-	-	-	-	-
Nitrite (as N)			mg/L	< 0.1	< 0.1	-	-	-	-	-
Nitrite/Nitrate Nitrogen			mg/L	0.48	< 0.2	-	-	-	-	-
Sulfate			mg/L	< 5	6.1	-	-	-	-	-
Sulfide			mg/L	< 0.1	< 0.1	-	-	-	-	-
Total Organic Carbon (TOC)			mg/L	2	2.9	-	-	-	-	-
Iron			mg/L	-	-	-	-	-	-	-
Iron, Ferrous			mg/L	-	-	-	-	-	-	-
Volatile Fatty Acids (mg/L)										
Acetic Acid			mg/L	-	-	-	-	-	-	-
Propionic Acid			mg/L	-	-	-	-	-	-	-
Pyruvic Acid			mg/L	-	-	-	-	-	-	-
Butyric Acid			mg/L	-	-	-	-	-	-	-
Lactic Acid			mg/L	-	-	-	-	-	-	-
Dissolved Gases (ug/L)										
Ethane			ug/L	-	-	-	-	-	-	-
Ethene			ug/L	-	-	-	-	-	-	-
Methane			ug/L	< 10	< 6.6	-	-	-	-	-
Volatile Organic Compounds (ug/L)										
1,1,2-Trichloroethane	457	ug/L	< 1	-	< 1	< 1	< 1	< 1	< 1	
1,1-Dichloroethene	13571	ug/L	< 1	-	-	< 1	< 1	< 1	< 1	
cis-1,2-Dichloroethene	-	ug/L	26.7	50.9	30	29	72	33	20	
Methylene chloride	328571	ug/L	< 2	-	< 4	< 4	< 4	< 4	< 1	
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
Trichloroethene	371	ug/L	356	183	260	280	150	220	24	
Vinyl chloride	386	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	1	

Notes and Abbreviations:

1. Results shown in **bold** were detected.
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3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	MW-14D 12/20/2011	MW-14I 12/20/2011
			Units	
Conductivity		mS/cm	0.105	0.06
Dissolved Oxygen		mg/L	3.1	1.48
ORP		mV	154.9	85.1
pH		s.u.	6.28	6.13
Temperature		°C	16	15.4
Turbidity		NTU	0.9	5.7
General Chemistry (mg/L)				
Alkalinity, Total (as CaCO ₃)		mg/L	51.3	26
Nitrate		mg/L	< 0.2	< 0.2
Nitrite (as N)		mg/L	< 0.1	< 0.1
Nitrite/Nitrate Nitrogen		mg/L	< 0.2	< 0.2
Sulfate		mg/L	< 5	< 5
Sulfide		mg/L	< 0.1	< 0.1
Total Organic Carbon (TOC)		mg/L	1.5	1.5
Iron		mg/L	-	-
Iron, Ferrous		mg/L	-	-
Volatile Fatty Acids (mg/L)				
Acetic Acid		mg/L	-	-
Propionic Acid		mg/L	-	-
Pyruvic Acid		mg/L	-	-
Butyric Acid		mg/L	-	-
Lactic Acid		mg/L	-	-
Dissolved Gases (ug/L)				
Ethane		ug/L	-	-
Ethene		ug/L	-	-
Methane		ug/L	< 10	30
Volatile Organic Compounds (ug/L)				
1,1,2-Trichloroethane	457	ug/L	< 1	< 1
1,1-Dichloroethene	13571	ug/L	< 1	< 1
cis-1,2-Dichloroethene	-	ug/L	< 1	< 1
Methylene chloride	328571	ug/L	< 2	< 2
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 1
Trichloroethene	371	ug/L	< 1	< 1
Vinyl chloride	386	ug/L	< 1	< 1

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	MW-16D 12/22/2011	MW-16D 2/22/2012	MW-16D (DUP) 2/22/2012	MW-16D 9/16/2015	MW-16D 3/3/2016	MW-16D 4/20/2016
			Units	mS/cm	0.088	0.105	-	0.112
Conductivity			mg/L	3.51	1.97	-	2.55	1.93
Dissolved Oxygen			mV	84	124.3	-	176	137
ORP			s.u.	5.85	5.99	-	6.37	6.24
pH			°C	19.9	18.9	-	20.73	18.86
Temperature			NTU	3.1	2.3	-	4.7	0.00
Turbidity								0.6
General Chemistry (mg/L)								
Alkalinity, Total (as CaCO ₃)			mg/L	30.5	-	-	-	-
Nitrate			mg/L	1.1	1.2	1.2	-	-
Nitrite (as N)			mg/L	< 0.1	< 0.1	< 0.1	-	-
Nitrite/Nitrate Nitrogen			mg/L	1.1	1.2	1.2	-	-
Sulfate			mg/L	10.3	-	-	8.1	7.9
Sulfide			mg/L	< 0.1	< 0.1	< 0.1	-	-
Total Organic Carbon (TOC)			mg/L	2.2	1.9	1.8	-	< 1.0
Iron			mg/L	-	-	-	-	-
Iron, Ferrous			mg/L	-	-	-	-	0.095
Volatile Fatty Acids (mg/L)								
Acetic Acid			mg/L	-	-	-	-	< 5.0
Propionic Acid			mg/L	-	-	-	-	< 5.0
Pyruvic Acid			mg/L	-	-	-	-	< 5.0
Butyric Acid			mg/L	-	-	-	-	< 5.0
Lactic Acid			mg/L	-	-	-	-	< 10
Dissolved Gases (ug/L)								
Ethane			ug/L	-	-	-	-	-
Ethene			ug/L	-	-	-	-	-
Methane			ug/L	< 10	< 6.6	< 6.6	-	-
Volatile Organic Compounds (ug/L)								
1,1,2-Trichloroethane	457	ug/L	< 1	-	-	< 1	< 1.0	< 1.0
1,1-Dichloroethene	13571	ug/L	< 1	-	-	-	-	-
cis-1,2-Dichloroethene	-	ug/L	34.2	28.8	28.2	36	37.0	35.0
Methylene chloride	328571	ug/L	< 2	-	-	< 4	< 4.0	< 4.0
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 1	< 1	< 1	< 1.0	< 1.0
Trichloroethene	371	ug/L	114	95.9	90.4	110	110	120
Vinyl chloride	386	ug/L	< 1	< 1	< 1	< 1	< 1.0	< 1.0

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	MW-16D 7/7/2016	MW-16D 9/7/2016	MW-16D 1/26/2017	MW-16D 3/9/2017	MW-16D 6/29/2017	MW-16D 9/7/2017	MW-16D 1/17/2018	MW-16D 3/19/2018	
			Units	mS/cm	0.114	0.103	0.118	0.115	0.142	0.037	0.094
Conductivity			mg/L	1.78	1.59	2.41	2.59	2.87	1.51	0.00	4.92
Dissolved Oxygen			mV	93	266	95	229	-38	193	105	193
ORP			s.u.	6.46	5.28	5.98	5.29	6.31	5.4	5.95	5.75
pH			°C	21.23	26.78	19.73	17.07	22.52	21.53	19.01	20.66
Temperature			NTU	0.8	0	0.3	-	3.2	0	0.1	7.4
General Chemistry (mg/L)											
Alkalinity, Total (as CaCO ₃)			mg/L	-	-	-	-	-	-	-	
Nitrate			mg/L	-	-	-	-	-	-	-	
Nitrite (as N)			mg/L	-	-	-	-	-	-	-	
Nitrite/Nitrate Nitrogen			mg/L	-	-	-	-	-	-	-	
Sulfate			mg/L	7.4	8.1	-	7.2	-	8	8.3	
Sulfide			mg/L	-	-	-	-	-	-	-	
Total Organic Carbon (TOC)			mg/L	< 1.0	1.0	-	< 1.0	-	< 1.0	< 1.0	
Iron			mg/L	< 0.200	< 0.200	-	< 0.200	-	< 0.200	< 0.200	
Iron, Ferrous			mg/L	0.088	< 0.050	-	< 0.050	-	< 0.050	< 0.050	
Volatile Fatty Acids (mg/L)											
Acetic Acid			mg/L	-	-	-	< 5.0	-	-	-	
Propionic Acid			mg/L	-	-	-	< 5.0	-	-	-	
Pyruvic Acid			mg/L	-	-	-	< 5.0	-	-	-	
Butyric Acid			mg/L	-	-	-	< 5.0	-	-	-	
Lactic Acid			mg/L	-	-	-	< 5.0	-	-	-	
Dissolved Gases (ug/L)											
Ethane			ug/L	-	-	-	< 5.0	-	< 5.0	< 5.0	
Ethene			ug/L	-	-	-	< 5.0	-	< 5.0	< 5.0	
Methane			ug/L	-	-	-	< 5.0	-	< 5.0	< 5.0	
Volatile Organic Compounds (ug/L)											
1,1,2-Trichloroethane	457		ug/L	< 1.0	< 1	-	< 1	-	< 1	< 1	
1,1-Dichloroethene	13571		ug/L	-	< 1	-	< 1	-	< 1	< 1	
cis-1,2-Dichloroethene	-		ug/L	38.0	43	49.9	50	45.3	72	80	
Methylene chloride	328571		ug/L	< 4.0	< 4	-	< 4	-	< 4	< 1	
trans-1,2-Dichloroethene	27143		ug/L	< 1.0	< 1	-	< 1	-	1	1	
Trichloroethene	371		ug/L	110	110	126.2	130	123	180	210	
Vinyl chloride	386		ug/L	< 1.0	< 1	< 5.0	< 1	< 1	< 1	< 1	

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	MW-16I 12/22/2011	MW-16I 2/22/2012	MW-16I 9/16/2015	MW-16I 3/3/2016	MW-16I 4/20/2016	MW-16I 7/7/2016	MW-16I 9/7/2016	
			Units	mS/cm	0.498	0.649	0.626	0.771	24.9	7.5
Conductivity			mg/L	1.68	1.12	1.38	0.00	0.00	0.19	0.6
Dissolved Oxygen			mV	125.4	162.4	-21	-13	-155	-128	-118
ORP			s.u.	5.32	5.42	6.31	6.37	7.04	6.95	6.15
pH			°C	20.2	19.3	21.33	19.49	20.72	21.05	23.84
Temperature			NTU	5.2	1.9	8.7	32.6	488	58.1	41.3
Turbidity										
General Chemistry (mg/L)										
Alkalinity, Total (as CaCO ₃)			mg/L	25.2	-	-	-	-	-	
Nitrate			mg/L	5.9	5.8	-	-	-	-	
Nitrite (as N)			mg/L	0.24	0.18	-	-	-	-	
Nitrite/Nitrate Nitrogen			mg/L	6.2	6	-	-	-	-	
Sulfate			mg/L	166	-	-	209	50	< 5.0	
Sulfide			mg/L	< 0.1	< 0.1	-	-	-	-	
Total Organic Carbon (TOC)			mg/L	11.3	12	-	6.2	15200	2900	
Iron			mg/L	-	-	-	-	75.7	107	
Iron, Ferrous			mg/L	-	-	-	2.5	63.8	78.9	
									122	
Volatile Fatty Acids (mg/L)										
Acetic Acid			mg/L	-	-	-	-	< 500	1900	
Propionic Acid			mg/L	-	-	-	-	< 500	2200	
Pyruvic Acid			mg/L	-	-	-	-	< 500	< 25	
Butyric Acid			mg/L	-	-	-	-	< 500	33	
Lactic Acid			mg/L	-	-	-	-	37000	2200	
									120	
Dissolved Gases (ug/L)										
Ethane			ug/L	-	-	-	-	-	-	
Ethene			ug/L	-	-	-	-	-	-	
Methane			ug/L	27.7	35.8	-	-	-	-	
Volatile Organic Compounds (ug/L)										
1,1,2-Trichloroethane	457	ug/L	9.1	-	< 20	< 20	< 10	< 20	< 1	
1,1-Dichloroethene	13571	ug/L	3.2	-	-	-	-	-	12	
cis-1,2-Dichloroethene	-	ug/L	7360	10600	15000	13000	9000	20000	22000	
Methylene chloride	328571	ug/L	5.2	-	< 80	< 80	< 40	< 80	< 4	
trans-1,2-Dichloroethene	27143	ug/L	126	< 100	48	37	190	360	250	
Trichloroethene	371	ug/L	17800	19700	13000	19000	6200	3100	97	
Vinyl chloride	386	ug/L	109	164	570	440	75	240	110	

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	MW-16I 12/22/2016	MW-16I 1/26/2017	MW-16I 3/9/2017	MW-16I 6/29/2017	MW-16I 9/7/2017	MW-16I 1/17/2018	MW-16I 3/19/2018	
			Units	mS/cm	2.97	2.33	2.06	1.58	1.29	1.78
Conductivity			mg/L	1.54	1.72	0.45	5.07	1.03	1.43	0.00
Dissolved Oxygen			mV	-73	-139	-134	-104	-121	-53	-66
ORP			s.u.	6.4	6.24	6.46	7.06	7.13	6.08	6.32
pH			°C	20.37	19.78	17.31	22.24	20.77	19.75	21.17
Temperature			NTU	20.6	68.2	1.68	77.6	16.0	5.5	19.8
Turbidity										
General Chemistry (mg/L)										
Alkalinity, Total (as CaCO ₃)			mg/L	-	-	-	-	-	-	
Nitrate			mg/L	-	-	-	-	-	-	
Nitrite (as N)			mg/L	-	-	-	-	-	-	
Nitrite/Nitrate Nitrogen			mg/L	-	-	-	-	-	-	
Sulfate			mg/L	< 5.0	-	< 5.0	-	8.8	10.8	
Sulfide			mg/L	-	-	-	-	-	-	
Total Organic Carbon (TOC)			mg/L	746	-	384	-	93.4	73.2	
Iron			mg/L	50.3	-	35.8	-	16.5	14.7	
Iron, Ferrous			mg/L	55.1	-	36.4	-	17.7	13.8	
Volatile Fatty Acids (mg/L)										
Acetic Acid			mg/L	730	-	420	-	-	-	
Propionic Acid			mg/L	440	-	170	-	-	-	
Pyruvic Acid			mg/L	< 10	-	< 5.0	-	-	-	
Butyric Acid			mg/L	350	-	120	-	-	-	
Lactic Acid			mg/L	< 20	-	< 10.0	-	-	-	
Dissolved Gases (ug/L)										
Ethane			ug/L	-	-	6.5	-	5.6	< 5.0	
Ethene			ug/L	-	-	3200	-	3000	4500	
Methane			ug/L	-	-	2000	-	4700	4900	
Volatile Organic Compounds (ug/L)										
1,1,2-Trichloroethane	457		ug/L	< 10	-	< 20	-	< 5	< 10	
1,1-Dichloroethene	13571		ug/L	14	-	< 20	-	7	< 10	
cis-1,2-Dichloroethene	-		ug/L	16000	12151.5	9100	1696.8	5000	4100	
Methylene chloride	328571		ug/L	< 40	-	< 80	-	< 20	< 10	
trans-1,2-Dichloroethene	27143		ug/L	560	-	270	-	88	90	
Trichloroethene	371		ug/L	< 10	<1000	< 20	< 200	9	29	
Vinyl chloride	386		ug/L	2200	2581.1	950	219.3	800	530	
									1200	

Notes and Abbreviations:

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3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	RW-1	RW-1	
			Units	12/19/2011	2/21/2012
Conductivity		mS/cm	0.04	0.15	
Dissolved Oxygen		mg/L	0.38	0.2	
ORP		mV	162.8	3.8	
pH		s.u.	5.31	5.95	
Temperature		°C	19.8	19.2	
Turbidity		NTU	-0.2	2.1	
General Chemistry (mg/L)					
Alkalinity, Total (as CaCO ₃)		mg/L	-	-	
Nitrate		mg/L	-	-	
Nitrite (as N)		mg/L	-	-	
Nitrite/Nitrate Nitrogen		mg/L	-	-	
Sulfate		mg/L	-	-	
Sulfide		mg/L	-	-	
Total Organic Carbon (TOC)		mg/L	-	-	
Iron		mg/L	-	-	
Iron, Ferrous		mg/L	-	-	
Volatile Fatty Acids (mg/L)					
Acetic Acid		mg/L	-	-	
Propionic Acid		mg/L	-	-	
Pyruvic Acid		mg/L	-	-	
Butyric Acid		mg/L	-	-	
Lactic Acid		mg/L	-	-	
Dissolved Gases (ug/L)					
Ethane		ug/L	-	-	
Ethene		ug/L	-	-	
Methane		ug/L	-	-	
Volatile Organic Compounds (ug/L)					
1,1,2-Trichloroethane	457	ug/L	< 1	-	
1,1-Dichloroethene	13571	ug/L	< 1	-	
cis-1,2-Dichloroethene	-	ug/L	404	784	
Methylene chloride	328571	ug/L	< 2	-	
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 5	
Trichloroethene	371	ug/L	987	2390	
Vinyl chloride	386	ug/L	9.6	35.3	

Notes and Abbreviations:

1. Results shown in **bold** were detected.
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4. - Not analyzed.
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TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	RW-2	RW-2	
			Units	12/19/2011	2/22/2012
Conductivity		mS/cm	0.07	0.72	
Dissolved Oxygen		mg/L	3.83	2.45	
ORP		mV	152.9	108.4	
pH		s.u.	6.13	6.15	
Temperature		°C	19.6	18.2	
Turbidity		NTU	11.5	1.5	
General Chemistry (mg/L)					
Alkalinity, Total (as CaCO ₃)		mg/L	-	-	
Nitrate		mg/L	-	-	
Nitrite (as N)		mg/L	-	-	
Nitrite/Nitrate Nitrogen		mg/L	-	-	
Sulfate		mg/L	-	-	
Sulfide		mg/L	-	-	
Total Organic Carbon (TOC)		mg/L	-	-	
Iron		mg/L	-	-	
Iron, Ferrous		mg/L	-	-	
Volatile Fatty Acids (mg/L)					
Acetic Acid		mg/L	-	-	
Propionic Acid		mg/L	-	-	
Pyruvic Acid		mg/L	-	-	
Butyric Acid		mg/L	-	-	
Lactic Acid		mg/L	-	-	
Dissolved Gases (ug/L)					
Ethane		ug/L	-	-	
Ethene		ug/L	-	-	
Methane		ug/L	-	-	
Volatile Organic Compounds (ug/L)					
1,1,2-Trichloroethane	457	ug/L	< 1	-	
1,1-Dichloroethene	13571	ug/L	< 1	-	
cis-1,2-Dichloroethene	-	ug/L	3	2.6	
Methylene chloride	328571	ug/L	< 2	-	
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 1	
Trichloroethene	371	ug/L	39.8	38.9	
Vinyl chloride	386	ug/L	< 1	< 1	

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	RW-3 12/19/2011	RW-3 2/22/2012	RW-3 9/16/2015	RW-3 9/8/2016	RW-3 3/9/2017	RW-3 9/8/2017	RW-3 3/20/2018	
			Units	mS/cm	0.131	0.146	0.282	0.205	0.173	0.185
Conductivity			mg/L	0.43	0.64	1.43	0.53	0.77	2.19	0.41
Dissolved Oxygen			mV	102.2	67.6	30	84	66	169	115
ORP			s.u.	8.95	9.5	7.95	6.54	6.67	5.87	6.39
pH			°C	19.8	17.9	21.68	23.73	21.54	20.57	21.97
Temperature			NTU	5.1	4	0.5	57.2	18.4	28.7	15.7
Turbidity										
General Chemistry (mg/L)										
Alkalinity, Total (as CaCO ₃)			mg/L	-	-	-	-	-	-	
Nitrate			mg/L	-	-	-	-	-	-	
Nitrite (as N)			mg/L	-	-	-	-	-	-	
Nitrite/Nitrate Nitrogen			mg/L	-	-	-	-	-	-	
Sulfate			mg/L	-	-	-	-	-	-	
Sulfide			mg/L	-	-	-	-	-	-	
Total Organic Carbon (TOC)			mg/L	-	-	-	-	-	-	
Iron			mg/L	-	-	-	-	-	-	
Iron, Ferrous			mg/L	-	-	-	-	-	-	
Volatile Fatty Acids (mg/L)										
Acetic Acid			mg/L	-	-	-	-	-	-	
Propionic Acid			mg/L	-	-	-	-	-	-	
Pyruvic Acid			mg/L	-	-	-	-	-	-	
Butyric Acid			mg/L	-	-	-	-	-	-	
Lactic Acid			mg/L	-	-	-	-	-	-	
Dissolved Gases (ug/L)										
Ethane			ug/L	-	-	-	-	-	-	
Ethene			ug/L	-	-	-	-	-	-	
Methane			ug/L	-	-	-	-	-	-	
Volatile Organic Compounds (ug/L)										
1,1,2-Trichloroethane	457	ug/L	4.5	-	< 20	< 20	< 10	< 10	< 10	
1,1-Dichloroethene	13571	ug/L	6.5	-	-	39	21	26	24	
cis-1,2-Dichloroethene	-	ug/L	678	768	770	900	740	750	780	
Methylene chloride	328571	ug/L	23.6	-	< 80	< 80	< 40	< 40	< 10	
trans-1,2-Dichloroethene	27143	ug/L	29.2	< 100	33	51	40	40	42	
Trichloroethene	371	ug/L	13100	16300	13000	13000	9000	7900	8300	
Vinyl chloride	386	ug/L	2.1	< 100	< 20	< 20	< 10	< 10	< 10	

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	RW-4 12/19/2011	RW-4 2/22/2012	RW-4 9/16/2015	RW-4 9/8/2016	RW-4 3/9/2017	RW-4 9/8/2017	RW-4 3/20/2018
			Units	mS/cm	0.08	0.087	0.111	0.094	0.087
Conductivity			mg/L	2.99	2.6	3.6	3.52	5.25	3.9
Dissolved Oxygen			mV	144.2	109.5	193	125	150	145
ORP			s.u.	6.54	6.66	7.09	6.26	5.97	7.04
pH			°C	19.8	17.2	20.52	22.73	18.99	20.04
Temperature			NTU	5.8	4.6	3.7	243	1.18	3.47
Turbidity									51.1
General Chemistry (mg/L)									
Alkalinity, Total (as CaCO ₃)			mg/L	-	-	-	-	-	-
Nitrate			mg/L	-	-	-	-	-	-
Nitrite (as N)			mg/L	-	-	-	-	-	-
Nitrite/Nitrate Nitrogen			mg/L	-	-	-	-	-	-
Sulfate			mg/L	-	-	-	-	-	-
Sulfide			mg/L	-	-	-	-	-	-
Total Organic Carbon (TOC)			mg/L	-	-	-	-	-	-
Iron			mg/L	-	-	-	-	-	-
Iron, Ferrous			mg/L	-	-	-	-	-	-
Volatile Fatty Acids (mg/L)									
Acetic Acid			mg/L	-	-	-	-	-	-
Propionic Acid			mg/L	-	-	-	-	-	-
Pyruvic Acid			mg/L	-	-	-	-	-	-
Butyric Acid			mg/L	-	-	-	-	-	-
Lactic Acid			mg/L	-	-	-	-	-	-
Dissolved Gases (ug/L)									
Ethane			ug/L	-	-	-	-	-	-
Ethene			ug/L	-	-	-	-	-	-
Methane			ug/L	-	-	-	-	-	-
Volatile Organic Compounds (ug/L)									
1,1,2-Trichloroethane	457	ug/L	< 1	-	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethene	13571	ug/L	< 1	-	-	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	-	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Methylene chloride	328571	ug/L	< 2	-	< 4	< 4	< 4	< 4	< 1
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	371	ug/L	11.8	7.6	8	5	6	7	3
Vinyl chloride	386	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	S-2	S-5
			12/27/2011	12/27/2011
Conductivity		Units mS/cm	-	-
Dissolved Oxygen		mg/L	-	-
ORP		mV	-	-
pH		s.u.	-	-
Temperature		°C	-	-
Turbidity		NTU	-	-
General Chemistry (mg/L)				
Alkalinity, Total (as CaCO ₃)		mg/L	-	-
Nitrate		mg/L	-	-
Nitrite (as N)		mg/L	-	-
Nitrite/Nitrate Nitrogen		mg/L	-	-
Sulfate		mg/L	-	-
Sulfide		mg/L	-	-
Total Organic Carbon (TOC)		mg/L	-	-
Iron		mg/L	-	-
Iron, Ferrous		mg/L	-	-
Volatile Fatty Acids (mg/L)				
Acetic Acid		mg/L	-	-
Propionic Acid		mg/L	-	-
Pyruvic Acid		mg/L	-	-
Butyric Acid		mg/L	-	-
Lactic Acid		mg/L	-	-
Dissolved Gases (ug/L)				
Ethane		ug/L	-	-
Ethene		ug/L	-	-
Methane		ug/L	-	-
Volatile Organic Compounds (ug/L)				
1,1,2-Trichloroethane	457	ug/L	< 1	< 1
1,1-Dichloroethene	13571	ug/L	< 1	< 1
cis-1,2-Dichloroethene	-	ug/L	1.7	< 1
Methylene chloride	328571	ug/L	< 2	< 2
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 1
Trichloroethene	371	ug/L	13.1	< 1
Vinyl chloride	386	ug/L	< 1	< 1

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	Units	SW-1 9/23/2013	SW-1 10/13/2014	SW-1 9/18/2015	SW-1 10/19/2016	SW-1 3/8/2017	SW-1 9/7/2017	SW-1 3/22/2018
				mS/cm	-	0.106	0.126	0.092	0.099	0.065
Conductivity			mg/L	-	-	6.50	20.38	12.77	8.99	8.46
Dissolved Oxygen			mV	-	-	-44	144	174	-129	-190
ORP			s.u.	-	-	7.44	6.62	5.74	8.66	8.58
pH			°C	-	-	18.66	20.49	16.42	18.65	12.5
Temperature			NTU	-	-	7.5	11.7	28.2	17.5	5.8
Turbidity										
General Chemistry (mg/L)										
Alkalinity, Total (as CaCO ₃)			mg/L	-	-	-	-	-	-	-
Nitrate			mg/L	-	-	-	-	-	-	-
Nitrite (as N)			mg/L	-	-	-	-	-	-	-
Nitrite/Nitrate Nitrogen			mg/L	-	-	-	-	-	-	-
Sulfate			mg/L	-	-	-	-	-	-	-
Sulfide			mg/L	-	-	-	-	-	-	-
Total Organic Carbon (TOC)			mg/L	-	-	-	-	-	-	-
Iron			mg/L	-	-	-	-	-	-	-
Iron, Ferrous			mg/L	-	-	-	-	-	-	-
Volatile Fatty Acids (mg/L)										
Acetic Acid			mg/L	-	-	-	-	-	-	-
Propionic Acid			mg/L	-	-	-	-	-	-	-
Pyruvic Acid			mg/L	-	-	-	-	-	-	-
Butyric Acid			mg/L	-	-	-	-	-	-	-
Lactic Acid			mg/L	-	-	-	-	-	-	-
Dissolved Gases (ug/L)										
Ethane			ug/L	-	-	-	-	-	-	-
Ethene			ug/L	-	-	-	-	-	-	-
Methane			ug/L	-	-	-	-	-	-	-
Volatile Organic Compounds (ug/L)										
1,1,2-Trichloroethane	457	ug/L	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethene	13571	ug/L	< 1	< 5	-	< 1	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	-	ug/L	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1
Methylene chloride	328571	ug/L	< 5	< 5	< 4	< 4	< 4	< 4	< 4	< 1
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	371	ug/L	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl chloride	386	ug/L	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name Sample Date	Risk Reduction Standards - Target Groundwater Concentrations (ug/L)	Units	SW-2 9/23/2013	SW-2 10/13/2014	SW-2 9/18/2015	SW-2 10/19/2016	SW-2 3/10/2017	SW-2 9/19/2017	SW-2 3/22/2018
				mS/cm	-	0.105	0.114	0.090	0.105	0.084
Conductivity			mg/L	-	-	6.86	12.61	9.00	7.00	5.58
Dissolved Oxygen			mV	-	-	58	179	146	160	97
ORP			s.u.	-	-	7.49	6.42	6.31	6.72	7.71
pH			°C	-	-	19.92	23.29	13.00	27.05	12.37
Temperature			NTU	-	-	19.1	21.4	282	26.2	14.6
Turbidity										
General Chemistry (mg/L)										
Alkalinity, Total (as CaCO ₃)			mg/L	-	-	-	-	-	-	-
Nitrate			mg/L	-	-	-	-	-	-	-
Nitrite (as N)			mg/L	-	-	-	-	-	-	-
Nitrite/Nitrate Nitrogen			mg/L	-	-	-	-	-	-	-
Sulfate			mg/L	-	-	-	-	-	-	-
Sulfide			mg/L	-	-	-	-	-	-	-
Total Organic Carbon (TOC)			mg/L	-	-	-	-	-	-	-
Iron			mg/L	-	-	-	-	-	-	-
Iron, Ferrous			mg/L	-	-	-	-	-	-	-
Volatile Fatty Acids (mg/L)										
Acetic Acid			mg/L	-	-	-	-	-	-	-
Propionic Acid			mg/L	-	-	-	-	-	-	-
Pyruvic Acid			mg/L	-	-	-	-	-	-	-
Butyric Acid			mg/L	-	-	-	-	-	-	-
Lactic Acid			mg/L	-	-	-	-	-	-	-
Dissolved Gases (ug/L)										
Ethane			ug/L	-	-	-	-	-	-	-
Ethene			ug/L	-	-	-	-	-	-	-
Methane			ug/L	-	-	-	-	-	-	-
Volatile Organic Compounds (ug/L)										
1,1,2-Trichloroethane	457	ug/L	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethene	13571	ug/L	< 1	< 5	-	< 1	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	-	ug/L	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1
Methylene chloride	328571	ug/L	< 5	< 5	< 4	< 4	< 4	< 1	< 1	< 1
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	371	ug/L	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1
Vinyl chloride	386	ug/L	< 1	< 2	< 1	< 1	< 1	< 1	< 1	< 1

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.
5. Highlighted cells indicate exceedances of the Risk Reduction Standards for groundwater.

TABLE III
GROUNDWATER ELEVATION DATA
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Well Identifier	Date of Measurement	Reference Point Elevation	Screened Interval (feet)	Depth to Water (feet)	Static Water Level Elevation (feet)	Notes
MW-1S	3/19/2018	641.3	4.5 - 14.5	7.15	634.15	
MW-1I	3/19/2018	641.1	20.0 - 25.0	6.09	635.01	
MW-2S	3/19/2018	637.3	10.0 - 20.0	15.54	621.76	
MW-2I	3/19/2018	637.4	76.5 - 86.5	16.87	620.53	
MW-2D	3/19/2018	635.5	216.5 - 226.5	20.94	614.56	
MW-3I	3/19/2018	639.7	89.5 - 99.5	15.44	624.26	
MW-5I	3/19/2018	623.5	31.5 - 41.5	10.18	613.32	
MW-6I	3/19/2018	622.8	61.0 - 71.0	8.30	614.50	
MW-7I	3/19/2018	619.1	26.5 - 36.5	7.65	611.45	
MW-8I	3/19/2018	618.7	5.0 - 15.0	7.99	610.71	
MW-9I	3/19/2018	613.2	44.5 - 54.5	13.51	599.69	
MW-9D	3/19/2018	613.4	181.4 - 201.4	4.73	608.67	
MW-11S	3/19/2018	611.0	3.0 - 13.0	7.95	603.05	
MW-11I	3/19/2018	610.9	22.0 - 32.0	8.80	602.10	
MW-11D	3/19/2018	611.9	277.3 - 287.3	8.29	603.61	
MW-16I	3/19/2018	643.6	20.0 - 30.0	18.35	625.25	
MW-16D	3/19/2018	643.6	47.0 - 57.0	18.30	625.30	
RW-1	3/19/2018	639.7	26.5 - 46.5	17.05	622.65	
RW-2	3/19/2018	639.2	70.0 - 90.0	17.26	621.94	
RW-3	3/19/2018	633.9	70.0 - 90.0	13.36	620.54	
RW-4	3/19/2018	633.7	75.0 - 95.0	12.35	621.35	

TABLE IV
INJECTION GROUNDWATER MONITORING PARAMETERS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Page 1 of 6

	Location Name Sample Date	MW-16D 3/3/2016	MW-16D 4/20/2016	MW-16D 7/7/2016	MW-16D 9/7/2016	MW-16D 1/26/2017	MW-16D 3/9/2017	MW-16D 6/29/2017	MW-16D 9/7/2017	MW-16D 1/17/2018	MW-16D 3/19/2018
Field Parameters	Units										
Conductivity	mS/cm	0.112	0.109	0.114	0.103	0.118	0.115	0.142	0.037	0.094	0.135
Dissolved Oxygen	mg/L	1.93	1.15	1.78	1.59	2.41	2.59	2.87	1.51	0.00	4.92
ORP	mV	137	166	93	266	95	229	-38	193	105	193
pH	s.u.	6.24	5.37	6.46	5.28	5.98	5.29	6.31	5.40	5.95	5.75
Temperature	°C	18.86	20.85	21.23	26.78	19.73	17.07	22.52	21.53	19.01	20.66
Turbidity	NTU	0.00	0.6	0.8	0	0.3	-	3.2	0	0.1	7.4
General Chemistry (mg/L)											
Alkalinity, Total (as CaCO ₃)	mg/L	-	-	-	-	-	-	-	-	-	-
Nitrate	mg/L	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	mg/L	-	-	-	-	-	-	-	-	-	-
Nitrite/Nitrate Nitrogen	mg/L	-	-	-	-	-	-	-	-	-	-
Sulfate	mg/L	8.1	7.9	7.4	8.1	-	7.2	-	8	8.3	-
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon (TOC)	mg/L	< 1.0	1.2	< 1.0	1.0	-	< 1.0	-	< 1.0	< 1.0	-
Iron	mg/L	-	-	< 0.200	< 0.200	-	< 0.200	-	< 0.200	< 0.200	-
Iron, Ferrous	mg/L	< 0.05	0.095	0.088	< 0.050	-	< 0.050	-	< 0.050	< 0.050	-
Volatile Fatty Acids (mg/L)											
Acetic Acid	mg/L	-	< 5.0	-	-	-	< 5.0	-	-	-	-
Propionic Acid	mg/L	-	< 5.0	-	-	-	< 5.0	-	-	-	-
Pyruvic Acid	mg/L	-	< 5.0	-	-	-	< 5.0	-	-	-	-
Butyric Acid	mg/L	-	< 5.0	-	-	-	< 5.0	-	-	-	-
Lactic Acid	mg/L	-	< 10	-	-	-	< 5.0	-	-	-	-
Dissolved Gases (ug/L)											
Ethane	ug/L	-	-	-	-	-	< 5.0	-	< 5.0	< 5.0	-
Ethene	ug/L	-	-	-	-	-	< 5.0	-	< 5.0	< 5.0	-
Methane	ug/L	-	-	-	-	-	< 5.0	-	< 5.0	< 5.0	-
Volatile Organic Compounds (ug/L)											
1,1,2-Trichloroethane	ug/L	< 1.0	< 1.0	< 1.0	< 1	-	< 1	-	< 1	< 1	< 1
1,1-Dichloroethene	ug/L	-	-	-	< 1	-	< 1	-	< 1	< 1	< 1
cis-1,2-Dichloroethene	ug/L	37.0	35.0	38.0	43	49.9	50	45.3	72	80	63
Methylene chloride	ug/L	< 4.0	< 4.0	< 4.0	< 4	-	< 4	-	< 4	< 1	< 1
trans-1,2-Dichloroethene	ug/L	< 1.0	< 1.0	< 1.0	< 1	-	< 1	-	1	1	1
Trichloroethene	ug/L	110	120	110	110	126.2	130	123	180	210	170
Vinyl chloride	ug/L	< 1.0	< 1.0	< 1.0	< 1	< 5.0	< 1	< 1	< 1	< 1	< 1

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.

TABLE IV
INJECTION GROUNDWATER MONITORING PARAMETERS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Page 2 of 6

	Location Name	MW-16I 3/3/2016	MW-16I 4/20/2016	MW-16I 7/7/2016	MW-16I 9/7/2016	MW-16I 12/22/2016	MW-16I 1/26/2017	MW-16I 3/9/2017	MW-16I 6/29/2017	MW-16I 9/7/2017	MW-16I 1/17/2018	MW-16I 3/19/2018
Field Parameters	Location Name	Units										
Conductivity	mS/cm	0.771	24.9	7.5	5.19	2.97	2.33	2.06	1.58	1.29	1.78	1.08
Dissolved Oxygen	mg/L	0.00	0.00	0.19	0.60	1.54	1.72	0.45	5.07	1.03	1.43	0.00
ORP	mV	-13	-155	-128	-118	-73	-139	-134	-104	-121	-53	-66
pH	s.u.	6.37	7.04	6.95	6.15	6.4	6.24	6.46	7.06	7.13	6.08	6.32
Temperature	°C	19.49	20.72	21.05	23.84	20.37	19.78	17.31	22.24	20.77	19.75	21.17
Turbidity	NTU	32.6	488	58.1	41.3	20.6	68.2	1.68	77.6	16.0	5.5	19.8
General Chemistry (mg/L)												
Alkalinity, Total (as CaCO ₃)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Nitrate	mg/L	-	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)	mg/L	-	-	-	-	-	-	-	-	-	-	-
Nitrite/Nitrate Nitrogen	mg/L	-	-	-	-	-	-	-	-	-	-	-
Sulfate	mg/L	209	50	< 5.0	< 5.0	< 5.0	-	< 5.0	-	8.8	10.8	-
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon (TOC)	mg/L	6.2	15200	2900	3020	746	-	384	-	93.4	73.2	-
Iron	mg/L	-	-	75.7	107	50.3	-	35.8	-	16.5	14.7	-
Iron, Ferrous	mg/L	2.5	63.8	78.9	122	55.1	-	36.4	-	17.7	13.8	-
Volatile Fatty Acids (mg/L)												
Acetic Acid	mg/L	-	< 500	1900	2000	730	-	420	-	-	-	-
Propionic Acid	mg/L	-	< 500	2200	2200	440	-	170	-	-	-	-
Pyruvic Acid	mg/L	-	< 500	< 25	< 50	< 10	-	< 5.0	-	-	-	-
Butyric Acid	mg/L	-	< 500	33	360	350	-	120	-	-	-	-
Lactic Acid	mg/L	-	37000	2200	120	< 20	-	< 10.0	-	-	-	-
Dissolved Gases (ug/L)												
Ethane	ug/L	-	-	-	-	-	-	6.5	-	5.6	< 5.0	-
Ethene	ug/L	-	-	-	-	-	-	3200	-	3000	4500	-
Methane	ug/L	-	-	-	-	-	-	2000	-	4700	4900	-
Volatile Organic Compounds (ug/L)												
1,1,2-Trichloroethane	ug/L	< 20	< 10	< 20	< 1	< 10	-	< 20	-	< 5	< 10	< 10
1,1-Dichloroethene	ug/L	-	-	-	12	14	-	< 20	-	7	< 10	10
cis-1,2-Dichloroethene	ug/L	13000	9000	20000	22000	16000	12151.5	9100	1696.8	5000	4100	5800
Methylene chloride	ug/L	< 80	< 40	< 80	< 4	< 40	-	< 80	-	< 20	< 10	< 10
trans-1,2-Dichloroethene	ug/L	37	190	360	250	560	-	270	-	88	90	120
Trichloroethene	ug/L	19000	6200	3100	97	< 10	< 1000	< 20	< 200	9	29	59
Vinyl chloride	ug/L	440	75	240	110	2200	2581.1	950	219.3	800	530	1200

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.

TABLE IV
INJECTION GROUNDWATER MONITORING PARAMETERS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

	Location Name Sample Date	HAMP-3 3/3/2016	HAMP-3 4/20/2016	HAMP-3 7/7/2016	HAMP-3 9/7/2016	HAMP-3 1/26/2017	HAMP-3 3/9/2017	HAMP-3 6/29/2017	HAMP-3 9/7/2017	HAMP-3 1/17/2018
Field Parameters										
Conductivity	mS/cm	0.871	0.562	0.688	4.83	4.97	6.18	5.08	3.82	3.72
Dissolved Oxygen	mg/L	0.00	0.00	0.16	4.13	0.96	0.83	0.00	1.08	1.54
ORP	mV	-151	-131	-171	-162	-166	-167	-182	-181	-170
pH	s.u.	7.69	7.24	8.42	6.77	6.93	7.05	7.29	8.18	7.28
Temperature	°C	18.27	20.46	20.19	23.39	19.70	17.81	22.2	20.77	19.41
Turbidity	NTU	37.9	11.8	11.1	16.0	16.9	-	89.4	251	78.6
General Chemistry (mg/L)										
Alkalinity, Total (as CaCO ₃)	mg/L	-	-	-	-	-	-	-	-	-
Nitrate	mg/L	-	-	-	-	-	-	-	-	-
Nitrite (as N)	mg/L	-	-	-	-	-	-	-	-	-
Nitrite/Nitrate Nitrogen	mg/L	-	-	-	-	-	-	-	-	-
Sulfate	mg/L	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	-	< 5.0	11.4
Sulfide	mg/L	-	-	-	-	-	-	-	-	-
Total Organic Carbon (TOC)	mg/L	4.3	2	48.2	1900	-	2290	-	471	266
Iron	mg/L	-	-	0.7	42.9	-	47.0	-	30.4	8.22
Iron, Ferrous	mg/L	2.00	0.77	0.7	47.9	-	46.9	-	29.5	8.5
Volatile Fatty Acids (mg/L)										
Acetic Acid	mg/L	-	< 5.0	12	2400	-	1400	-	-	-
Propionic Acid	mg/L	-	< 5.0	84	3200	-	1700	-	-	-
Pyruvic Acid	mg/L	-	< 5.0	< 5.0	< 50	-	< 5.0	-	-	-
Butyric Acid	mg/L	-	< 5.0	< 5.0	110	-	100	-	-	-
Lactic Acid	mg/L	-	< 10	< 10	160	-	< 10	-	-	-
Dissolved Gases (ug/L)										
Ethane	ug/L	-	-	-	-	-	< 5.0	-	28	53
Ethene	ug/L	-	-	-	-	-	97	-	50	180
Methane	ug/L	-	-	-	-	-	16000	-	17000	24000
Volatile Organic Compounds (ug/L)										
1,1,2-Trichloroethane	ug/L	< 2.0	< 1.0	< 1.0	< 1.0	-	< 1.0	-	< 1.0	< 1.0
1,1-Dichloroethene	ug/L	-	-	-	2	-	< 1.0	-	< 1.0	< 1.0
cis-1,2-Dichloroethene	ug/L	410.0	270.0	350	1000	228.7	140	58.4	12	130
Methylene chloride	ug/L	< 8.0	< 4.0	< 4.0	< 4.0	-	< 4.0	-	< 4.0	< 1.0
trans-1,2-Dichloroethene	ug/L	< 2.0	2	3	16	-	14	-	7	21
Trichloroethene	ug/L	92	19	7	6	ND	< 1.0	< 10	< 1.0	< 1.0
Vinyl chloride	ug/L	4	3	4	17	13.4	15	< 10	3	71

Notes and Abbreviations:

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3. Only detected compounds are shown in table.
4. - Not analyzed.

TABLE IV
INJECTION GROUNDWATER MONITORING PARAMETERS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

	Location Name Sample Date	HAMP-7 3/3/2016	HAMP-7 4/20/2016	HAMP-7 7/7/2016	HAMP-7 9/7/2016	HAMP-7 1/26/2017	HAMP-7 3/9/2017	HAMP-7 6/29/2017	HAMP-7 9/7/2017	HAMP-7 1/17/2018
Field Parameters										
Conductivity	mS/cm	0.237	0.255	1.72	2.56	3.04	2.00	0.74	0.222	0.437
Dissolved Oxygen	mg/L	0.00	0.00	0.06	0.24	0.62	0.36	0.00	1.42	0.00
ORP	mV	197	156	-107	-112	-178	-156	-124	-70	-105
pH	s.u.	6.00	5.39	6.85	6.29	6.65	6.90	6.98	6.72	6.51
Temperature	°C	20.03	20.69	18.08	26.26	20.37	17.93	22.47	21.69	21.27
Turbidity	NTU	8.6	16.3	40.6	17.6	82.7	0.0	60.5	108	6.0
General Chemistry (mg/L)										
Alkalinity, Total (as CaCO ₃)	mg/L	-	-	-	-	-	-	-	-	-
Nitrate	mg/L	-	-	-	-	-	-	-	-	-
Nitrite (as N)	mg/L	-	-	-	-	-	-	-	-	-
Nitrite/Nitrate Nitrogen	mg/L	-	-	-	-	-	-	-	-	-
Sulfate	mg/L	41.2	43.8	31.0	23.8	-	25.2	-	26.6	40.3
Sulfide	mg/L	-	-	-	-	-	-	-	-	-
Total Organic Carbon (TOC)	mg/L	1.6	6.4	461	955	-	261	-	3.3	3.1
Iron	mg/L	-	-	33.6	79.2	-	33.8	-	8.81	12.2
Iron, Ferrous	mg/L	< 0.05	0.05	45.5	93.0	-	29.7	-	10.3	12.5
Volatile Fatty Acids (mg/L)										
Acetic Acid	mg/L	-	< 5.0	280	530	-	170	-	-	-
Propionic Acid	mg/L	-	< 5.0	370	650	-	350	-	-	-
Pyruvic Acid	mg/L	-	< 5.0	< 5.0	< 5.0	-	< 5.0	-	-	-
Butyric Acid	mg/L	-	< 5.0	< 5.0	81	-	74	-	-	-
Lactic Acid	mg/L	-	< 10	320	340	-	< 10	-	-	-
Dissolved Gases (ug/L)										
Ethane	ug/L	-	-	-	-	-	< 5.0	-	< 5.0	< 5.0
Ethene	ug/L	-	-	-	-	-	310	-	280	76
Methane	ug/L	-	-	-	-	-	7500	-	540	960
Volatile Organic Compounds (ug/L)										
1,1,2-Trichloroethane	ug/L	< 20	< 10	< 10	< 5.0	-	< 2	-	< 5.0	< 20
1,1-Dichloroethene	ug/L	-	-	-	11	-	6	-	8	< 20
cis-1,2-Dichloroethene	ug/L	2100	2200	4800	6000	2397.7	2900	2390.6	2500	4000
Methylene chloride	ug/L	< 80	< 40	< 40	< 20	-	< 8	-	< 20	< 20
trans-1,2-Dichloroethene	ug/L	< 20	12	18	16	-	17	-	17	21
Trichloroethene	ug/L	8500	9900	8800	4500	3703.4	6300	4184.9	5200	8400
Vinyl chloride	ug/L	48	33	53	50	114.6	130	144.8	120	190

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.

TABLE IV
INJECTION GROUNDWATER MONITORING PARAMETERS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

	Location Name Sample Date		HAMP-8 3/3/2016	HAMP-8 4/20/2016	HAMP-8 7/7/2016	HAMP-8 9/7/2016	HAMP-8 1/26/2017	HAMP-8 3/9/2017	HAMP-8 6/29/2017	HAMP-8 9/7/2017	HAMP-8 1/17/2018
Field Parameters											
Conductivity	Units mS/cm	0.644	0.514	1.49	1.93	1.55	1.34	0.981	0.327	1.53	
Dissolved Oxygen	mg/L	0.00	0.00	0.13	0.25	0.76	0.38	0.00	1.70	1.36	
ORP	mV	99	145	-75	-125	-167	-165	-133	-65	-49	
pH	s.u.	5.29	5.13	6.53	5.94	6.37	6.60	6.79	6.42	6.11	
Temperature	°C	18.8	20.18	20.37	25.9	19.46	17.26	21.77	26.11	19.59	
Turbidity	NTU	15.1	6.8	16.1	21.7	42.2	0.0	19.8	35.7	9.8	
General Chemistry (mg/L)											
Alkalinity, Total (as CaCO ₃)	mg/L	-	-	-	-	-	-	-	-	-	
Nitrate	mg/L	-	-	-	-	-	-	-	-	-	
Nitrite (as N)	mg/L	-	-	-	-	-	-	-	-	-	
Nitrite/Nitrate Nitrogen	mg/L	-	-	-	-	-	-	-	-	-	
Sulfate	mg/L	152	139	91.9	30.0	-	5.4	-	34.0	37.0	
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	
Total Organic Carbon (TOC)	mg/L	5.3	1	453	782	-	156	-	53.3	38.3	
Iron	mg/L	-	-	11.6	61.3	-	14.7	-	7.7	10.4	
Iron, Ferrous	mg/L	1.3	0.05	14.7	74.8	-	12.4	-	9.6	11.4	
Volatile Fatty Acids (mg/L)											
Acetic Acid	mg/L	-	< 5.0	170	710	-	240	-	-	-	
Propionic Acid	mg/L	-	< 5.0	120	520	-	58	-	-	-	
Pyruvic Acid	mg/L	-	< 5.0	< 5.0	< 5.0	-	< 5.0	-	-	-	
Butyric Acid	mg/L	-	< 5.0	19	39	-	< 5.0	-	-	-	
Lactic Acid	mg/L	-	35	760	350	-	< 10	-	-	-	
Dissolved Gases (ug/L)											
Ethane	ug/L	-	-	-	-	-	< 5.0	-	< 5.0	< 5.0	
Ethene	ug/L	-	-	-	-	-	< 5.0	-	650	600	
Methane	ug/L	-	-	-	-	-	110	-	110	100	
Volatile Organic Compounds (ug/L)											
1,1,2-Trichloroethane	ug/L	57	< 100	< 20	< 20	-	< 50	-	< 50	< 50	
1,1-Dichloroethene	ug/L	-	-	-	< 20	-	< 50	-	79	< 50	
cis-1,2-Dichloroethene	ug/L	3200	3000	4000	8700	18419.8	27000	18321.6	25000	26000	
Methylene chloride	ug/L	< 200	< 400	< 80	< 80	-	< 200	-	< 200	< 50	
trans-1,2-Dichloroethene	ug/L	< 50	< 100	120	200	-	98	-	86	120	
Trichloroethene	ug/L	27000	30000	26000	18000	3650	760	1539	4100	4600	
Vinyl chloride	ug/L	< 50	< 100	25	< 20	ND	< 50	468.9	650	750	

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.

TABLE IV
INJECTION GROUNDWATER MONITORING PARAMETERS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

	Location Name Sample Date	HAMP-9 1/17/2018	HAMP-10 1/17/2018	HAMP-11 1/17/2018	HAMP-12 1/17/2018
Field Parameters					
Conductivity	Units mS/cm	0.262	0.848	0.455	0.087
Dissolved Oxygen	mg/L	3.00	1.34	0.00	0.00
ORP	mV	95	110	-136	135
pH	s.u.	6.04	4.95	6.79	5.13
Temperature	°C	20.13	20.08	18.78	19.95
Turbidity	NTU	5.5	10.0	102.0	13.1
General Chemistry (mg/L)					
Alkalinity, Total (as CaCO ₃)	mg/L	-	-	-	-
Nitrate	mg/L	-	-	-	-
Nitrite (as N)	mg/L	-	-	-	-
Nitrite/Nitrate Nitrogen	mg/L	-	-	-	-
Sulfate	mg/L	< 5.0	144	12.8	< 5.0
Sulfide	mg/L	-	-	-	-
Total Organic Carbon (TOC)	mg/L	< 1.0	3.1	16.7	1.1
Iron	mg/L	< 0.200	2.67	27.9	1.54
Iron, Ferrous	mg/L	0.079	1.0	28.5	1.3
Volatile Fatty Acids (mg/L)					
Acetic Acid	mg/L	-	-	-	-
Propionic Acid	mg/L	-	-	-	-
Pyruvic Acid	mg/L	-	-	-	-
Butyric Acid	mg/L	-	-	-	-
Lactic Acid	mg/L	-	-	-	-
Dissolved Gases (ug/L)					
Ethane	ug/L	< 5.0	< 5.0	16	5.4
Ethene	ug/L	< 5.0	11	1500	< 5.0
Methane	ug/L	10	76	3500	1400
Volatile Organic Compounds (ug/L)					
1,1,2-Trichloroethane	ug/L	< 20	< 1	< 5	< 10
1,1-Dichloroethene	ug/L	< 20	< 1	< 5	< 10
cis-1,2-Dichloroethene	ug/L	1700	600	1900	1100
Methylene chloride	ug/L	< 20	< 1	< 5	< 10
trans-1,2-Dichloroethene	ug/L	< 20	6	19	< 10
Trichloroethene	ug/L	6200	460	1600	3200
Vinyl chloride	ug/L	< 20	21	170	11

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.



INJECTION LOG

Page 1 of 4

Project	Former General Time Facility		H&A File No.	128752-004				
Location	Athens, Georgia		Project Manager	N. Alla				
Client	Carpenter Technology Corporation		Field Representative	B. Durrette				
Contractor	GeoLab		Date	03/19/18 - 04/02/18				
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-2	20-30	12.17	28	29.4	102.9	572.1	675	3/22
Note:								
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-3	20-30	15.82	22	99.4	202.9	987	1,190	03/22 & 03/30 & 04/02
Note:	Injected additional 500 gal at the end to make up for unused lactate and bicarb.							
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-4	20-30	6.73	27	99.4	202.9	972.1	1,175	03/22 - 03/23 & 03/30 & 04/02
Note:	Injected additional 500 gal at the end to make up for unused lactate and bicarb.							
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-5	20-30	7.81	23	99.4	202.9	971.1	1,174	03/23 & 03/30 & 04/02
Note:								
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-6	20-30	18.38	20	29.4	102.9	572.1	675	03/28 - 03/29
Note:								
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-7	20-30	20.57	24	29.4	102.9	583.1	686	03/26
Note:								
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-8	20-30	23.63	26	29.62	103.66	573.34	677	03/26
Note:								
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-9	20-30	7.19	20	49.4	152.9	772.1	925	03/27 - 03/28 & 03/30
Note:	Injected additional 250 gal at the end to make up for unused lactate and bicarb.							
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-10	20-30	4.33	15	29.4	102.9	572.1	675	3/29
Note:								



INJECTION LOG

Page 2 of 4

Project	Former General Time Facility		H&A File No.	128752-004				
Location	Athens, Georgia		Project Manager	N. Alla				
Client	Carpenter Technology Corporation		Field Representative	B. Durrette				
Contractor	GeoLab		Date	03/19/18 - 04/02/18				
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-11	20-30	8.47	17	29.4	102.9	577.1	680	3/28
Note:	Daylighting occurred twice during injections due to loose caps on IP7 and IP9. Caps were tightened and the daylighting stopped.							
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-12	20-30	19.63	24	29.4	102.9	572.1	675	3/26
Note:								
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-13	20-30	20.25	26	79.4	152.9	772.1	925	03/26 - 03/27 & 04/02
Note:	Injected additional 250 gal at the end to make up for unused lactate and bicarb.							
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-14	20-30	8.17	15	29.4	102.9	572.1	675	3/26
Note:								
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-15	20-30	5.82	16	49.4	152.9	774.1	927	03/27 & 03/30
Note:	Injected additional 250 gal at the end to make up for unused lactate and bicarb.							
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-16	20-30	16.92	21	29.4	102.9	572.1	675	03/23
Note:								
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-17	20-30	21.63	50	18.95	66.31	368.69	435	03/21 - 03/22
Note:	The pressure increased dramatically from 20-30 psi range to 50 psi.							
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-18	20-30	19.88	28	42.03	147.11	824.89	972	03/20 - 03/22
Note:	Added remaining 290 gal from IP17 into IP18.							
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-19	20-30	27.88	60	18.25	63.87	355.13	419	3/22
Note:	The pressure increased dramatically from 20-30 psi range to 40-60 psi range.							



INJECTION LOG

Page 3 of 4

Project	Former General Time Facility		H&A File No.	128752-004				
Location	Athens, Georgia		Project Manager	N. Alla				
Client	Carpenter Technology Corporation		Field Representative	B. Durrette				
Contractor	GeoLab		Date	03/19/18 - 04/02/18				
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-20	20-30	18.08	24	29.4	102.9	572.1	675	3/21
Note:								
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-21	20-30	24.88	33	29.97	104.88	583.12	688	03/21 - 03/22
Note:								
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-22	20-30	25.71	34	29.4	102.9	570.1	673	3/22
Note:								
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-23	20-30	22.84	34	89.98	189.95	978.05	1,168	03/20 & 03/22 & 04/02
Note:	Added remaining 243 gal from IP19 into IP23. Also, injected additional 250 gal at the end to make up for unused lactate and bicarb.							
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-24	20-30	30.5	38	29.4	102.9	602.1	705	3/21
Note:								
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-25	20-30	21.6	90	27.22	95.28	529.72	625	03/21
Note:	The pressure increased dramatically from 20-30 psi range to 60-90 psi range.							
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-26	20-30	19.32	28	29.4	102.9	572.1	675	03/20
Note:								
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-27	20-30	15.5	22	29.4	102.9	579.1	682	3/23
Note:								
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-28	20-30	15.15	23	29.4	102.9	572.1	675	3/28
Note:								



INJECTION LOG

Page 4 of 4

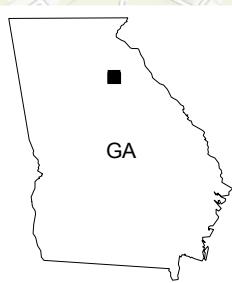
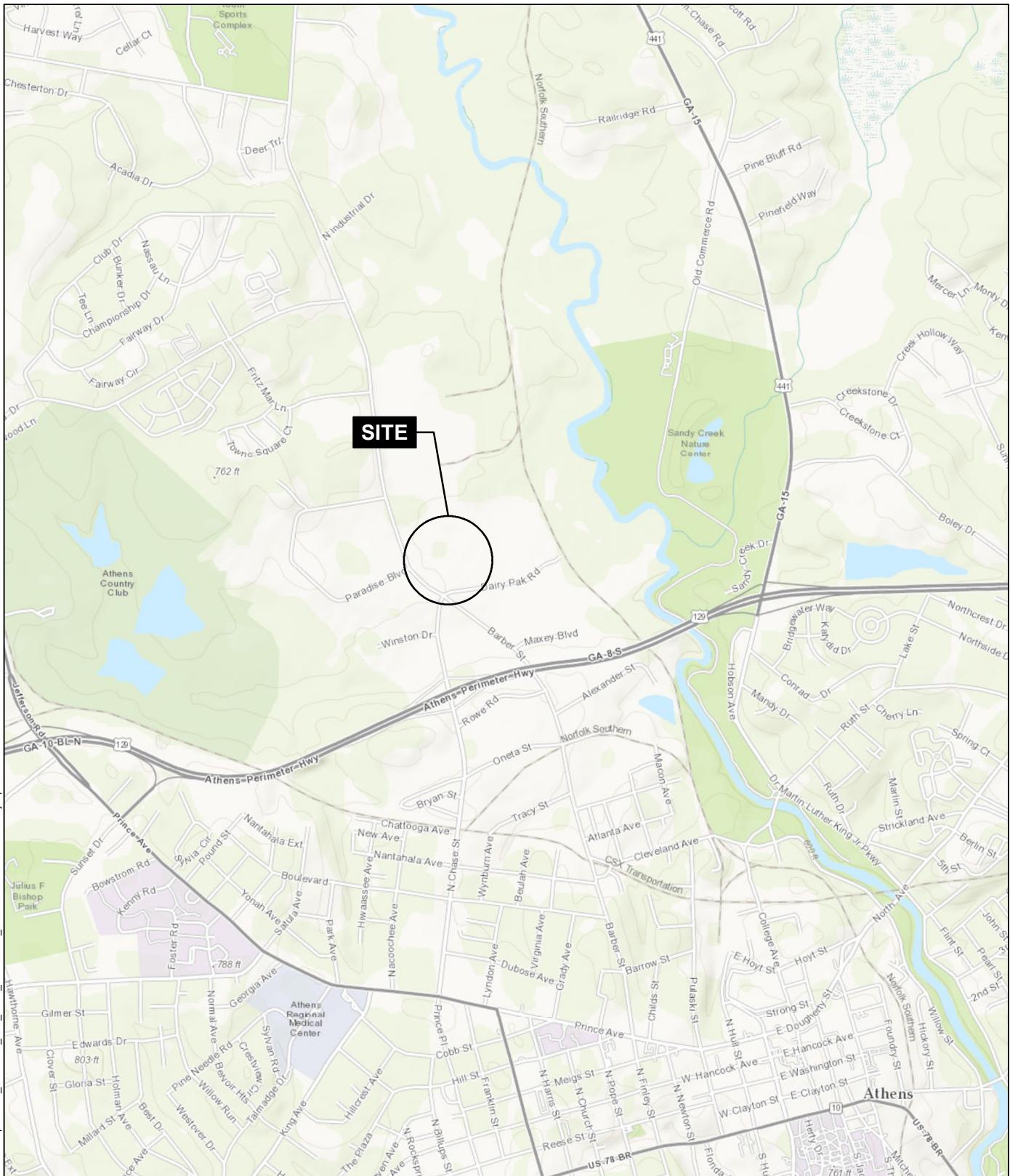
Project	Former General Time Facility		H&A File No.	128752-004				
Location	Athens, Georgia		Project Manager	N. Alla				
Client	Carpenter Technology Corporation		Field Representative	B. Durrette				
Contractor	GeoLab		Date	03/19/18 - 04/02/18				
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-29	20-30	20.07	25	29.4	102.9	572.1	675	3/29
Note:								
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-30	20-30	18.38	24	29.4	102.9	572.1	675	03/27 - 03/28
Note:								
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-31	20-30	16.75	26	29.4	102.9	572.1	675	3/29
Note:								
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-32	20-30	17.46	18	29.4	102.9	579.1	682	3/27
Note:								
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-33	20-30	13.41	23	27.22	95.28	529.72	625	3/28
Note:	Daylighting occurred through cracks on the ground next to nearby column. This column was between IP33 and IP34 (only 2-4 feet away from IP33).							
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-34	20-30	19.13	22	29.18	102.14	567.86	670	03/26 - 03/27
Note:								
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
IP-35	20-30	13.5	18	31.58	110.52	614.48	725	03/28 - 03/29
Note:	Added remaining 50 gal from IP33 into IP35.							
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
Note:								
Injection Point	Injection Depth (ft)	Average Injection Pressure (psi)	Maximum Injection Pressure (psi)	Sodium Bisulfite (lbs)	Volume of Lactate (gal)	Volume of Chase Water (gal)	Total Volume of Reagents (gal)	Date of Injection
Note:								

TABLE VI
PROJECT MILESTONE SCHEDULE
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

No.	TASK	2013				2014				2015				2016				2017				2018				2019				
		Q1	Q2	Q3	Q4																									
1	VRP Application Submittal				■																									
2	Delineation																													
3	Semiannual Groundwater and Surface Water Sampling																													
5	Supplemental Remedial Activities								■	■				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
6	Semiannual Reporting									■				■																
7	Compliance Status Report Submittal																										■			

NOTES: VRP application was approved on April 16, 2014

FIGURES



MAP SOURCE: ESRI
USGS QUAD: ATHENS WEST
SITE COORDINATES: 82°23'13"N, 33°58'50"E

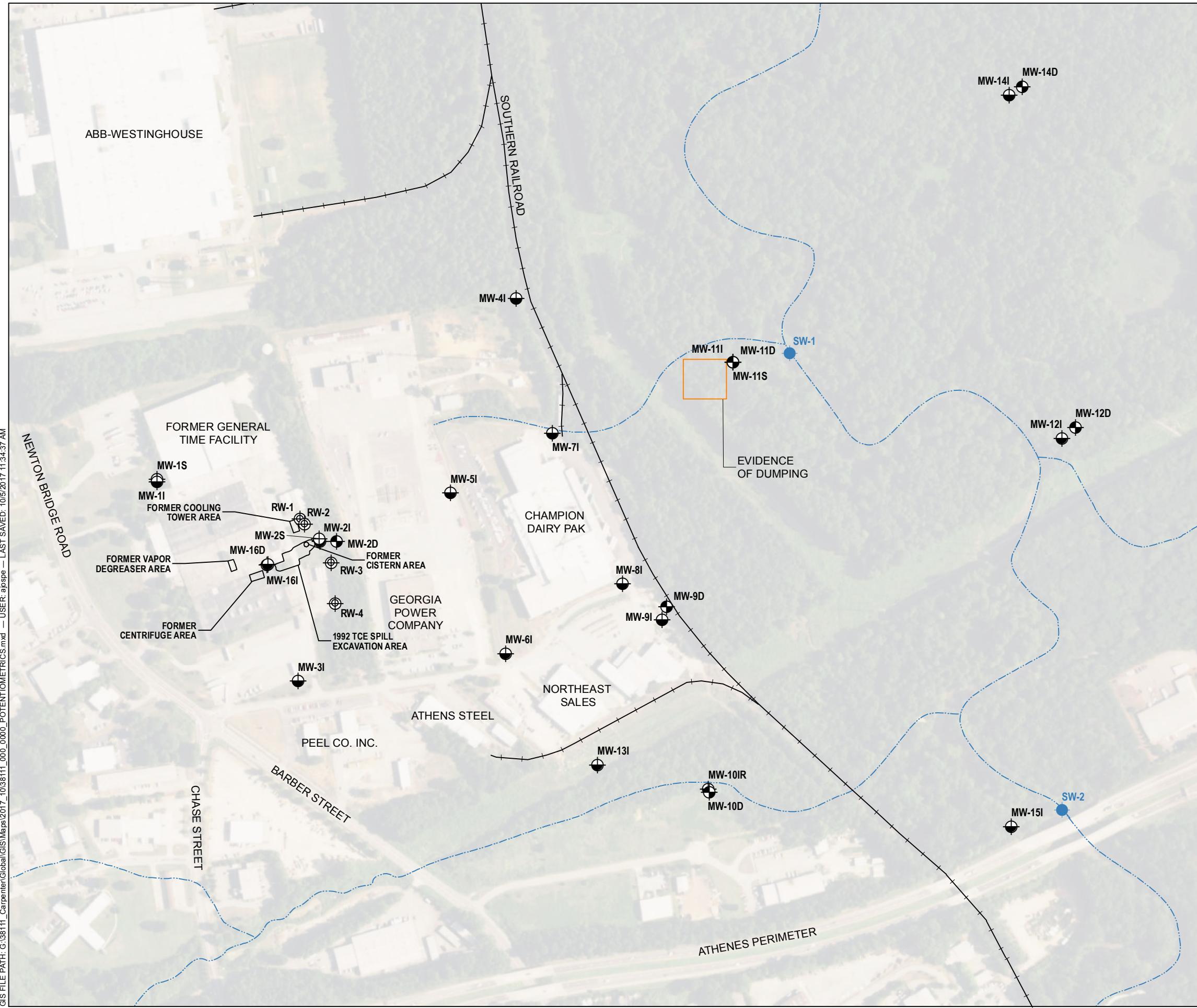
**HALEY
ALDRICH**

GENERAL TIME FACILITY
ATHENS, GEORGIA

SITE LOCATION MAP

APPROXIMATE SCALE: 1 IN = 2000 FT
OCTOBER 2016

FIGURE 1

**LEGEND**

- NORTH OCONEE RIVER SURFACE WATER SAMPLING LOCATION
- SHALLOW MONITORING WELL
- INTERMEDIATE MONITORING WELL
- DEEP MONITORING WELL
- RECOVERY MONITORING WELL
- STREAM
- RAILROAD

NOTES

- ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
- AERIAL IMAGERY SOURCE: ESRI



0 400 800
SCALE IN FEET

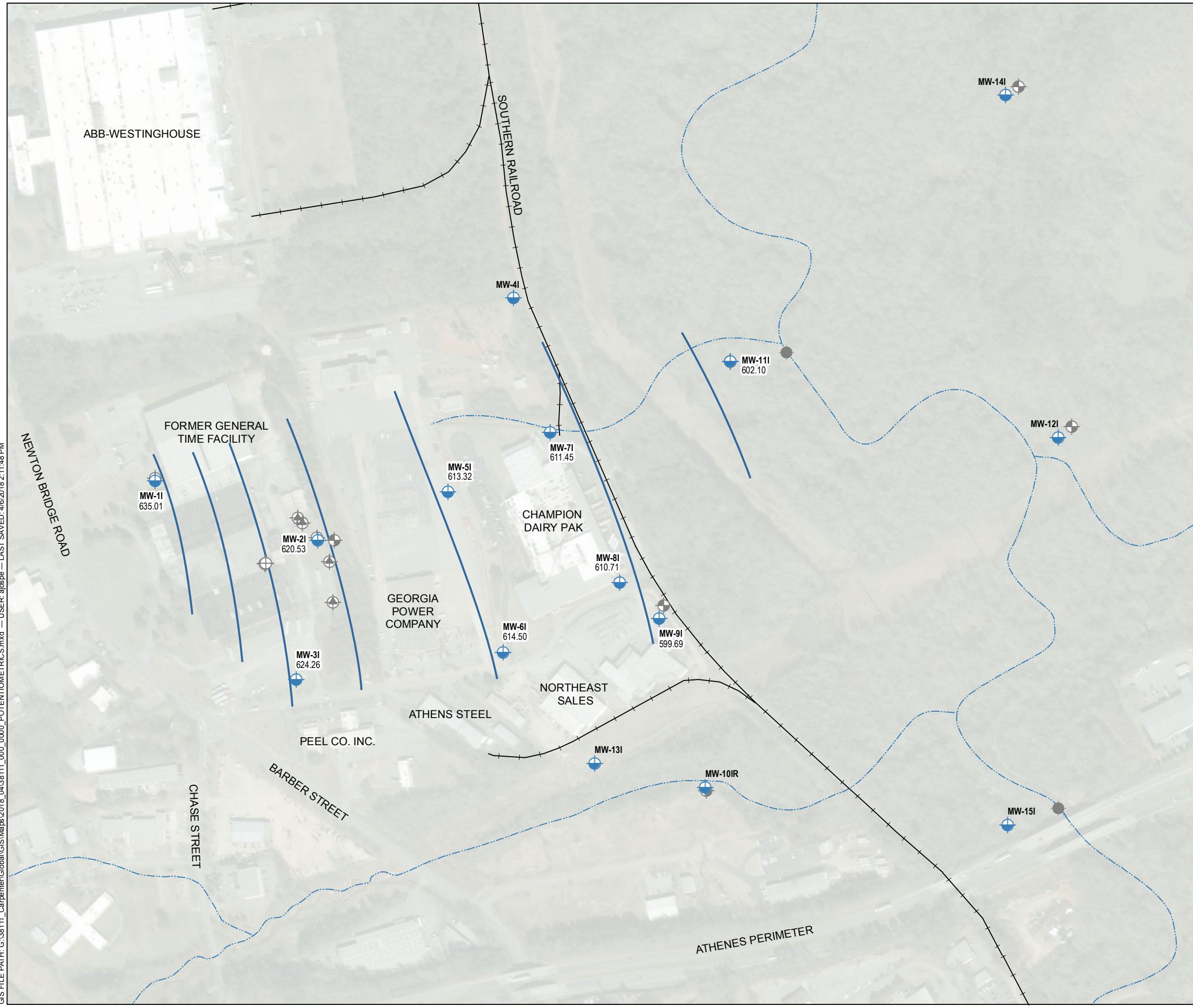
HALEY ALDRICH

GENERAL TIME FACILITY
ATHENS, GEORGIA

SITE MAP SHOWING SAMPLE LOCATIONS AND SUSPECTED SOURCE AREAS

OCTOBER 2017

FIGURE 2

**LEGEND**

- INTERMEDIATE MONITORING WELL WITH ID AND GROUNDWATER ELEVATION INDICATED IN FEET ABOVE MEAN SEA LEVEL (WHERE SAMPLED)
- NORTH OCONEE RIVER SURFACE WATER SAMPLING LOCATION
- SHALLOW MONITORING WELL
- DEEP MONITORING WELL
- RECOVERY MONITORING WELL
- GROUNDWATER ELEVATION CONTOUR, IN FEET ABOVE MEAN SEA LEVEL, 2-FT INTERVAL
- STREAM
- RAILROAD

NOTES

- ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
- AERIAL IMAGERY SOURCE: ESRI



0 400 800
SCALE IN FEET

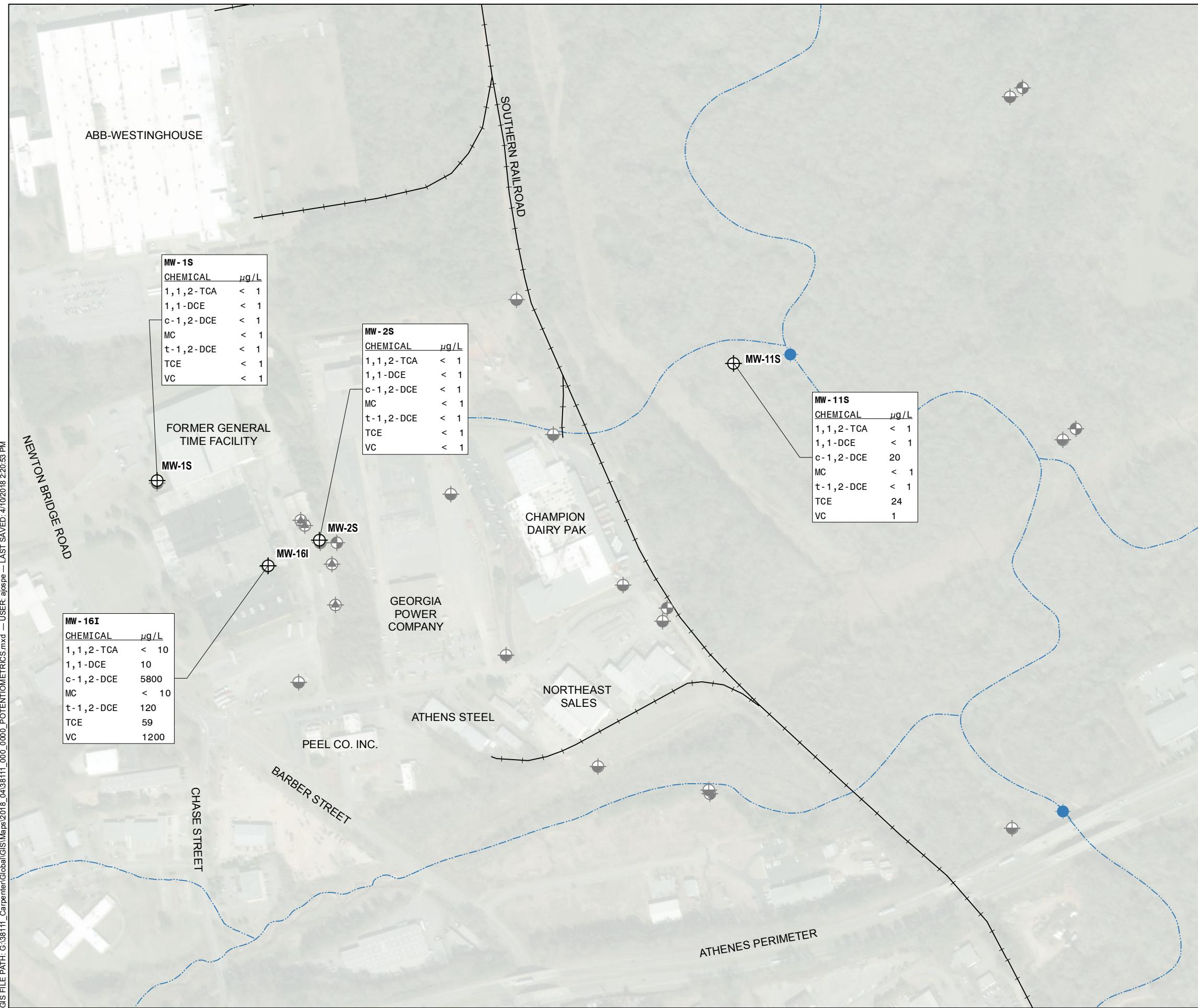
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ALDRICH

GENERAL TIME FACILITY
ATHENS, GEORGIA

POTENTIOMETRIC SURFACE
MARCH 2018

APRIL 2018

FIGURE 3

**LEGEND**

- SHALLOW MONITORING WELL
- INTERMEDIATE MONITORING WELL
- DEEP MONITORING WELL
- RECOVERY MONITORING WELL
- North Oconee River Surface Water Sample
- Stream
- Railroad

NOTES

- ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
- ACRONYMS:
 - 1,1,2-TCA = 1,1,2-TRICHLOROETHANE
 - 1,1-DCE = 1,1-DICHLOROETHENE
 - c-1,2-DCE = cis-1,2-DICHLOROETHENE
 - MC = METHYLENE CHLORIDE
 - t-1,2-DCE = trans-1,2-DICHLOROETHENE
 - TCE = TRICHLOROETHENE
 - VC = VINYL CHLORIDE
- AERIAL IMAGERY SOURCE: ESRI



0 400 800
SCALE IN FEET

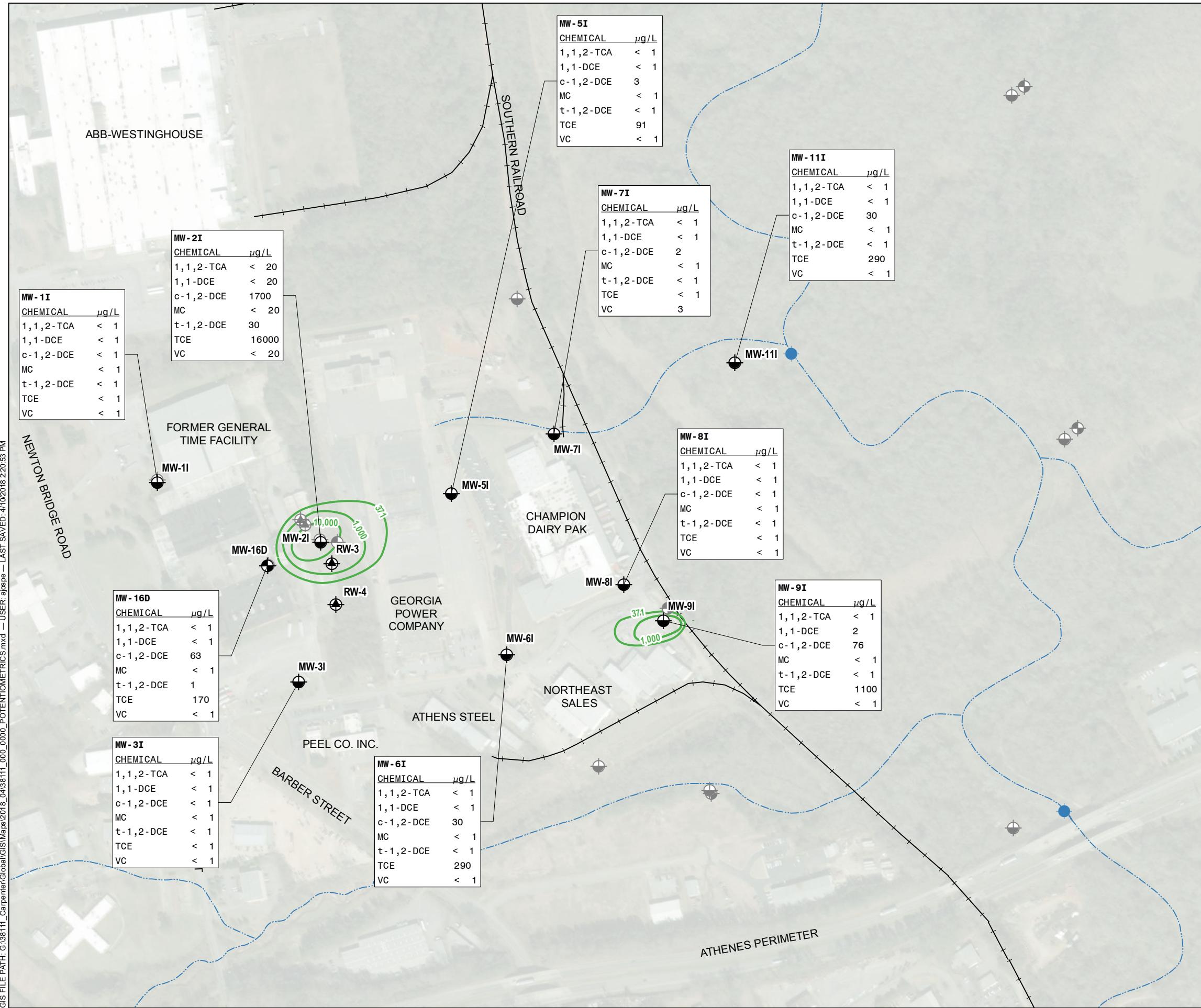
HALEY ALDRICH

GENERAL TIME FACILITY
ATHENS, GEORGIA

DISTRIBUTION OF TCE IN
SHALLOW GROUNDWATER
MARCH 2018

APRIL 2018

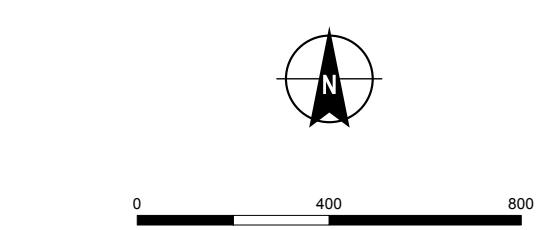
FIGURE 4

**LEGEND**

- SHALLOW MONITORING WELL
- INTERMEDIATE MONITORING WELL
- DEEP MONITORING WELL
- RECOVERY MONITORING WELL
- NORTH OCONEE RIVER SURFACE WATER SAMPLE
- TCE ISOCONCENTRATION CONTOUR µg/L, DASHED WHERE INFERRED
- STREAM
- RAILROAD

NOTES

- ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
- ACRONYMS:
 - 1,1,2-TCA = 1,1,2-TRICHLOROETHANE
 - 1,1-DCE = 1,1-DICHLOROETHENE
 - c-1,2-DCE = cis-1,2-DICHLOROETHENE
 - MC = METHYLENE CHLORIDE
 - t-1,2-DCE = trans-1,2-DICHLOROETHENE
 - TCE = TRICHLOROETHENE
 - VC = VINYL CHLORIDE
- AERIAL IMAGERY SOURCE: ESRI



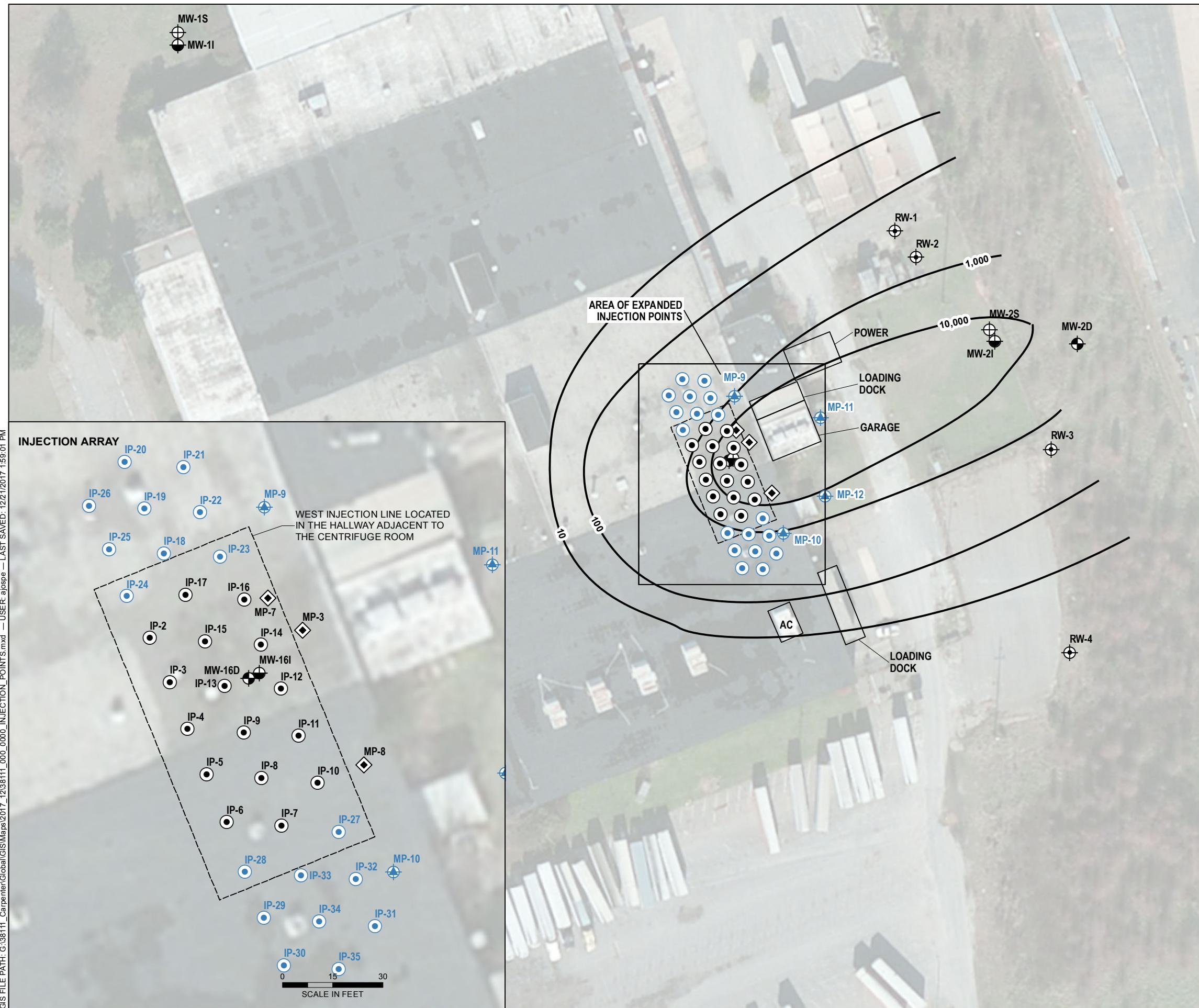
**HALEY
ALDRICH**

GENERAL TIME FACILITY
ATHENS, GEORGIA

DISTRIBUTION OF TCE IN
INTERMEDIATE GROUNDWATER
MARCH 2018

APRIL 2018

FIGURE 5

**LEGEND**

- PROPOSED INJECTION POINT
- PROPOSED MONITORING WELL
- ◆ BASELINE AND POST-REMEDIATION MONITORING WELL LOCATION
- INJECTION POINT LOCATION
- SHALLOW MONITORING WELL
- INTERMEDIATE MONITORING WELL
- DEEP MONITORING WELL
- RECOVERY MONITORING WELL
- TCE ISO-CONCENTRATION CONTOUR IN µg/L (JULY 2011)

NOTES

1. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE.
2. AERIAL IMAGERY SOURCE: ESRI



0 80 160
SCALE IN FEET

HALEY ALDRICH

GENERAL TIME FACILITY
ATHENS, GEORGIA

INJECTION POINTS AND
BASELINE POST-REMEDIATION
MONITORING WELLS

DECEMBER 2017

FIGURE 6

APPENDIX A

Analytical Report



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Carpenter Technology Corp.-PA
PO Box 14662
Reading PA 19612-4662

Report Date: January 31, 2018 18:45

Project: Former General Time

Account #: 00435
Group Number: 1899106
PO Number: 128752-004
State of Sample Origin: GA

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>. To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To	Haley Aldrich	Attn: Shawn Lewis
Electronic Copy To	Carpenter Technology Corp.-PA	Attn: Mike Reichardt
Electronic Copy To	Carpenter Technology Corp.	Attn: Amie Chafin

Respectfully Submitted,


Jordan Zito
Project Manager

(717) 556-7289



SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
MP-9 Grab Groundwater	01/17/2018 09:51	9415985
MW-16I Grab Groundwater	01/17/2018 10:57	9415986
MP-10 Grab Groundwater	01/17/2018 12:04	9415987
MP-8 Grab Groundwater	01/17/2018 14:22	9415988
MP-3 Grab Groundwater	01/17/2018 15:10	9415989
MP-7 Grab Groundwater	01/17/2018 09:48	9415990
MW-16D Grab Groundwater	01/17/2018 10:56	9415991
MP-12 Grab Groundwater	01/17/2018 14:38	9415992
MP-11 Grab Groundwater	01/17/2018 15:20	9415993
Trip Blank Water	01/17/2018	9415994

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.



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Sample Description: MP-9 Grab Groundwater
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9415985
ELLE Group #: 1899106
Matrix: Groundwater

Project Name: Former General Time

Submittal Date/Time: 01/19/2018 11:00

Collection Date/Time: 01/17/2018 09:51

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles					
10335	1,1-Dichloroethene	75-35-4	< 20	20	20
10335	cis-1,2-Dichloroethene	156-59-2	1,700	20	20
10335	trans-1,2-Dichloroethene	156-60-5	< 20	20	20
10335	Methylene Chloride	75-09-2	< 20	20	20
10335	1,1,2-Trichloroethane	79-00-5	< 20	20	20
10335	Trichloroethene	79-01-6	6,200	200	200
10335	Vinyl Chloride	75-01-4	< 20	20	20
GC Miscellaneous					
07105	Ethane	74-84-0	< 5.0	5.0	1
07105	Ethene	74-85-1	< 5.0	5.0	1
07105	Methane	74-82-8	10	5.0	1
Metals					
01754	Iron	7439-89-6	< 0.200	0.200	1
Wet Chemistry					
00228	Sulfate	14808-79-8	< 5.0	5.0	5
00273	Total Organic Carbon	n.a.	< 1.0	1.0	1
08344	Ferrous Iron	n.a.	0.079	0.050	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P180291AA	01/30/2018 03:24	Kevin D Kelly	20
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P180291AA	01/30/2018 03:49	Kevin D Kelly	200
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P180291AA	01/30/2018 03:24	Kevin D Kelly	20
01163	GC/MS VOA Water Prep	SW-846 5030B	2	P180291AA	01/30/2018 03:49	Kevin D Kelly	200
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	180220021A	01/22/2018 13:02	Johanna C Kennedy	1
01754	Iron	SW-846 6010B	1	180210184801	01/23/2018 19:59	Elaine F Stoltzfus	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	180210184801	01/23/2018 07:20	Nicholas W Shroyer	1
00228	Sulfate	EPA 300.0	1	18021249117A	01/21/2018 13:57	Zachary W Enck	5
00273	Total Organic Carbon	SM 5310 C-2000	1	18023667606A	01/23/2018 23:21	Drew M Gerhart	1
08344	Ferrous Iron	SM 3500-Fe B 1997	1	18027834401A	01/27/2018 04:20	Daniel S Smith	1

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Sample Description: MW-16I Grab Groundwater
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9415986
ELLE Group #: 1899106
Matrix: Groundwater

Project Name: Former General Time

Submittal Date/Time: 01/19/2018 11:00

Collection Date/Time: 01/17/2018 10:57

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	SW-846 8260B		ug/l	ug/l	
10335	1,1-Dichloroethene	75-35-4	< 10	10	10
10335	cis-1,2-Dichloroethene	156-59-2	4,100	100	100
10335	trans-1,2-Dichloroethene	156-60-5	90	10	10
10335	Methylene Chloride	75-09-2	< 10	10	10
10335	1,1,2-Trichloroethane	79-00-5	< 10	10	10
10335	Trichloroethene	79-01-6	29	10	10
10335	Vinyl Chloride	75-01-4	530	10	10
GC Miscellaneous	RSKSOP-175 modified		ug/l	ug/l	
07105	Ethane	74-84-0	< 5.0	5.0	1
07105	Ethene	74-85-1	4,500	100	20
07105	Methane	74-82-8	4,900	100	20
Metals	SW-846 6010B		mg/l	mg/l	
01754	Iron	7439-89-6	14.7	0.200	1
Wet Chemistry	EPA 300.0		mg/l	mg/l	
00228	Sulfate	14808-79-8	10.8	5.0	5
00273	Total Organic Carbon	n.a.	73.2	5.0	5
08344	Ferrous Iron	n.a.	13.8	2.5	50

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P180292AA	01/30/2018 01:01	Kevin D Kelly	10
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P180292AA	01/30/2018 01:27	Kevin D Kelly	100
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P180292AA	01/30/2018 01:01	Kevin D Kelly	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	P180292AA	01/30/2018 01:27	Kevin D Kelly	100
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	180220021A	01/22/2018 13:39	Johanna C Kennedy	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	180220021A	01/23/2018 13:51	Johanna C Kennedy	20
01754	Iron	SW-846 6010B	1	180210184801	01/23/2018 20:03	Elaine F Stoltzfus	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	180210184801	01/23/2018 07:20	Nicholas W Shroyer	1
00228	Sulfate	EPA 300.0	1	18021249117A	01/21/2018 14:39	Zachary W Enck	5
00273	Total Organic Carbon	SM 5310 C-2000	1	18023667606B	01/24/2018 00:21	Drew M Gerhart	5

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Sample Description: MW-16I Grab Groundwater
Carpenter Site - Athens, GA**Carpenter Technology Corp.-PA**
ELLE Sample #: WW 9415986
ELLE Group #: 1899106
Matrix: Groundwater**Project Name:** Former General Time**Submittal Date/Time:** 01/19/2018 11:00**Collection Date/Time:** 01/17/2018 10:57**Laboratory Sample Analysis Record**

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08344	Ferrous Iron	SM 3500-Fe B 1997	1	18027834401A	01/27/2018 04:20	Daniel S Smith	50



Sample Description: MP-10 Grab Groundwater
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9415987
ELLE Group #: 1899106
Matrix: Groundwater

Project Name: Former General Time

Submittal Date/Time: 01/19/2018 11:00

Collection Date/Time: 01/17/2018 12:04

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	SW-846 8260B		ug/l	ug/l	
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	600	20	20
10335	trans-1,2-Dichloroethene	156-60-5	6	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	460	20	20
10335	Vinyl Chloride	75-01-4	21	1	1
GC Miscellaneous	RSKSOP-175 modified		ug/l	ug/l	
07105	Ethane	74-84-0	< 5.0	5.0	1
07105	Ethene	74-85-1	11	5.0	1
07105	Methane	74-82-8	76	5.0	1
Metals	SW-846 6010B		mg/l	mg/l	
01754	Iron	7439-89-6	2.67	0.200	1
Wet Chemistry	EPA 300.0		mg/l	mg/l	
00228	Sulfate	14808-79-8	144	50.0	50
00273	Total Organic Carbon	n.a.	3.1	1.0	1
	SM 5310 C-2000		mg/l	mg/l	
08344	Ferrous Iron	n.a.	1.0	0.10	2
	SM 3500-Fe B 1997		mg/l	mg/l	

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P180292AA	01/29/2018 23:18	Kevin D Kelly	1
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P180292AA	01/29/2018 23:44	Kevin D Kelly	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P180292AA	01/29/2018 23:18	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	P180292AA	01/29/2018 23:44	Kevin D Kelly	20
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	180220021A	01/22/2018 13:57	Johanna C Kennedy	1
01754	Iron	SW-846 6010B	1	180210184801	01/23/2018 20:13	Elaine F Stoltzfus	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	180210184801	01/23/2018 07:20	Nicholas W Shroyer	1
00228	Sulfate	EPA 300.0	1	18021249117A	01/21/2018 14:53	Zachary W Enck	50
00273	Total Organic Carbon	SM 5310 C-2000	1	18023667606B	01/24/2018 00:37	Drew M Gerhart	1
08344	Ferrous Iron	SM 3500-Fe B 1997	1	18027834401A	01/27/2018 04:20	Daniel S Smith	2

Sample Description: MP-8 Grab Groundwater
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9415988
ELLE Group #: 1899106
Matrix: Groundwater

Project Name: Former General Time

Submittal Date/Time: 01/19/2018 11:00

Collection Date/Time: 01/17/2018 14:22

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
	GC/MS Volatiles	SW-846 8260B	ug/l	ug/l	
10335	1,1-Dichloroethene	75-35-4	< 50	50	50
10335	cis-1,2-Dichloroethene	156-59-2	26,000	500	500
10335	trans-1,2-Dichloroethene	156-60-5	120	50	50
10335	Methylene Chloride	75-09-2	< 50	50	50
10335	1,1,2-Trichloroethane	79-00-5	< 50	50	50
10335	Trichloroethene	79-01-6	4,600	50	50
10335	Vinyl Chloride	75-01-4	750	50	50
	GC Miscellaneous	RSKSOP-175 modified	ug/l	ug/l	
07105	Ethane	74-84-0	< 5.0	5.0	1
07105	Ethene	74-85-1	600	25	5
07105	Methane	74-82-8	100	5.0	1
	Metals	SW-846 6010B	mg/l	mg/l	
01754	Iron	7439-89-6	10.4	0.200	1
	Wet Chemistry	EPA 300.0	mg/l	mg/l	
00228	Sulfate	14808-79-8	37.0	20.0	20
		SM 5310 C-2000	mg/l	mg/l	
00273	Total Organic Carbon	n.a.	38.3	2.0	2
		SM 3500-Fe B 1997	mg/l	mg/l	
08344	Ferrous Iron	n.a.	11.4	5.0	100

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P180292AA	01/30/2018 03:37	Kevin D Kelly	50
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P180292AA	01/30/2018 04:03	Kevin D Kelly	500
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P180292AA	01/30/2018 03:37	Kevin D Kelly	50
01163	GC/MS VOA Water Prep	SW-846 5030B	2	P180292AA	01/30/2018 04:03	Kevin D Kelly	500
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	180220021A	01/22/2018 14:16	Johanna C Kennedy	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	180220021A	01/23/2018 14:10	Johanna C Kennedy	5
01754	Iron	SW-846 6010B	1	180210184801	01/23/2018 20:16	Elaine F Stoltzfus	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	180210184801	01/23/2018 07:20	Nicholas W Shroyer	1
00228	Sulfate	EPA 300.0	1	18021249117A	01/21/2018 15:07	Zachary W Enck	20
00273	Total Organic Carbon	SM 5310 C-2000	1	18023667606B	01/24/2018 00:51	Drew M Gerhart	2

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Sample Description: MP-8 Grab Groundwater
Carpenter Site - Athens, GA**Carpenter Technology Corp.-PA**
ELLE Sample #: WW 9415988
ELLE Group #: 1899106
Matrix: Groundwater**Project Name:** Former General Time**Submittal Date/Time:** 01/19/2018 11:00**Collection Date/Time:** 01/17/2018 14:22**Laboratory Sample Analysis Record**

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08344	Ferrous Iron	SM 3500-Fe B 1997	1	18027834401A	01/27/2018 04:20	Daniel S Smith	100

Sample Description: MP-3 Grab Groundwater
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9415989
ELLE Group #: 1899106
Matrix: Groundwater

Project Name: Former General Time

Submittal Date/Time: 01/19/2018 11:00
Collection Date/Time: 01/17/2018 15:10

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	SW-846 8260B		ug/l	ug/l	
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	130	1	1
10335	trans-1,2-Dichloroethene	156-60-5	21	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	71	1	1
GC Miscellaneous	RSKSOP-175 modified		ug/l	ug/l	
07105	Ethane	74-84-0	53	5.0	1
07105	Ethene	74-85-1	180	5.0	1
07105	Methane	74-82-8	24,000	1,000	200
A preserved vial was submitted for analysis. However, the pH at the time of analysis was 3.					
Metals	SW-846 6010B		mg/l	mg/l	
01754	Iron	7439-89-6	8.22	0.200	1
Wet Chemistry	EPA 300.0		mg/l	mg/l	
00228	Sulfate	14808-79-8	11.4	5.0	5
SM 5310 C-2000			mg/l	mg/l	
00273	Total Organic Carbon	n.a.	266	25.0	25
SM 3500-Fe B 1997			mg/l	mg/l	
08344	Ferrous Iron	n.a.	8.5	2.5	50

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P180292AA	01/29/2018 21:35	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P180292AA	01/29/2018 21:35	Kevin D Kelly	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	180220021A	01/22/2018 14:35	Johanna C Kennedy	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	180220021A	01/23/2018 14:28	Johanna C Kennedy	200
01754	Iron	SW-846 6010B	1	180210184801	01/23/2018 20:20	Elaine F Stoltzfus	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	180210184801	01/23/2018 07:20	Nicholas W Shroyer	1
00228	Sulfate	EPA 300.0	1	18021249217A	01/22/2018 19:04	Zachary W Enck	5
00273	Total Organic Carbon	SM 5310 C-2000	1	18023667606B	01/24/2018 01:24	Drew M Gerhart	25
08344	Ferrous Iron	SM 3500-Fe B 1997	1	18027834401A	01/27/2018 04:20	Daniel S Smith	50

Sample Description: MP-7 Grab Groundwater
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9415990
ELLE Group #: 1899106
Matrix: Groundwater

Project Name: Former General Time

Submittal Date/Time: 01/19/2018 11:00
Collection Date/Time: 01/17/2018 09:48

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
	GC/MS Volatiles	SW-846 8260B	ug/l	ug/l	
10335	1,1-Dichloroethene	75-35-4	< 20	20	20
10335	cis-1,2-Dichloroethene	156-59-2	4,000	20	20
10335	trans-1,2-Dichloroethene	156-60-5	21	20	20
10335	Methylene Chloride	75-09-2	< 20	20	20
10335	1,1,2-Trichloroethane	79-00-5	< 20	20	20
10335	Trichloroethene	79-01-6	8,400	200	200
10335	Vinyl Chloride	75-01-4	190	20	20
	GC Miscellaneous	RSKSOP-175 modified	ug/l	ug/l	
07105	Ethane	74-84-0	< 5.0	5.0	1
07105	Ethene	74-85-1	76	5.0	1
07105	Methane	74-82-8	960	25	5
	Metals	SW-846 6010B	mg/l	mg/l	
01754	Iron	7439-89-6	12.2	0.200	1
	Wet Chemistry	EPA 300.0	mg/l	mg/l	
00228	Sulfate	14808-79-8	40.3	20.0	20
		SM 5310 C-2000	mg/l	mg/l	
00273	Total Organic Carbon	n.a.	3.1	1.0	1
		SM 3500-Fe B 1997	mg/l	mg/l	
08344	Ferrous Iron	n.a.	12.5	2.5	50

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P180292AA	01/30/2018 02:45	Kevin D Kelly	20
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P180292AA	01/30/2018 03:11	Kevin D Kelly	200
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P180292AA	01/30/2018 02:45	Kevin D Kelly	20
01163	GC/MS VOA Water Prep	SW-846 5030B	2	P180292AA	01/30/2018 03:11	Kevin D Kelly	200
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	180220021A	01/22/2018 14:53	Johanna C Kennedy	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	180220021A	01/23/2018 14:47	Johanna C Kennedy	5
01754	Iron	SW-846 6010B	1	180210184801	01/23/2018 20:23	Elaine F Stoltzfus	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	180210184801	01/23/2018 07:20	Nicholas W Shroyer	1
00228	Sulfate	EPA 300.0	1	18021249217A	01/21/2018 22:10	Zachary W Enck	20
00273	Total Organic Carbon	SM 5310 C-2000	1	18023667606B	01/24/2018 01:40	Drew M Gerhart	1

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Sample Description: MP-7 Grab Groundwater
Carpenter Site - Athens, GA**Carpenter Technology Corp.-PA**
ELLE Sample #: WW 9415990
ELLE Group #: 1899106
Matrix: Groundwater**Project Name:** Former General Time**Submittal Date/Time:** 01/19/2018 11:00**Collection Date/Time:** 01/17/2018 09:48**Laboratory Sample Analysis Record**

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08344	Ferrous Iron	SM 3500-Fe B 1997	1	18027834401A	01/27/2018 04:20	Daniel S Smith	50

Sample Description: MW-16D Grab Groundwater
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9415991
ELLE Group #: 1899106
Matrix: Groundwater

Project Name: Former General Time

Submittal Date/Time: 01/19/2018 11:00
Collection Date/Time: 01/17/2018 10:56

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	SW-846 8260B		ug/l	ug/l	
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	80	1	1
10335	trans-1,2-Dichloroethene	156-60-5	1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	210	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1
GC Miscellaneous	RSKSOP-175 modified		ug/l	ug/l	
07105	Ethane	74-84-0	< 5.0	5.0	1
07105	Ethene	74-85-1	< 5.0	5.0	1
07105	Methane	74-82-8	< 5.0	5.0	1
Metals	SW-846 6010B		mg/l	mg/l	
01754	Iron	7439-89-6	< 0.200	0.200	1
Wet Chemistry	EPA 300.0		mg/l	mg/l	
00228	Sulfate	14808-79-8	8.3	5.0	5
00273	Total Organic Carbon	n.a.	< 1.0	1.0	1
08344	Ferrous Iron	n.a.	< 0.050	0.050	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P180292AA	01/29/2018 22:27	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P180292AA	01/29/2018 22:27	Kevin D Kelly	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	180220021A	01/22/2018 15:12	Johanna C Kennedy	1
01754	Iron	SW-846 6010B	1	180210184801	01/23/2018 20:27	Elaine F Stoltzfus	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	180210184801	01/23/2018 07:20	Nicholas W Shroyer	1
00228	Sulfate	EPA 300.0	1	18021249217A	01/21/2018 21:13	Zachary W Enck	5
00273	Total Organic Carbon	SM 5310 C-2000	1	18023667606B	01/24/2018 01:55	Drew M Gerhart	1
08344	Ferrous Iron	SM 3500-Fe B 1997	1	18027834401A	01/27/2018 04:20	Daniel S Smith	1

Sample Description: MP-12 Grab Groundwater
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9415992
ELLE Group #: 1899106
Matrix: Groundwater

Project Name: Former General Time

Submittal Date/Time: 01/19/2018 11:00

Collection Date/Time: 01/17/2018 14:38

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
	GC/MS Volatiles	SW-846 8260B	ug/l	ug/l	
10335	1,1-Dichloroethene	75-35-4	< 10	10	10
10335	cis-1,2-Dichloroethene	156-59-2	1,100	10	10
10335	trans-1,2-Dichloroethene	156-60-5	< 10	10	10
10335	Methylene Chloride	75-09-2	< 10	10	10
10335	1,1,2-Trichloroethane	79-00-5	< 10	10	10
10335	Trichloroethene	79-01-6	3,200	100	100
10335	Vinyl Chloride	75-01-4	11	10	10
	GC Miscellaneous	RSKSOP-175 modified	ug/l	ug/l	
07105	Ethane	74-84-0	5.4	5.0	1
07105	Ethene	74-85-1	< 5.0	5.0	1
07105	Methane	74-82-8	1,400	50	10
	Metals	SW-846 6010B	mg/l	mg/l	
01754	Iron	7439-89-6	1.54	0.200	1
	Wet Chemistry	EPA 300.0	mg/l	mg/l	
00228	Sulfate	14808-79-8	< 5.0	5.0	5
		SM 5310 C-2000	mg/l	mg/l	
00273	Total Organic Carbon	n.a.	1.1	1.0	1
		SM 3500-Fe B 1997	mg/l	mg/l	
08344	Ferrous Iron	n.a.	1.3	0.10	2

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P180292AA	01/30/2018 01:53	Kevin D Kelly	10
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P180292AA	01/30/2018 02:19	Kevin D Kelly	100
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P180292AA	01/30/2018 01:53	Kevin D Kelly	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	P180292AA	01/30/2018 02:19	Kevin D Kelly	100
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	180220021A	01/22/2018 15:30	Johanna C Kennedy	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	180220021A	01/23/2018 15:05	Johanna C Kennedy	10
01754	Iron	SW-846 6010B	1	180210184801	01/23/2018 20:30	Elaine F Stoltzfus	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	180210184801	01/23/2018 07:20	Nicholas W Shroyer	1
00228	Sulfate	EPA 300.0	1	18021249217A	01/21/2018 22:24	Zachary W Enck	5
00273	Total Organic Carbon	SM 5310 C-2000	1	18023667606B	01/24/2018 02:10	Drew M Gerhart	1

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Sample Description: MP-12 Grab Groundwater
Carpenter Site - Athens, GA**Carpenter Technology Corp.-PA**
ELLE Sample #: WW 9415992
ELLE Group #: 1899106
Matrix: Groundwater**Project Name:** Former General Time**Submittal Date/Time:** 01/19/2018 11:00**Collection Date/Time:** 01/17/2018 14:38**Laboratory Sample Analysis Record**

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08344	Ferrous Iron	SM 3500-Fe B 1997	1	18027834401A	01/27/2018 04:20	Daniel S Smith	2

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Sample Description: MP-11 Grab Groundwater
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9415993
ELLE Group #: 1899106
Matrix: Groundwater

Project Name: Former General Time

Submittal Date/Time: 01/19/2018 11:00
Collection Date/Time: 01/17/2018 15:20

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	SW-846 8260B		ug/l	ug/l	
10335	1,1-Dichloroethene	75-35-4	< 5	5	5
10335	cis-1,2-Dichloroethene	156-59-2	1,900	50	50
10335	trans-1,2-Dichloroethene	156-60-5	19	5	5
10335	Methylene Chloride	75-09-2	< 5	5	5
10335	1,1,2-Trichloroethane	79-00-5	< 5	5	5
10335	Trichloroethene	79-01-6	1,600	50	50
10335	Vinyl Chloride	75-01-4	170	5	5
GC Miscellaneous	RSKSOP-175 modified		ug/l	ug/l	
07105	Ethane	74-84-0	16	5.0	1
07105	Ethene	74-85-1	1,500	50	10
07105	Methane	74-82-8	3,500	50	10
Metals	SW-846 6010B		mg/l	mg/l	
01754	Iron	7439-89-6	27.9	0.200	1
Wet Chemistry	EPA 300.0		mg/l	mg/l	
00228	Sulfate	14808-79-8	12.8	5.0	5
00273	Total Organic Carbon	n.a.	16.7	1.0	1
08344	Ferrous Iron	n.a.	28.5	2.5	50

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P180292AA	01/30/2018 00:10	Kevin D Kelly	5
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P180292AA	01/30/2018 00:36	Kevin D Kelly	50
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P180292AA	01/30/2018 00:10	Kevin D Kelly	5
01163	GC/MS VOA Water Prep	SW-846 5030B	2	P180292AA	01/30/2018 00:36	Kevin D Kelly	50
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	180220021A	01/22/2018 15:49	Johanna C Kennedy	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	180220021A	01/23/2018 15:24	Johanna C Kennedy	10
01754	Iron	SW-846 6010B	1	180210184801	01/23/2018 20:33	Elaine F Stoltzfus	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	180210184801	01/23/2018 07:20	Nicholas W Shroyer	1
00228	Sulfate	EPA 300.0	1	18021249217A	01/21/2018 23:06	Zachary W Enck	5
00273	Total Organic Carbon	SM 5310 C-2000	1	18023667606B	01/24/2018 02:25	Drew M Gerhart	1

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Sample Description: MP-11 Grab Groundwater
Carpenter Site - Athens, GA**Carpenter Technology Corp.-PA**
ELLE Sample #: WW 9415993
ELLE Group #: 1899106
Matrix: Groundwater**Project Name:** Former General Time**Submittal Date/Time:** 01/19/2018 11:00**Collection Date/Time:** 01/17/2018 15:20**Laboratory Sample Analysis Record**

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
08344	Ferrous Iron	SM 3500-Fe B 1997	1	18027834401A	01/27/2018 04:20	Daniel S Smith	50

Sample Description: Trip Blank Water
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9415994
ELLE Group #: 1899106
Matrix: Water

Project Name: Former General Time

Submittal Date/Time: 01/19/2018 11:00
Collection Date/Time: 01/17/2018

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
	GC/MS Volatiles	SW-846 8260B	ug/l	ug/l	
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P180291AA	01/29/2018 19:13	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P180291AA	01/29/2018 19:13	Kevin D Kelly	1

Quality Control Summary

Client Name: Carpenter Technology Corp.-PA
Reported: 01/31/2018 18:45

Group Number: 1899106

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result ug/l	LOQ ug/l
Batch number: P180291AA	Sample number(s): 9415985,9415994	
1,1-Dichloroethene	< 1	1
cis-1,2-Dichloroethene	< 1	1
trans-1,2-Dichloroethene	< 1	1
Methylene Chloride	< 1	1
1,1,2-Trichloroethane	< 1	1
Trichloroethene	< 1	1
Vinyl Chloride	< 1	1
Batch number: P180292AA	Sample number(s): 9415986-9415993	
1,1-Dichloroethene	< 1	1
cis-1,2-Dichloroethene	< 1	1
trans-1,2-Dichloroethene	< 1	1
Methylene Chloride	< 1	1
1,1,2-Trichloroethane	< 1	1
Trichloroethene	< 1	1
Vinyl Chloride	< 1	1
Batch number: 180220021A	Sample number(s): 9415985-9415993	
Ethane	< 5.0	5.0
Ethene	< 5.0	5.0
Methane	< 5.0	5.0
	mg/l	mg/l
Batch number: 180210184801	Sample number(s): 9415985-9415993	
Iron	< 0.200	0.200
Batch number: 18021249117A	Sample number(s): 9415985-9415988	
Sulfate	< 1.0	1.0
Batch number: 18021249217A	Sample number(s): 9415989-9415993	
Sulfate	< 1.0	1.0
Batch number: 18023667606A	Sample number(s): 9415985	
Total Organic Carbon	< 1.0	1.0
Batch number: 18023667606B	Sample number(s): 9415986-9415993	
Total Organic Carbon	< 1.0	1.0
Batch number: 18027834401A	Sample number(s): 9415985-9415993	
Ferrous Iron	< 0.050	0.050

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Carpenter Technology Corp.-PA
Reported: 01/31/2018 18:45

Group Number: 1899106

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: P180291AA									
1,1-Dichloroethene	20	22.18			111		76-124		
cis-1,2-Dichloroethene	20	21.84			109		80-120		
trans-1,2-Dichloroethene	20	21.9			109		80-120		
Methylene Chloride	20	21.24			106		80-120		
1,1,2-Trichloroethane	20	21.65			108		80-120		
Trichloroethene	20	21.28			106		80-120		
Vinyl Chloride	20	18.32			92		63-121		
Batch number: P180292AA									
1,1-Dichloroethene	20	22.89			114		76-124		
cis-1,2-Dichloroethene	20	22.65			113		80-120		
trans-1,2-Dichloroethene	20	22.98			115		80-120		
Methylene Chloride	20	22.49			112		80-120		
1,1,2-Trichloroethane	20	20.73			104		80-120		
Trichloroethene	20	21.58			108		80-120		
Vinyl Chloride	20	18.76			94		63-121		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 180220021A									
Ethane	58.4	61.4	58.4	57.87	105	99	85-115	6	20
Ethene	60.8	63.57	60.8	59.15	105	97	83-115	7	20
Methane	59.8	66.1	59.8	62.46	111	104	85-115	6	20
	mg/l	mg/l	mg/l	mg/l					
Batch number: 180210184801									
Iron	1.00	0.970				97		80-120	
	mg/l	mg/l	mg/l	mg/l					
Batch number: 18021249117A									
Sulfate	7.50	6.88				92		90-110	
Batch number: 18021249217A									
Sulfate	7.50	6.94				93		90-110	
Batch number: 18023667606A									
Total Organic Carbon	25	24.86				99		91-113	
Batch number: 18023667606B									
Total Organic Carbon	25	24.86				99		91-113	
	mg/l	mg/l	mg/l	mg/l					
Batch number: 18027834401A									
Ferrous Iron	0.400	0.403				101		93-105	

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Carpenter Technology Corp.-PA
Reported: 01/31/2018 18:45

Group Number: 1899106

LCS/LCSD (continued)

Analysis Name	LCS Spike Added mg/l	LCS Conc mg/l	LCSD Spike Added mg/l	LCSD Conc mg/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
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MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: P180291AA										
1,1-Dichloroethene	< 1	20	28.41	20	28.38	142*	142*	76-124	0	30
cis-1,2-Dichloroethene	4.99	20	30.52	20	30.68	128*	128*	80-120	1	30
trans-1,2-Dichloroethene	< 1	20	25.22	20	25.73	126*	129*	80-120	2	30
Methylene Chloride	< 1	20	24.32	20	25.11	122*	126*	80-120	3	30
1,1,2-Trichloroethane	< 1	20	21.64	20	22.2	108	111	80-120	3	30
Trichloroethene	9.23	20	34.04	20	34.72	124*	127*	80-120	2	30
Vinyl Chloride	< 1	20	22.51	20	23.31	113	117	63-121	3	30
Batch number: P180292AA										
1,1-Dichloroethene	< 1	20	26.61	20	27.25	133*	136*	76-124	2	30
cis-1,2-Dichloroethene	< 1	20	25.5	20	25.35	127*	127*	80-120	1	30
trans-1,2-Dichloroethene	< 1	20	16.88	20	26.04	84	130*	80-120	43*	30
Methylene Chloride	< 1	20	25.42	20	25.16	127*	126*	80-120	1	30
1,1,2-Trichloroethane	< 1	20	21.41	20	21.69	107	108	80-120	1	30
Trichloroethene	< 1	20	24.13	20	24.26	121*	121*	80-120	1	30
Vinyl Chloride	< 1	20	22.62	20	22.05	113	110	63-121	3	30
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 180210184801										
Iron	Sample number(s): 9415985-9415993 UNSPK: P407335				< 0.200	1.00	0.937	1.00	0.928	94
	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Batch number: 18021249117A										
Sulfate	Sample number(s): 9415985-9415988 UNSPK: P416360				3.88	25	26.17			89*
	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Batch number: 18021249217A										
Sulfate	Sample number(s): 9415989-9415993 UNSPK: 9415991				8.33	25	32			95
	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Batch number: 18023667606A										
Total Organic Carbon	Sample number(s): 9415985 UNSPK: P415930				1.30	10	11			97
	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l
Batch number: 18023667606B										
Total Organic Carbon	Sample number(s): 9415986-9415993 UNSPK: P417076				10.35	10	19.33			90*
	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l	mg/l

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Carpenter Technology Corp.-PA
Reported: 01/31/2018 18:45

Group Number: 1899106

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc mg/l	MS Spike Added mg/l	MS Conc mg/l	MSD Spike Added mg/l	MSD Conc mg/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 18027834401A Ferrous Iron	Sample number(s): 9415985-9415993 UNSPK: 9415988 11.36	40	49.73	40	48.54	96	93	93-105	2	6

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc mg/l	DUP Conc mg/l	DUP RPD	DUP RPD Max
Batch number: 180210184801 Iron	Sample number(s): 9415985-9415993 BKG: P407335 < 0.200	< 0.200	0 (1)	20
Batch number: 18021249117A Sulfate	Sample number(s): 9415985-9415988 BKG: P416360 3.88	3.66	6 (1)	15
Batch number: 18021249217A Sulfate	Sample number(s): 9415989-9415993 BKG: 9415991 8.33	8.49	2 (1)	15
Batch number: 18023667606A Total Organic Carbon	Sample number(s): 9415985 BKG: P415930 1.30	1.29	1 (1)	9
Batch number: 18023667606B Total Organic Carbon	Sample number(s): 9415986-9415993 BKG: P417076 10.35	10.27	1	9
Batch number: 18027834401A Ferrous Iron	Sample number(s): 9415985-9415993 BKG: 9415988 11.36	12.05	6 (1)	6

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: P180291AA

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Carpenter Technology Corp.-PA
Reported: 01/31/2018 18:45

Group Number: 1899106

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: VOCs- 5ml Water by 8260B

Batch number: P180291AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9415985	104	100	101	109
9415994	112	102	104	107
Blank	108	102	105	108
LCS	110	103	104	105
MS	113	105	96	105
MSD	113	104	96	104
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260B

Batch number: P180292AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9415986	105	102	101	108
9415987	108	103	108	112
9415988	104	102	101	110
9415989	112	102	106	113
9415990	102	102	102	109
9415991	109	105	104	106
9415992	103	100	101	107
9415993	107	103	103	111
Blank	112	105	105	107
LCS	112	105	98	102
MS	114	105	96	102
MSD	114	106	96	98
Limits:	80-120	80-120	80-120	80-120

Analysis Name: Volatile Headspace Hydrocarbon

Batch number: 180220021A

	Propene
9415985	104
9415986	86
9415987	88
9415988	78
9415989	84
9415990	88
9415991	97
9415992	94
9415993	107

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Carpenter Technology Corp.-PA
Reported: 01/31/2018 18:45

Group Number: 1899106

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report. For dual column analyses, the surrogate (at least one surrogate for multi-surrogate tests) must be within the acceptance limits on at least one of the two columns.

Analysis Name: Volatile Headspace Hydrocarbon

Batch number: 180220021A

Propene

Blank	106
LCS	108
LCSD	104

Limits: 44-123

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # 1135

For Eurofins Lancaster Laboratories Environmental use only
Group # 1899106 Sample # 9115985-94

COC # 539676

Client Information				Matrix			Analysis Requested				For Lab Use Only		
Client:		Acct. #:		Matrix			Analysis Requested				For Lab Use Only		
Haley and Aldrich				<input type="checkbox"/> Tissue <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Sediment <input type="checkbox"/> Composite			N	H	H	O	FSC:		
Project Name/#: Former General Time		PWSID #:		<input checked="" type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Surface							SCR#:		
Project Manager: Nagi Alia		P.O. #: 128752-004									Preservation Codes		
Sampler: Sean Lewis and Jason Yon-Is		Quote #:									Preservation Codes		
State where samples were collected: GA		For Compliance: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>									Preservation Codes		
Sample Identification				Collected		Grab	Soil	Water	NPDES	Other:	Total # of Containers	Remarks	
				Date	Time								
MP-9				1-17-18	0951	X		X		10	X X X X X X	Run VOCs for site specific COCs	
MW-16I					1057	X		X		10	X X X X X X		
MP-10					1204	X		X		10	X X X X X X		
MP-8					1422	X		X		10	X X X X X X		
MP-3					1510	X		X		10	X X X X X X		
MP-7					948	X		X		10	X X X X X X		
MW-16D					1056	X		X		10	X X X X X X		
MP-12					1438	X		X		10	X X X X X X		
MP-11					1520	X		X		10	X X X X X X		
Turnaround Time (TAT) Requested (please circle)						Relinquished by		Date	Time	Received by	Date	Time	
Standard						<i>Cir N/A</i>		1/17/18	1615	<i>Sean Lewis</i>	1/17/18	1620	
(Rush TAT is subject to laboratory approval and surcharge.)						Relinquished by		Date	Time	Received by	Date	Time	
Date results are needed:						<i>Sean Lewis</i>		1-18-17	1600				
E-mail address:						Relinquished by		Date	Time	Received by	Date	Time	
Data Package Options (circle if required)						Relinquished by		Date	Time	Received by	Date	Time	
Type I (EPA Level 3 Equivalent/non-CLP)		Type VI (Raw Data Only)		Relinquished by		Date	Time	Received by	Date	Time			
Type III (Reduced non-CLP)		NJ DKQP	TX TRRP-13	Relinquished by		Date	Time	Received by	<i>LOB</i>	Time			
NYSDEC Category A or B		MA MCP	CT RCP	EDD Required?		Yes	No	Relinquished by Commercial Carrier:	UPS	FedEx	Other		
				If yes, format:									
				Site-Specific QC (MS/MSD/Dup)?		Yes	No	Temperature upon receipt	12/1/3 °C				
				(If yes, indicate QC sample and submit triplicate sample volume.)									

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The white copy should accompany samples to Eurofins Lancaster Laboratories Environmental. The yellow copy should be retained by the client.

Page 24 of 27

Client: Haley and Aldrich**Delivery and Receipt Information**

Delivery Method:	<u>Fed Ex</u>	Arrival Timestamp:	<u>01/19/2018 11:00</u>
Number of Packages:	<u>2</u>	Number of Projects:	<u>1</u>
State/Province of Origin:	<u>GA</u>		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace ≥ 6mm:	No
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	2
Samples Intact:	Yes	Trip Blank Type:	HCL
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Wyatt Shiffler (12792) at 13:46 on 01/19/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

<u>Cooler #</u>	<u>Thermometer ID</u>	<u>Corrected Temp</u>	<u>Therm. Type</u>	<u>Ice Type</u>	<u>Ice Present?</u>	<u>Ice Container</u>	<u>Elevated Temp?</u>
1	DT42-03	1.3	DT	Wet	Y	Bagged	N
2	DT42-01	1.2	DT	Wet	Y	Bagged	N

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mg	milligram(s)
C	degrees Celsius	mL	milliliter(s)
cfu	colony forming units	MPN	Most Probable Number
CP Units	cobalt-chloroplatinate units	N.D.	non-detect
F	degrees Fahrenheit	ng	nanogram(s)
g	gram(s)	NTU	nephelometric turbidity units
IU	International Units	pg/L	picogram/liter
kg	kilogram(s)	RL	Reporting Limit
L	liter(s)	TNTC	Too Numerous To Count
lb.	pound(s)	µg	microgram(s)
m3	cubic meter(s)	µL	microliter(s)
meq	milliequivalents	umhos/cm	micromhos/cm
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.

Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Carpenter Technology Corp.-PA
PO Box 14662
Reading PA 19612-4662

Report Date: April 04, 2018 09:06

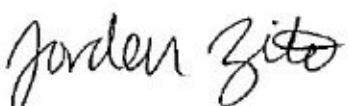
Project: Former General Time

Account #: 00435
Group Number: 1922955
PO Number: 128752-006
State of Sample Origin: GA

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/> . To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To	Haley Aldrich	Attn: Shawn Lewis
Electronic Copy To	Carpenter Technology Corp.-PA	Attn: Mike Reichardt
Electronic Copy To	Carpenter Technology Corp.	Attn: Amie Chafin

Respectfully Submitted,


Jordan Zito
Project Manager

(717) 556-7289



SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
MW-16I Grab Groundwater	03/19/2018 12:15	9519976
MW-16D Grab Groundwater	03/19/2018 12:25	9519977
MW-11 Grab Groundwater	03/20/2018 10:17	9519978
MW-1S Grab Groundwater	03/20/2018 10:30	9519979
MW-2I Grab Groundwater	03/20/2018 11:36	9519980
MW-2S Grab Groundwater	03/20/2018 11:40	9519981
RW-3 Grab Groundwater	03/20/2018 14:15	9519982
RW-4 Grab Groundwater	03/20/2018 14:35	9519983
MW-2D Grab Groundwater	03/20/2018 15:57	9519984
MW-3I Grab Groundwater	03/21/2018 09:40	9519985
MW-6I Grab Groundwater	03/21/2018 10:45	9519986
MW-5I Grab Groundwater	03/21/2018 11:50	9519987
MW-9D Grab Groundwater	03/21/2018 14:06	9519988
MW-9I Grab Groundwater	03/21/2018 14:10	9519989
MW-8I Grab Groundwater	03/21/2018 15:14	9519990
MW-7I Grab Groundwater	03/21/2018 15:55	9519991
SW-1 Grab Surface Water	03/22/2018 09:10	9519992
MW-11D Grab Groundwater	03/22/2018 09:40	9519993
MW-11I Grab Groundwater	03/22/2018 09:42	9519994
MW-11S Grab Groundwater	03/22/2018 10:37	9519995
SW-2 Grab Surface Water	03/22/2018 11:35	9519998
FB Grab Water	03/22/2018 12:40	9519999
TB Water	03/22/2018	9520000

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: MW-16I Grab Groundwater
Carpenter Site - Athens, GA**Carpenter Technology Corp.-PA**
ELLE Sample #: WW 9519976
ELLE Group #: 1922955
Matrix: Groundwater**Project Name:** Former General Time

Submittal Date/Time: 03/23/2018 10:15

Collection Date/Time: 03/19/2018 12:15

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10335	1,1-Dichloroethene	75-35-4	10	10	10
10335	cis-1,2-Dichloroethene	156-59-2	5,800	100	100
10335	trans-1,2-Dichloroethene	156-60-5	120	10	10
10335	Methylene Chloride	75-09-2	< 10	10	10
10335	1,1,2-Trichloroethane	79-00-5	< 10	10	10
10335	Trichloroethene	79-01-6	59	10	10
10335	Vinyl Chloride	75-01-4	1,200	10	10

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/19.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 21:20	Kevin D Kelly	10
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 21:42	Kevin D Kelly	100
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180891AA	03/30/2018 21:20	Kevin D Kelly	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Y180891AA	03/30/2018 21:42	Kevin D Kelly	100

Sample Description: MW-16D Grab Groundwater
Carpenter Site - Athens, GA**Carpenter Technology Corp.-PA**
ELLE Sample #: WW 9519977
ELLE Group #: 1922955
Matrix: Groundwater**Project Name:** Former General Time

Submittal Date/Time: 03/23/2018 10:15

Collection Date/Time: 03/19/2018 12:25

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	63	1	1
10335	trans-1,2-Dichloroethene	156-60-5	1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	170	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/19.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 15:06	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180891AA	03/30/2018 15:06	Kevin D Kelly	1

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Sample Description: MW-11 Grab Groundwater
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9519978
ELLE Group #: 1922955
Matrix: Groundwater

Project Name: Former General Time

Submittal Date/Time: 03/23/2018 10:15
Collection Date/Time: 03/20/2018 10:17

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
	GC/MS Volatiles	SW-846 8260B	ug/l	ug/l	
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/19.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 15:28	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180891AA	03/30/2018 15:28	Kevin D Kelly	1

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Sample Description: MW-1S Grab Groundwater
Carpenter Site - Athens, GA**Carpenter Technology Corp.-PA**
ELLE Sample #: WW 9519979
ELLE Group #: 1922955
Matrix: Groundwater**Project Name:** Former General Time

Submittal Date/Time: 03/23/2018 10:15

Collection Date/Time: 03/20/2018 10:30

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
	GC/MS Volatiles	SW-846 8260B	ug/l	ug/l	
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/19.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 15:50	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180891AA	03/30/2018 15:50	Kevin D Kelly	1

Sample Description: MW-2I Grab Groundwater
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9519980
ELLE Group #: 1922955
Matrix: Groundwater

Project Name: Former General Time

Submittal Date/Time: 03/23/2018 10:15
Collection Date/Time: 03/20/2018 11:36

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
	GC/MS Volatiles	SW-846 8260B	ug/l	ug/l	
10335	1,1-Dichloroethene	75-35-4	< 20	20	20
10335	cis-1,2-Dichloroethene	156-59-2	1,700	20	20
10335	trans-1,2-Dichloroethene	156-60-5	30	20	20
10335	Methylene Chloride	75-09-2	< 20	20	20
10335	1,1,2-Trichloroethane	79-00-5	< 20	20	20
10335	Trichloroethene	79-01-6	16,000	200	200
10335	Vinyl Chloride	75-01-4	< 20	20	20

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/19.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 22:48	Kevin D Kelly	20
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 23:10	Kevin D Kelly	200
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180891AA	03/30/2018 22:48	Kevin D Kelly	20
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Y180891AA	03/30/2018 23:10	Kevin D Kelly	200

Sample Description: MW-2S Grab Groundwater
Carpenter Site - Athens, GA**Carpenter Technology Corp.-PA**
ELLE Sample #: WW 9519981
ELLE Group #: 1922955
Matrix: Groundwater**Project Name:** Former General Time

Submittal Date/Time: 03/23/2018 10:15

Collection Date/Time: 03/20/2018 11:40

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/19.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 16:12	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180891AA	03/30/2018 16:12	Kevin D Kelly	1

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Sample Description: RW-3 Grab Groundwater
Carpenter Site - Athens, GA**Carpenter Technology Corp.-PA**
ELLE Sample #: WW 9519982
ELLE Group #: 1922955
Matrix: Groundwater**Project Name:** Former General Time

Submittal Date/Time: 03/23/2018 10:15

Collection Date/Time: 03/20/2008 14:15

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
	GC/MS Volatiles	SW-846 8260B	ug/l	ug/l	
10335	1,1-Dichloroethene	75-35-4	24	10	10
10335	cis-1,2-Dichloroethene	156-59-2	780	10	10
10335	trans-1,2-Dichloroethene	156-60-5	42	10	10
10335	Methylene Chloride	75-09-2	< 10	10	10
10335	1,1,2-Trichloroethane	79-00-5	< 10	10	10
10335	Trichloroethene	79-01-6	8,300	100	100
10335	Vinyl Chloride	75-01-4	< 10	10	10

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/19.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 22:04	Kevin D Kelly	10
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 22:26	Kevin D Kelly	100
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180891AA	03/30/2018 22:04	Kevin D Kelly	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Y180891AA	03/30/2018 22:26	Kevin D Kelly	100

Sample Description: RW-4 Grab Groundwater
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9519983
ELLE Group #: 1922955
Matrix: Groundwater

Project Name: Former General Time

Submittal Date/Time: 03/23/2018 10:15
Collection Date/Time: 03/20/2018 14:35

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles					
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	3	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/19.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 16:34	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180891AA	03/30/2018 16:34	Kevin D Kelly	1

Sample Description: MW-2D Grab Groundwater
Carpenter Site - Athens, GA**Carpenter Technology Corp.-PA**
ELLE Sample #: WW 9519984
ELLE Group #: 1922955
Matrix: Groundwater**Project Name:** Former General Time

Submittal Date/Time: 03/23/2018 10:15

Collection Date/Time: 03/20/2018 15:57

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
	GC/MS Volatiles	SW-846 8260B	ug/l	ug/l	
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	5	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1

Sample Comments

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All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 16:56	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180891AA	03/30/2018 16:56	Kevin D Kelly	1

Sample Description: MW-3I Grab Groundwater
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9519985
ELLE Group #: 1922955
Matrix: Groundwater

Project Name: Former General Time

Submittal Date/Time: 03/23/2018 10:15
Collection Date/Time: 03/21/2018 09:40

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles					
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1

Sample Comments

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All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 17:18	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180891AA	03/30/2018 17:18	Kevin D Kelly	1

Sample Description: MW-6I Grab Groundwater
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9519986
ELLE Group #: 1922955
Matrix: Groundwater

Project Name: Former General Time

Submittal Date/Time: 03/23/2018 10:15

Collection Date/Time: 03/21/2018 10:45

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	30	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	290	10	10
10335	Vinyl Chloride	75-01-4	< 1	1	1

Sample Comments

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All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 19:52	Kevin D Kelly	1
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 20:14	Kevin D Kelly	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180891AA	03/30/2018 19:52	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Y180891AA	03/30/2018 20:14	Kevin D Kelly	10

Sample Description: MW-5I Grab Groundwater
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9519987
ELLE Group #: 1922955
Matrix: Groundwater

Project Name: Former General Time

Submittal Date/Time: 03/23/2018 10:15
Collection Date/Time: 03/21/2018 11:50

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles					
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	3	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	91	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1

Sample Comments

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Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 17:40	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180891AA	03/30/2018 17:40	Kevin D Kelly	1

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Sample Description: MW-9D Grab Groundwater
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9519988
ELLE Group #: 1922955
Matrix: Groundwater

Project Name: Former General Time

Submittal Date/Time: 03/23/2018 10:15
Collection Date/Time: 03/21/2018 14:06

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
	GC/MS Volatiles	SW-846 8260B	ug/l	ug/l	
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	2	1	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/19.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 18:02	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180891AA	03/30/2018 18:02	Kevin D Kelly	1

Sample Description: MW-9I Grab Groundwater
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9519989
ELLE Group #: 1922955
Matrix: Groundwater

Project Name: Former General Time

Submittal Date/Time: 03/23/2018 10:15
Collection Date/Time: 03/21/2018 14:10

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10335	1,1-Dichloroethene	75-35-4	2	1	1
10335	cis-1,2-Dichloroethene	156-59-2	76	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	1,100	10	10
10335	Vinyl Chloride	75-01-4	< 1	1	1

Sample Comments

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All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 20:36	Kevin D Kelly	1
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 20:58	Kevin D Kelly	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180891AA	03/30/2018 20:36	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Y180891AA	03/30/2018 20:58	Kevin D Kelly	10

Sample Description: MW-8I Grab Groundwater
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9519990
ELLE Group #: 1922955
Matrix: Groundwater

Project Name: Former General Time

Submittal Date/Time: 03/23/2018 10:15
Collection Date/Time: 03/21/2018 15:14

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
	GC/MS Volatiles	SW-846 8260B	ug/l	ug/l	
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1

Sample Comments

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All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 18:24	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180891AA	03/30/2018 18:24	Kevin D Kelly	1

Sample Description: MW-7I Grab Groundwater
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9519991
ELLE Group #: 1922955
Matrix: Groundwater

Project Name: Former General Time

Submittal Date/Time: 03/23/2018 10:15
Collection Date/Time: 03/21/2018 15:55

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	2	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	3	1	1

Sample Comments

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All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 18:46	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180891AA	03/30/2018 18:46	Kevin D Kelly	1

Sample Description: SW-1 Grab Surface Water
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9519992
ELLE Group #: 1922955
Matrix: Surface Water

Project Name: Former General Time

Submittal Date/Time: 03/23/2018 10:15
Collection Date/Time: 03/22/2018 09:10

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/19.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 19:08	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180891AA	03/30/2018 19:08	Kevin D Kelly	1

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Sample Description: MW-11D Grab Groundwater
Carpenter Site - Athens, GA**Carpenter Technology Corp.-PA**
ELLE Sample #: WW 9519993
ELLE Group #: 1922955
Matrix: Groundwater**Project Name:** Former General Time

Submittal Date/Time: 03/23/2018 10:15

Collection Date/Time: 03/22/2018 09:40

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1

Sample Comments

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All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180891AA	03/30/2018 19:30	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180891AA	03/30/2018 19:30	Kevin D Kelly	1

Sample Description: MW-11I Grab Groundwater
Carpenter Site - Athens, GA**Carpenter Technology Corp.-PA**
ELLE Sample #: WW 9519994
ELLE Group #: 1922955
Matrix: Groundwater**Project Name:** Former General Time

Submittal Date/Time: 03/23/2018 10:15

Collection Date/Time: 03/22/2018 09:42

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles SW-846 8260B					
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	30	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	290	10	10
10335	Vinyl Chloride	75-01-4	< 1	1	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/19.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180932AA	04/03/2018 17:54	Linda C Pape	1
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180932AA	04/03/2018 18:16	Linda C Pape	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180932AA	04/03/2018 17:54	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Y180932AA	04/03/2018 18:16	Linda C Pape	10

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Sample Description: MW-11S Grab Groundwater
Carpenter Site - Athens, GA**Carpenter Technology Corp.-PA**
ELLE Sample #: WW 9519995
ELLE Group #: 1922955
Matrix: Groundwater**Project Name:** Former General Time

Submittal Date/Time: 03/23/2018 10:15

Collection Date/Time: 03/22/2018 10:37

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
	GC/MS Volatiles	SW-846 8260B	ug/l	ug/l	
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	20	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	24	1	1
10335	Vinyl Chloride	75-01-4	1	1	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/19.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180932AA	04/03/2018 17:11	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180932AA	04/03/2018 17:11	Linda C Pape	1

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Sample Description: SW-2 Grab Surface Water
Carpenter Site - Athens, GA**Carpenter Technology Corp.-PA**
ELLE Sample #: WW 9519998
ELLE Group #: 1922955
Matrix: Surface Water**Project Name:** Former General Time

Submittal Date/Time: 03/23/2018 10:15

Collection Date/Time: 03/22/2018 11:35

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
	GC/MS Volatiles	SW-846 8260B	ug/l	ug/l	
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/19.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180932AA	04/03/2018 17:32	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180932AA	04/03/2018 17:32	Linda C Pape	1

Sample Description: FB Grab Water
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9519999
ELLE Group #: 1922955
Matrix: Water

Project Name: Former General Time

Submittal Date/Time: 03/23/2018 10:15
Collection Date/Time: 03/22/2018 12:40

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles					
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/19.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180932AA	04/03/2018 16:26	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180932AA	04/03/2018 16:26	Linda C Pape	1

Sample Description: TB Water
Carpenter Site - Athens, GA

Carpenter Technology Corp.-PA
ELLE Sample #: WW 9520000
ELLE Group #: 1922955
Matrix: Water

Project Name: Former General Time

Submittal Date/Time: 03/23/2018 10:15
Collection Date/Time: 03/22/2018

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
	GC/MS Volatiles	SW-846 8260B	ug/l	ug/l	
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/19.

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y180932AA	04/03/2018 16:48	Linda C Pape	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Y180932AA	04/03/2018 16:48	Linda C Pape	1

Quality Control Summary

Client Name: Carpenter Technology Corp.-PA
Reported: 04/04/2018 09:06

Group Number: 1922955

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result ug/l	LOQ ug/l
Batch number: Y180891AA		
1,1-Dichloroethene	< 1	1
cis-1,2-Dichloroethene	< 1	1
trans-1,2-Dichloroethene	< 1	1
Methylene Chloride	< 1	1
1,1,2-Trichloroethane	< 1	1
Trichloroethene	< 1	1
Vinyl Chloride	< 1	1
Batch number: Y180932AA		
1,1-Dichloroethene	< 1	1
cis-1,2-Dichloroethene	< 1	1
trans-1,2-Dichloroethene	< 1	1
Methylene Chloride	< 1	1
1,1,2-Trichloroethane	< 1	1
Trichloroethene	< 1	1
Vinyl Chloride	< 1	1

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: Y180891AA									
1,1-Dichloroethene	20	21.82	20	21.74	109	109	80-131	0	30
cis-1,2-Dichloroethene	20	20.04	20	19.96	100	100	80-120	0	30
trans-1,2-Dichloroethene	20	21	20	20.45	105	102	80-120	3	30
Methylene Chloride	20	21.01	20	21.08	105	105	80-120	0	30
1,1,2-Trichloroethane	20	19.05	20	19.1	95	95	80-120	0	30
Trichloroethene	20	19.59	20	19.55	98	98	80-120	0	30
Vinyl Chloride	20	17.81	20	17.52	89	88	68-120	2	30
Batch number: Y180932AA									
1,1-Dichloroethene	20	22.06	20	22.19	110	111	80-131	1	30
cis-1,2-Dichloroethene	20	19.65	20	19.86	98	99	80-120	1	30
trans-1,2-Dichloroethene	20	20.33	20	20.27	102	101	80-120	0	30
Methylene Chloride	20	20.41	20	20.64	102	103	80-120	1	30

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Carpenter Technology Corp.-PA
Reported: 04/04/2018 09:06

Group Number: 1922955

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
1,1,2-Trichloroethane	20	18.5	20	18.58	93	93	80-120	0	30
Trichloroethene	20	19.07	20	19.44	95	97	80-120	2	30
Vinyl Chloride	20	15.04	20	15.47	75	77	68-120	3	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260B

Batch number: Y180891AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9519976	106	102	97	89
9519977	104	100	96	88
9519978	102	101	96	87
9519979	104	105	96	87
9519980	106	103	98	86
9519981	105	103	96	86
9519982	107	106	99	86
9519983	105	103	96	86
9519984	105	103	96	86
9519985	105	104	96	86
9519986	107	103	98	87
9519987	104	103	98	88
9519988	104	103	96	85
9519989	108	103	98	86
9519990	104	101	97	86
9519991	104	104	96	86
9519992	107	105	96	85
9519993	99	96	94	88
Blank	101	102	97	89
LCS	103	100	98	95
LCSD	102	100	98	95
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260B

Batch number: Y180932AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9519994	105	103	96	86
9519995	104	103	96	87
9519998	104	103	95	87

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Carpenter Technology Corp.-PA
Reported: 04/04/2018 09:06

Group Number: 1922955

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: VOCs- 5ml Water by 8260B

Batch number: Y180932AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9519999	104	102	95	87
9520000	105	103	95	86
Blank	103	101	96	88
LCS	101	99	98	96
LCSD	102	99	97	95
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # 435

For Eurofins Lancaster Laboratories Environmental use only

Group # 1722955 Sample # 9319976-2000

COC # 546691

Client Information			Matrix			Analysis Requested			For Lab Use Only						
						Preservation Codes									
						<u>H</u>									
Client: <u>Halley and Aldrich</u>	Acct. #:		<input type="checkbox"/> Soil	<input type="checkbox"/> Sediment	<input type="checkbox"/> Tissue	<input type="checkbox"/> Potable	<input type="checkbox"/> Ground	<input type="checkbox"/> Surface	<input type="checkbox"/> NPDES	<input type="checkbox"/> Other:	Total # of Containers <u>VOCs*</u>				
Project Name/#: <u>Former General Tire</u>	PWSID #:														
Project Manager: <u>N. Alla</u>	P.O. #:	<u>128752-COL</u>													
Sampler: <u>J. Younts N. Clancy</u>	Quote #:														
State where samples were collected: <u>GA</u>	For Compliance: <u>Yes</u> <input type="checkbox"/> <u>No</u> <input type="checkbox"/>		<input type="checkbox"/> Grab	<input type="checkbox"/> Composite											
Sample Identification		Collected													
		Date	Time												
MW-16-I	3/19/18	1215	X		GW							*COL VOCs*			
MW-16-D	3/19/18	1335	X		GW							-1,1-DCE			
MW-1-I	3/20/18	1017	X		GW							-cis-1,2-DCE			
MW-1-S	3/20/18	1030	X		GW							-trans-1,2-DCE			
MW-2-I	3/20/18	1136	X		GW							-ML			
MW-2-S	3/20/18	1140	X		GW							-1,1,2-TCA			
RW-3	3/20/18	1415	X		GW							-TCE			
RW-4	3/20/18	1435	X		GW							-VC			
MW-2-D	3/20/18	1557	X		GW										
MW-3-I	3/21/18	940	X		GW										
Turnaround Time (TAT) Requested (please circle)						Relinquished by <u>Chelsi West</u>						Date <u>3/14/18</u> Time <u>13:30</u>	Received by	Date	Time
<input checked="" type="radio"/> Standard						Relinquished by <u>J. Younts</u>						Date <u>3/20/18</u> Time <u>1315</u>	Received by	Date	Time
(Rush TAT is subject to laboratory approval and surcharge.)						Relinquished by						Date	Time		
Date results are needed: _____						Relinquished by						Date	Time		
E-mail address: _____						Relinquished by						Date	Time		
Data Package Options (circle if required)						Relinquished by						Date	Time		
Type I (EPA Level 3 Equivalent/non-CLP)	Type VI (Raw Data Only)		EDD Required? Yes No						Relinquished by Commercial Carrier:			Date	Time		
Type III (Reduced non-CLP)	NJ DKQP	TX TRRP-13	If yes, format: _____						UPS	FedEx	✓ Other				
NYSDEC Category A or B	MA MCP	CT RCP	Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)						Temperature upon receipt <u>1.6</u> °C						

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7044 0216

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # 435

For Eurofins Lancaster Laboratories Environmental use only

Group # 1922955 Sample # 9819976-2000

COC # 546693

Client Information				Matrix			Analysis Requested						For Lab Use Only						
Client:		Acct. #:					Preservation Codes						FSC:						
Haley and Aldrich																			
Project Name/#: Former General Time		PWSID #:											SCR#:						
Project Manager: N. Alla		P.O. #: 128752-0006																	
Sampler: J. Vorts M. Clancy		Quote #:																	
State where samples were collected: GA		For Compliance: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																	
Sample Identification		Collected		Grab	Composite	Soil	<input type="checkbox"/> Sediment	<input type="checkbox"/> Tissue	<input type="checkbox"/> Potable	<input type="checkbox"/> Ground	<input type="checkbox"/> Surface	Other:	Total # of Containers	Preservation Codes					
		Date	Time																
MW-6I	3/21/18	1045	X		Glo													*Site COC VOCs	
MW-5I	3/21/18	1150	X		Glo														
MW-4I	3/21/18	1406	X		Glo														
MW-9I	3/21/18	1416	X		Glo														
MW-8I	3/21/18	1514	X		Glo														
MW-7I	3/21/18	1555	X		Glo														
SW-1	3/22/18	910	X		Sw														
MW-11D	3/22/18	940	X		Glo														
MW-11E	3/22/18	942	X		Glo														
MW-11S	3/22/18	1037	X		Glo														
Turnaround Time (TAT) Requested (please circle)				Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____															
<input checked="" type="radio"/> Standard Rush (Rush TAT is subject to laboratory approval and surcharge.)				Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____															
Date results are needed: _____				Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____															
E-mail address: _____				Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____															
Data Package Options (circle if required) Type I (EPA Level 3 Equivalent/non-CLP)				Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____															
Type VI (Raw Data Only)				Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____															
Type III (Reduced non-CLP)				Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____															
NJ DKQP TX TRRP-13				EDD Required? Yes No If yes, format: _____															
NYSDEC Category A or B				Relinquished by Commercial Carrier: UPS <input type="checkbox"/> FedEx <input checked="" type="checkbox"/> Other															
MA MCP CT RCP				Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)															
				Temperature upon receipt <u>1.6</u> °C															

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Environmental Analysis Request/Chain of Custody

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Lancaster Laboratories
Environmental

Acct. # 435

For Eurofins Lancaster Laboratories Environmental use only

Group # 1922958 Sample # 9519976-2000

COC # 546692

Client Information				Matrix			Analysis Requested				For Lab Use Only		
Client:		Acct. #:		Matrix			Preservation Codes				For Lab Use Only		
Project Name/#:		PWSID #:		<input type="checkbox"/> Soil	<input type="checkbox"/> Sediment	<input type="checkbox"/> Tissue	<input type="checkbox"/> Potable	<input type="checkbox"/> Ground	<input type="checkbox"/> Surface	<input type="checkbox"/> NPDES	<input type="checkbox"/> Other:	FSC:	
Project Manager:		P.O. #:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	SCR#:	
Sampler:		Quote #:		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Preservation Codes	
State where samples were collected:		For Compliance:		<input checked="" type="checkbox"/> GA	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	H=HCl T=Thiosulfate N=NHO ₃ B=NaOH S=H ₂ SO ₄ O=Other	
Sample Identification				Collected		Grab	Composite	Total # of Containers	Remarks				
				Date	Time	<input type="checkbox"/>	<input type="checkbox"/>	VOCs*					
SW-2				3/22/18	1125	X	SW	3	X	Site specific COC			
FB				3/22/18	1240	X	W	3	X	VOCs (7 and 18)			
TB				3/22/18		X	W	1	X				
Turnaround Time (TAT) Requested (please circle)				Relinquished by		Date	Time	Received by	Date	Time			
<u>Standard</u>				<u>Rush</u>		<u>3/22/18</u>	<u>1325</u>	<u>Felix Gonzalez</u>	<u>3/23/18</u>	<u>10:15</u>			
(Rush TAT is subject to laboratory approval and surcharge.)				Relinquished by		Date	Time	Received by	Date	Time			
Date results are needed: _____				Relinquished by		Date	Time	Received by	Date	Time			
E-mail address: _____				Relinquished by		Date	Time	Received by	Date	Time			
Data Package Options (circle if required)				Relinquished by		Date	Time	Received by	Date	Time			
Type I (EPA Level 3 Equivalent/non-CLP)		Type VI (Raw Data Only)		Relinquished by		Date	Time	Received by	Date	Time			
Type III (Reduced non-CLP)		NJ DKQP	TX TRRP-13	Relinquished by		Date	Time	Received by	Felix Gonzalez	3/23/18 10:15			
				EDD Required? Yes If yes, format: _____		Yes No		Relinquished by Commercial Carrier: UPS FedEx Other					
NYSDEC Category A or B				Site-Specific QC (MS/MSD/Dup)? Yes (If yes, indicate QC sample and submit triplicate sample volume.)		Yes No		Temperature upon receipt <u>1.6</u> °C					

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7044 0216

Client: Haley and Aldrich**Delivery and Receipt Information**

Delivery Method: Fed Ex Arrival Timestamp: 03/23/2018 10:15
 Number of Packages: 1 Number of Projects: 1
 State/Province of Origin: GA

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	2
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Felix Gonzalez (13783) at 14:31 on 03/23/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

<u>Cooler #</u>	<u>Thermometer ID</u>	<u>Corrected Temp</u>	<u>Therm. Type</u>	<u>Ice Type</u>	<u>Ice Present?</u>	<u>Ice Container</u>	<u>Elevated Temp?</u>
1	DT42-01	1.6	DT	Wet	Y	Bagged	N

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mg	milligram(s)
C	degrees Celsius	mL	milliliter(s)
cfu	colony forming units	MPN	Most Probable Number
CP Units	cobalt-chloroplatinate units	N.D.	non-detect
F	degrees Fahrenheit	ng	nanogram(s)
g	gram(s)	NTU	nephelometric turbidity units
IU	International Units	pg/L	picogram/liter
kg	kilogram(s)	RL	Reporting Limit
L	liter(s)	TNTC	Too Numerous To Count
lb.	pound(s)	µg	microgram(s)
m3	cubic meter(s)	µL	microliter(s)
meq	milliequivalents	umhos/cm	micromhos/cm
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.

Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

APPENDIX B

Field Sampling Forms

TABLE III
POTENTIOMETRIC SURFACE DATA
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Page 1 of 1

Well Identifier	Date of Measurement	Time	Reference Point Elevation	Screened Interval (feet)	Depth to Water (feet)	Static Water Level Elevation (feet)	Notes
MW-1S	3/19/18	1409	641.3	14.5 - 4.5	7.15		obstruction @ ~7.5' b.t.o.c., roots?
MW-1I		1407	641.1	25 - 20	6.09		
MW-2S		1413	637.3	20 - 10	15.54		
MW-2I		1414	637.4	86.5 - 76.5	16.87		
MW-2D		1421	635.5	226.5 - 216.5	20.94		No lock
MW-3I		1428	639.7	99.5 - 89.5	15.44		
MW-5I		1440	623.5	41.5 - 31.5	10.18		Filled w/ water (manhole)
MW-6I		1447	622.8	71 - 61	8.30		
MW-7I		1510	619.1	36.5 - 26.5	7.65		
MW-8I		1502	618.7	15 - 5	7.99		
MW-9I		1458	613.2	54.5 - 44.5	13.51 *		cap under pressure
MW-9D		1505	613.4	201.4 - 181.4	4.73		
MW-11S		1520	611.0	13 - 3	7.95		
MW-11I		1519	610.9	32 - 22	8.80		
MW-11D		1518	611.9	287.3 - 277.3	8.89		
MW-16I		1140	643.6	30 - 20	18.35		
MW-16D		1145	643.6	57 - 47	18.30		
RW-1		1417	639.7	46.5 - 26.5	17.05		4" PVC
RW-2		1416	639.2	90 - 70	17.26		4" PVC
RW-3		1419	633.9	90 - 70	13.36		4" PVC
RW-4	↓	1424	633.7	95 - 75	12.35		4" PVC

HALEY
ALDRICH

SURFACE WATER SAMPLE LOG

Page 1 of 2

PROJECT	Former General Time Facility	H&A FILE NO.	128752-004
LOCATION	Athens, Georgia	PROJECT MGR.	N. Alla
CLIENT	Carpenter Technology Corporation	FIELD REP	J. Vonts
SUBCONTRACTOR	None	DATE	3/22/18

Sample ID SW-1
Date 3/22/18
Time 9:10
Weather Sunny, 50°F

DESCRIPTION OF SAMPLE LOCATION:

Name of Water Body North Oconee River
Depth of Water Unknown Velocity 1-2 ft/sec
Other Comments River higher than normal and turbid
Substrate Description sand, gravel
Location by MW-II well cluster
Description of Nearby Vegetation Large trees, Forest

FIELD PARAMETERS:

Sample Method Disposable poly. cup
Sample Description Cloudy - tan
Temperature (°C°F) 12.50 pH 8.58
Dissolved Oxygen (mg/L) 8.46 Conductivity (mS/cm) 0.065
Turbidity (NTU) 5.8 ORP (mV) -190

CONTAINER DESCRIPTION:

Laboratory Eurofins

Bottle Type 40 mL VOA	Analysis VOCs*	Preservative HCl
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Notes:

*Site specific COC

HALEY
ALDRICH

SURFACE WATER SAMPLE LOG

Page 2 of 2

PROJECT	Former General Time Facility	H&A FILE NO.	128752-004
LOCATION	Athens, Georgia	PROJECT MGR.	N. Alla
CLIENT	Carpenter Technology Corporation	FIELD REP	J. Yants
SUBCONTRACTOR	None	DATE	3/22/18

Sample ID SW-2
Date 3/22/18
Time 11:35
Weather Sunny, 50°F

DESCRIPTION OF SAMPLE LOCATION:

Name of Water Body North Oconee River
Depth of Water unknown Velocity ~1-2 ft/sec
Other Comments River higher than normal. Can't see river bottom
Substrate Description sand, gravel
Location At bridge of GA Route 129/10
Description of Nearby Vegetation Large trees, bushes

FIELD PARAMETERS:

Sample Method Disposable poly. cup
Sample Description Cloudy - tan

Temperature (°C/F) 12.37 pH 7.71
Dissolved Oxygen (mg/L) 5.58 Conductivity (mS/cm) 0.084
Turbidity (NTU) 14.6 ORP (mV) 97

CONTAINER DESCRIPTION:

Laboratory Eurofins

Bottle Type Analysis Preservative
40 mL VOA VOCs* HCl

Notes:

*Site specific COC

LOW FLOW SAMPLING FORM

Page 1 of 1

PROJECT Former General Time Facility
LOCATION Athens, Georgia
CLIENT Carpenter Technology Corporation
CONTRACTOR None

H&A FILE NO. 128752-004
PROJECT MGR. N. Alla
FIELD REP JMC
DATE 3/20/18

Sampling Data:

Well ID: MW-1S Well Depth: 14.5 ft Initial Depth To Water: 6.54 ft Purging Device: PERISTATSE
Start time: 0930 Depth To Top Of Screen: 9.5 ft Depth Of Pump Intake: 13' ft Tubing Present In Well: Yes No
Finish Time: 1035 Depth To Bottom Of Screen: 14.5 ft Measuring Point: Top of filter Tubing Type: 1/4 "

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (mL/min or gal/min)	Purge Rate (mL/min or gal/min)	Cumulative Purge Vol. (liters or gal)	Temp-erature (°F or °C)	pH	Conduct-ivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mV)	Comments
Stabilized within →	[100 mL/min] to [500 mL/min]			N/A	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
05	6.60	200		0.5	17.02	4.53	0.026	4.41	274	174	Sample for:
10	6.60	200		0.75	16.97	4.37	0.023	3.71	34.1	198	VOCs* (Eurofins)
15	6.50	200		1.30	16.90	4.32	0.023	3.44	34.6	213	
20	6.50	180		1.50	16.90	4.31	0.023	3.71	25.2	222	
25	6.50	180		1.75	16.94	4.34	0.023	3.25	28.9	234	
30	6.50	180		2.00	16.94	4.36	0.023	3.20	33.1	241	
35	6.50	180		2.25	16.94	4.36	0.023	3.19	36.1	236	
											Sample @ 10:30
											Sample ID: MW-1S
											*Site Specific VOCs:
											1,1-Dichloroethene
											cis-1,2-Dichloroethene
											trans-1,2-Dichloroethene
											Methylene Chloride
											1,1,2-Trichloroethane
											Trichloroethene
											Vinyl Chloride

well volume = 3.14 (PI) x radius² x height of water column. 2 in well = 0.163 gal/ft, 3 in = 0.367 gal/ft, 4 in = 0.653 gal/ft, 6 in = 1.469 gal/ft, 1 cu. ft. = 7.48 gal, 1 gal = 3.785 L, 1L = 0.264 gal, 0.5L/min = 0.132 gal/min

LOW FLOW SAMPLING FORM

Page 1 of 1

PROJECT Former General Time Facility
LOCATION Athens, Georgia
CLIENT Carpenter Technology Corporation
CONTRACTOR None

H&A FILE NO. 128752-004
PROJECT MGR. N. Alla
FIELD REP J. Vants
DATE 3/20/18

Sampling Data:

Well ID: MW-II Well Depth: 25.27 ft Initial Depth To Water: 5.83 ft Purgging Device: Peristaltic
Start time: 947 Depth To Top Of Screen: 15.27 ft Depth Of Pump Intake: ~20 ft Tubing Present In Well: Yes No
Finish Time: 1025 Depth To Bottom Of Screen: 25.27 ft Measuring Point: TAC Tubing Type: LDPE

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (mL/min) or (gal/min)	Purge Rate (mL/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mV)	Comments
Stabilized within →	[100 mL/min] to [500 mL/min]		—	N/A	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
952	6.10	200	0.0	18.11	6.87	0.070	4.68	0.0	184		Sample for:
957	6.04	150	1.7	18.10	6.39	0.063	4.84	0.0	179		VOCs* (Eurofins)
1002	6.12	200	3.8	18.16	6.32	0.059	4.94	0.0	188		
1007	6.11	175	4.5	18.31	6.33	0.058	5.04	0.0	192		
1012	6.12	175	5.3	18.37	6.32	0.057	5.00	0.0	195		
1017	6.12	175	6.2	18.38	6.32	0.057	5.05	0.0	197		
Parameters stable, sample time in MW-II at 1017											
*Site Specific VOCs:											
1,1-Dichloroethene											
cis-1,2-Dichloroethene											
trans-1,2-Dichloroethene											
Methylene Chloride											
1,1,2-Trichloroethane											
Trichloroethene											
Vinyl Chloride											

LOW FLOW SAMPLING FORM

Page 1 of 1

PROJECT Former General Time Facility
LOCATION Athens, Georgia
CLIENT Carpenter Technology Corporation
CONTRACTOR None

H&A FILE NO. 128752-004
PROJECT MGR. N. Alla
FIELD REP *M. le Clecuy*
DATE *3/20/18*

Sampling Data:

Well ID: MW-2S Well Depth: 20.2 ft Initial Depth To Water: 14.58 ft Purging Device: PAC.
Start time: 10:45 Depth To Top Of Screen: 10.2 ft Depth Of Pump Intake: 18.0 ft Tubing Present In Well: Yes No
Finish Time: 1145 Depth To Bottom Of Screen: ft Measuring Point: Top of P.325 Tubing Type: 1/4"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (mL/min) or (gal/min)	Purge Rate (mL/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mV)	Comments
Stabilized within →	[100 mL/min] to [500 mL/min]	--	--	N/A	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
5	15.6	200	-	0.3	20.3	5.82	0.151	9.02	18.9	167	Sample for:
10	15.9	200	-	0.5	20.39	5.92	0.149	2.72	2.9	164	VOCs* (Eurofins)
15	16.0	200	-	0.75	20.36	5.88	0.148	2.64	13.1	171	
20	16.5	200	-	1.25	20.79	5.86	0.147	2.50	1.5	176	
25	16.5	200	-	1.5	21.15	5.96	0.146	2.39	1.3	175	
30	16.5	200	-	1.9	21.33	6.00	0.145	2.35	1.0	173	
35	16.5	200	-	2.4	21.34	6.02	0.145	2.33	1.0	172	
											Sample @ <u>11:40</u>
											*Site Specific VOCs:
											1,1-Dichloroethene
											cis-1,2-Dichloroethene
											trans-1,2-Dichloroethene
											Methylene Chloride
											1,1,2-Trichloroethane
											Trichloroethene
											Vinyl Chloride

LOW FLOW SAMPLING FORM

Page 1 of 1

PROJECT Former General Time Facility
LOCATION Athens, Georgia
CLIENT Carpenter Technology Corporation
CONTRACTOR None

H&A FILE NO. 128752-004
PROJECT MGR. N. Alla
FIELD REP. J. Korts
DATE 3/20/18

Sampling Data:

Well ID: MW-2I Well Depth: 86.5 ft Initial Depth To Water: 15.74 ft Purgging Device: Grindfos
 Start time: 1100 Depth To Top Of Screen: 76.5 ft Depth Of Pump Intake: ~81 ft Tubing Present In Well: Yes No
 Finish Time: 1200 Depth To Bottom Of Screen: 86.5 ft Measuring Point: TOC Tubing Type: LDPE

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (mL/min) or (gal/min)	Purge Rate (mL/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mV)	Comments
Stabilized within →	[100 mL/min] to [500 mL/min]			-	N/A	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
1106	18.51		600	0.0	20.71	6.35	0.086	1.01	77.8	185	Sample for:
1111	20.34		600	3.0	21.13	6.00	0.086	0.30	59.9	191	VOCs* (Eurofins)
1116	20.05		400	5.0	21.14	5.96	0.086	0.21	49.9	194	
1121	20.14		200	6.0	21.03	5.97	0.087	0.33	67.7	190	
1126	20.16		200	7.0	21.16	5.97	0.086	0.35	47.7	189	
1131	20.16		200	8.0	21.19	5.97	0.086	0.36	42.0	188	
1136	20.17		200	9.0	21.21	5.96	0.087	0.32	37.0	187	

Parameters stable, sample fine
 in MW-2I at 1136

*Site Specific VOCs:

1,1-Dichloroethene

cis-1,2-Dichloroethene

trans-1,2-Dichloroethene

Methylene Chloride

1,1,2-Trichloroethane

Trichloroethene

Vinyl Chloride

LOW FLOW SAMPLING FORM

Page 1 of 1

PROJECT Former General Time Facility
LOCATION Athens, Georgia
CLIENT Carpenter Technology Corporation
CONTRACTOR None

H&A FILE NO. 128752-004
PROJECT MGR. N. Alla
FIELD REP J. Yontz
DATE 3/20/18

Sampling Data:

Well ID: MW-2D Well Depth: 226.5 ft Initial Depth To Water: ~16.14 ft Purgging Device: Grundfos
 Start time: 1500 Depth To Top Of Screen: 216.5 ft Depth Of Pump Intake: ~221 ft Tubing Present In Well: Yes No
 Finish Time: 1610 Depth To Bottom Of Screen: 226.5 ft Measuring Point: TOC Tubing Type: LDPE

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (mL/min) or (gal/min)	Purge Rate (mL/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mV)	Comments
Stabilized within →	[100 mL/min] to [500 mL/min]	—	N/A	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
1507	17.42	250	0.0	21.77	9.52	0.190	3.60	1.0	41	Sample for:	
1512	19.91	400	2.0	21.19	9.53	0.191	3.04	0.3	38	VOCs* (Eurofins)	
1517	20.70	200	3.0	20.90	9.43	0.191	2.54	0.8	38		
1522	23.52	400	5.0	20.74	9.15	0.192	1.16	40.7	34		
1527	24.65	200	6.0	20.80	8.73	0.193	0.41	16.8	9		
1532	24.98	200	7.0	20.88	8.64	0.193	0.21	11.2	-3	Cant maintain drawdown	
1537	25.49	200	8.0	20.78	8.60	0.194	0.24	7.0	-9		
1542	25.72	200	9.0	20.81	8.64	0.193	0.15	6.4	-13		
1547	26.91	400	11.0	26.75	8.70	0.193	0.21	8.3	-19		
1552	28.00	400	13.0	20.81	8.64	0.193	0.19	7.9	-19		
1557	29.14	200	14.0	20.78	8.73	0.193	0.20	8.4	-20	*Site Specific VOCs: 1,1-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene Methylene Chloride 1,1,2-Trichloroethane Trichloroethene Vinyl Chloride	
Parameters stable, sample time in mw-2D at 1557											

LOW FLOW SAMPLING FORM

Page 1 of 1

PROJECT Former General Time Facility
LOCATION Athens, Georgia
CLIENT Carpenter Technology Corporation
CONTRACTOR None

H&A FILE NO. 128752-004
PROJECT MGR. N. Alla
FIELD REP J. Yonts
DATE 3/21/18

Sampling Data:

Well ID: MW-3I Well Depth: 99.25 ft Initial Depth To Water: _____ ft Purgging Device: Grand fas
 Start time: 846 840 Depth To Top Of Screen: 89.25 ft Depth Of Pump Intake: ~95 ft Tubing Present In Well: Yes No
 Finish Time: 956 Depth To Bottom Of Screen: 99.25 ft Measuring Point: TOC Tubing Type: LDPE

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (mL/min) or (gal/min)	Purge Rate (mL/min) or (gal/min)	Cumulative Purge Vol. (Liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mV)	Comments
Stabilized within →	[100 mL/min] to [500 mL/min]		--	N/A	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
850	15.41		0	17.06	4.30	0.115	6.01	745	149		Sample for:
900	16.30	600	5.0	18.60	5.95	0.116	3.00	>1000	105		VOCs* (Eurofins)
910	15.74	600	10.0	20.07	5.69	0.115	2.61	>1000	114		
915	15.77	600	13.0	20.28	5.65	0.115	2.51	750	109		Generator keeps cutting
920	15.76	600	16.0	20.84	5.64	0.115	2.49	550	108		tan color water with fines
925	15.74	500	18.5	20.33	5.63	0.114	2.47	400	108		
930	15.74	600	21.5	20.38	5.63	0.114	2.46	290	108		
935	15.77	500	24.0	20.41	5.63	0.114	2.46	281	110		
940	15.77	600	27.0	20.39	5.62	0.114	2.45	184	111		
											*Site Specific VOCs:
											1,1-Dichloroethene
											cis-1,2-Dichloroethene
											trans-1,2-Dichloroethene
											Methylene Chloride
											1,1,2-Trichloroethane
											Trichloroethene
											Vinyl Chloride

parameters stable, sample
mw -3I at 940

LOW FLOW SAMPLING FORM

Page 1 of 1

PROJECT	Former General Time Facility						H&A FILE NO.	128752-004			
LOCATION	Athens, Georgia						PROJECT MGR.	N. Alla			
CLIENT	Carpenter Technology Corporation						FIELD REP	J. Vant			
CONTRACTOR	None						DATE	3/21/18			
Sampling Data:											
Well ID:	MW-5I	Well Depth:	41.5	ft	Initial Depth To Water:	9.78	ft	Purging Device:	Puristaltic		
Start time:	1110	Depth To Top Of Screen:	31.5	ft	Depth Of Pump Intake:	~37	ft	Tubing Present In Well:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Finish Time:	1155	Depth To Bottom Of Screen:	41.5	ft	Measuring Point:	70C		Tubing Type:	LDPE		
Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (mL/min) or (gal/min)	Purge Rate (mL/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp- erature (°F) or (°C)	pH	Conduct- ivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mV)	Comments
Stabilized within →		[100 mL/min] to [500 mL/min]		N/A	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
1120	9.91		250	0.0	50.91	6.59	0.093	3.51	99.1	19.2	Sample for:
1125	10.08		400	2.0	22.00	6.62	0.093	1.67	3.6	183	VOCs* (Eurofins)
1130	10.08		200	3.0	22.30	6.59	0.092	1.62	1.4	183	
1135	10.10		200	4.0	21.94	6.58	0.091	1.70	1.1	183	
1140	10.10		200	6.0	22.18	6.58	0.091	1.53	1.8	182	
1145	10.11		300	7.5	22.27	6.58	0.090	1.57	1.8	181	
1150	10.11		300	9.0	22.24	6.58	0.090	1.58	1.6	181	
Parameters stable sample mw-5I at 1150										*Site Specific VOCs:	
										1,1-Dichloroethene	
										cis-1,2-Dichloroethene	
										trans-1,2-Dichloroethene	
										Methylene Chloride	
										1,1,2-Trichloroethane	
										Trichloroethene	
										Vinyl Chloride	

$$\text{well volume} = 3.14 (\text{PI}) \times \text{radius}^2 \times \text{height of water column.}$$

LOW FLOW SAMPLING FORM

Page | of |

PROJECT	Former General Time Facility	H&A FILE NO.	128752-004
LOCATION	Athens, Georgia	PROJECT MGR.	N. Alla
CLIENT	Carpenter Technology Corporation	FIELD REP.	J. Yontz
CONTRACTOR	None	DATE	3/21/18

Sampling Data:

Well ID:	MW-6I	Well Depth:	70.91	ft	Initial Depth To Water:		ft	Purging Device:	Grundfos
Start time:	1005	Depth To Top Of Screen:	60.91	ft	Depth Of Pump Intake:	N 66	ft	Tubing Present In Well:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Finish Time:	1055	Depth To Bottom Of Screen:	70.91	ft	Measuring Point:	TDC		Tubing Type:	LDPE

$$\text{well volume} = 3.14 (\text{PI}) \times \text{radius}^2 \times \text{height of water column}. \quad 2 \text{ in well} = 0.163 \text{ gal/ft}, \quad 3 \text{ in} = 0.367 \text{ gal/ft} \quad 4 \text{ in} = 0.653 \text{ gal/ft}, \quad 6 \text{ in} = 1.469 \text{ gal/ft}, \quad 1 \text{ cu. ft.} = 7.48 \text{ gal}, \quad 1 \text{ gal} = 3.785 \text{ L}, \quad 1 \text{L} = 0.264 \text{ gal}, \quad 0.5 \text{L/min} = 0.132 \text{ gal/min}$$

LOW FLOW SAMPLING FORM

Page _____ of _____

PROJECT	Former General Time Facility	H&A FILE NO.	128752-004
LOCATION	Athens, Georgia	PROJECT MGR.	N. Alla
CLIENT	Carpenter Technology Corporation	FIELD REP.	J. Yants
CONTRACTOR	None	DATE	3/21/18

Sampling Data:

Well ID: MW-71 Well Depth: 36.5 ft Initial Depth To Water: 7.25 ft Purging Device: Peristaltic
 Start time: 1555 Depth To Top Of Screen: 26.5 ft Depth Of Pump Intake: ~31 ft Tubing Present In Well: Yes No
 Finish Time: 1605 Depth To Bottom Of Screen: 36.5 ft Measuring Point: TOL Tubing Type: LDPE

Parameters stable, sample
Mw-71 at 1555

*Site Specific VOCs:

1,1-Dichloroethene

cis-1,2-Dichloroethene

trans-1,2-Dichloroethene

Methylene Chloride

1,1,2-Trichloroethane

Trichloroethene

Vinyl Chloride

LOW FLOW SAMPLING FORM

Page 1 of 1

$$\text{well volume} = 3.14 \text{ (PI)} \times \text{radius}^2 \times \text{height of water column.}$$

LOW FLOW SAMPLING FORM

Page _____ of _____

LOW FLOW SAMPLING FORM

Page 1 of 1

PROJECT Former General Time Facility
LOCATION Athens, Georgia
CLIENT Carpenter Technology Corporation
CONTRACTOR None

H&A FILE NO. 128752-004
PROJECT MGR. N. Alla
FIELD REP J. Yants
DATE 3/21/18

Sampling Data:

Well ID: MW-9D Well Depth: 201.5 ft Initial Depth To Water: 6.06 ft Purging Device: Gravitor
 Start time: 1315 Depth To Top Of Screen: 181.5 ft Depth Of Pump Intake: ~190 ft Tubing Present In Well: Yes No
 Finish Time: 1415 Depth To Bottom Of Screen: 201.5 ft Measuring Point: Toc Tubing Type: LDPE

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (mL/min) or (gal/min)	Purge Rate (mL/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mV)	Comments
Stabilized within →	[100 mL/min] to [500 mL/min]		--	N/A	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
13:46	8.08		400	0.0	19.27	7.43	0.167	3.22	48.1	167	Sample for:
13:31	9.90		400	2.0	19.87	7.82	0.168	0.61	7.7	-25	VOCs* (Eurofins)
13:46	14.51		250	6.0	20.80	8.74	0.171	0.17	5.5	-79	
13:51	21.55		600	9.0	20.34	8.67	0.172	0.04	5.3	-90	Can't maintain flow rate
13:54	26.40		300	10.5	20.40	8.64	0.172	0.05	5.3	-100	
14:01	27.84		300	12.0	20.49	8.61	0.172	0.08	5.4	-105	
14:06	28.63		300	13.5	20.51	8.60	0.173	0.08	6.0	-103	
<i>Parameters stable sample MW-9D at 1406</i>											
*Site Specific VOCs:											
1,1-Dichloroethene											
cis-1,2-Dichloroethene											
trans-1,2-Dichloroethene											
Methylene Chloride											
1,1,2-Trichloroethane											
Trichloroethene											
Vinyl Chloride											

LOW FLOW SAMPLING FORM

PROJECT	Former General Time Facility						H&A FILE NO.	128752-004			
LOCATION	Athens, Georgia						PROJECT MGR.	N. Alla			
CLIENT	Carpenter Technology Corporation						FIELD REP.	J. Yantz			
CONTRACTOR	None						DATE	3/22/18			
Sampling Data:											
Well ID:	MW-11S	Well Depth:	14.5	ft	Initial Depth To Water:	7.90	ft	Purging Device:	Peristaltic		
Start time:	947	Depth To Top Of Screen:	4.5	ft	Depth Of Pump Intake:	~13	ft	Tubing Present In Well:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Finish Time:	1045	Depth To Bottom Of Screen:	14.5	ft	Measuring Point:	TOC		Tubing Type:	LDPE		
Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (mL/min) or (gal/min)	Purge Rate (mL/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp- erature (°F) or (°C)	pH	Conduct- ivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mV)	Comments
Stabilized within →	[100 mL/min] to [500 mL/min]			-	N/A	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
942	7.97		9.00	0.0	14.91	5.46	0.370	2.14	9.5	214	Sample for:
957	8.01		200	1.0	14.98	5.19	0.365	2.22	5.7	228	VOCs* (Eurofins)
1003	8.01		200	2.0	15.04	5.13	0.344	2.09	3.3	232	
1007	8.02		200	3.0	15.10	5.05	0.363	1.49	1.1	224	
1013	8.02		250	4.3	15.08	4.94	0.190	0.96	0.0	206	
1017	8.02		250	5.6	15.12	4.91	0.164	0.80	0.0	192	
1022	8.03		250	6.8	15.16	4.90	0.160	0.75	0.0	190	
1027	8.03		250	8.0	15.20	4.91	0.140	0.60	0.0	181	
1032	8.04		250	9.3	15.22	4.91	0.139	0.59	0.0	175	
1037	8.04		250	10.5	15.24	4.91	0.135	0.59	0.0	173	
										*Site Specific VOCs:	
										1,1-Dichloroethene	
										cis-1,2-Dichloroethene	
										trans-1,2-Dichloroethene	
										Methylene Chloride	
										1,1,2-Trichloroethane	
										Trichloroethene	
										Vinyl Chloride	
Paracetamol stable sample mw-115 at 1037											

$$\text{well volume} = 3.14 (\text{PI}) \times \text{radius}^2 \times \text{height of water column}. \quad 2 \text{ in well} = 0.163 \text{ gal/ft}, \quad 3 \text{ in} = 0.367 \text{ gal/ft}, \quad 4 \text{ in} = 0.653 \text{ gal/ft}, \quad 6 \text{ in} = 1.469 \text{ gal/ft}, \quad 1 \text{ cu. ft.} = 7.48 \text{ gal}, \quad 1 \text{ gal} = 3.785 \text{ L}, \quad 1 \text{ L} = 0.264 \text{ gal}, \quad 0.5 \text{ L/min} = 0.132 \text{ gal/min}$$

LOW FLOW SAMPLING FORM

Page of

PROJECT	Former General Time Facility
LOCATION	Athens, Georgia
CLIENT	Carpenter Technology Corporation
CONTRACTOR	None

H&A FILE NO.	128752-004
PROJECT MGR.	N. Alla
FIELD REP	J. Vents
DATE	3/22/18

Sampling Data:

Well ID: MW-11I
Start time: 85.5
Finish Time: 925

Well Depth: 32 ft Initial Depth To Water: 7.78 ft Purging Device: Pristaltic
Depth To Top Of Screen: 22 ft Depth Of Pump Intake: ~27 ft Tubing Present In Well: Yes No
Depth To Bottom Of Screen: 32 ft Measuring Point: TOD Tubing Type: LDPE

Parameters stable sample

MW-111 at 942

*Site Specific VOCs:

1,1-Dichloroethene

cis-1,2-Dichloroethene

trans-1,2-Dichloroethene

Methylene Chloride

1,1,2-Trichloroethane

Trichloroethene

Vinyl Chloride

LOW FLOW SAMPLING FORM

Page 1 of 1

PROJECT Former General Time Facility
LOCATION Athens, Georgia
CLIENT Carpenter Technology Corporation
CONTRACTOR None

H&A FILE NO. 128752-004
PROJECT MGR. N. Alla
FIELD REP M. Clancy
DATE 3/22/18

Sampling Data:

Well ID: MW-11D Well Depth: 289.6 ft Initial Depth To Water: 5.80 ft Purgging Device: PGRU.
Start time: 8:40 Depth To Top Of Screen: - ft Depth Of Pump Intake: 285 ft Tubing Present In Well: Yes No
Finish Time: 9:45 Depth To Bottom Of Screen: 289.6 ft Measuring Point: Mid Screen Tubing Type: 1/2" LDPE

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (mL/min) or (gal/min)	Purge Rate (mL/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mV)	Comments
Stabilized within →	[100 mL/min] to [500 mL/min]			N/A	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
05	8.17		0.5	15.42	7.88	0.294	0.53	8.8	-118		Sample for:
10	8.20		0.75	15.49	7.70	0.366	0.32	0.0	-155		VOCs* (Eurofins)
15	8.20		1.0	15.58	7.58	0.469	0.35	4.5	-186		
20	8.20		1.5	15.99	7.49	0.603	0.0	11.8	-233		
25	8.20		2.0	15.92	7.51	0.659	0.0	7.0	-278		
30	8.20		2.25	15.29	7.57	0.698	0.04	4.7	-799		
35	8.20		2.50	15.14	7.58	0.687	0.0	0.686	-305		
40	8.20		2.75	15.92	7.58	0.689	0.0	0.20	-310		
											Sample @ 9:40
											*Site Specific VOCs:
											1,1-Dichloroethene
											cis-1,2-Dichloroethene
											trans-1,2-Dichloroethene
											Methylene Chloride
											1,1,2-Trichloroethane
											Trichloroethene
											Vinyl Chloride

LOW FLOW SAMPLING FORM

Page 7 of 1

PROJECT Former General Time Facility
LOCATION Athens, Georgia
CLIENT Carpenter Technology Corporation
CONTRACTOR None

H&A FILE NO. 128752-004
PROJECT MGR. N. Alla
FIELD REP Mike Clancy
DATE 3/19/18

Sampling Data:

Well ID: MW-16I Well Depth: 30.68 ft Initial Depth To Water: 18.35 ft Purging Device: Peristaltic
Start time: 11:40 Depth To Top Of Screen: 20.68 ft Depth Of Pump Intake: ~26 ft Tubing Present In Well: Yes No
Finish Time: 12:30 Depth To Bottom Of Screen: 30.68 ft Measuring Point: Top of Casing Tubing Type: LDPE

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (mL/min) or (gal/min)	Purge Rate (mL/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mV)	Comments
Stabilized within	→	[100 mL/min] to [500 mL/min]		N/A	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
5	19.40	200		0.5	20.57	6.21	0.797	0.01	34	-35	Sample for:
10	19.63	200		0.75	20.87	6.26	1.027	0.00	18.5	-48	VOCs* (Eurofins)
15	19.79	200		1.00	21.02	6.31	1.20	0.02	18.2	-56	
20	19.90	200		1.50	21.12	6.31	1.14	0.0	19.1	-61	
25	20.00	200		2.00	21.17	6.32	1.08	0.0	19.8	-66	
											Sample @ 12:15
											Sample II) MW16I
											*Site Specific VOCs:
											1,1-Dichloroethene
											cis-1,2-Dichloroethene
											trans-1,2-Dichloroethene
											Methylene Chloride
											1,1,2-Trichloroethane
											Trichloroethene
											Vinyl Chloride

well volume = 3.14 (PI) x radius² x height of water column. 2 in well = 0.163 gal/ft, 3 in = 0.367 gal/ft, 4 in = 0.653 gal/ft, 6 in = 1.469 gal/ft, 1 cu. ft. = 7.48 gal, 1 gal = 3.785 L, 1L = 0.264 gal, 0.5L/min = 0.132 gal/min

LOW FLOW SAMPLING FORM

Page _____ of _____

PROJECT	Former General Time Facility	H&A FILE NO.	128752-004
LOCATION	Athens, Georgia	PROJECT MGR.	N. Alla
CLIENT	Carpenter Technology Corporation	FIELD REP.	J. Woots
CONTRACTOR	None	DATE	3/19/18

Sampling Data:

Well ID:	MW-16D	Well Depth:	56.48	ft	Initial Depth To Water:	19.30	ft	Purging Device:	Peristaltic
Start time:	1145	Depth To Top Of Screen:	46.48	ft	Depth Of Pump Intake:	~51	ft	Tubing Present In Well:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Finish Time:	1235	Depth To Bottom Of Screen:	56.48	ft	Measuring Point:	Top of Casing		Tubing Type:	LDPE

$$\text{well volume} = \pi r^2 \times \text{height of water column.} \quad 2 \text{ in well} = 0.163 \text{ gal/ft}, \quad 3 \text{ in} = 0.367 \text{ gal/ft}, \quad 4 \text{ in} = 0.653 \text{ gal/ft}, \quad 6 \text{ in} = 1.469 \text{ gal/ft}, \quad 1 \text{ cu. ft.} = 7.48 \text{ gal}, \quad 1 \text{ gal} = 3.785 \text{ L}, \quad 1 \text{ L} = 0.264 \text{ gal}, \quad 0.5 \text{ L/min} = 0.132 \text{ gal/min}$$

LOW FLOW SAMPLING FORM

Page 1 of 1

PROJECT Former General Time Facility
LOCATION Athens, Georgia
CLIENT Carpenter Technology Corporation
CONTRACTOR None

H&A FILE NO. 128752-004
PROJECT MGR. N. Alla
FIELD REP Mike Clancy
DATE 3/20/18

Sampling Data:

Well ID: RW-3 Well Depth: 89.6 ft Initial Depth To Water: 17.75 ft Purging Device: *lorzuelofs*
Start time: 13:15 Depth To Top Of Screen: 59.6 ft Depth Of Pump Intake: 86.6 ft Tubing Present In Well: Yes No
Finish Time: 14:20 Depth To Bottom Of Screen: 89.6 ft Measuring Point: Top of 123-5 Tubing Type: 1/2"

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting (mL/min) or (gal/min)	Purge Rate (mL/min) or (gal/min)	Cumulative Purge Vol. (liters) or (gal)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mV)	Comments
Stabilized within	→ [100 mL/min] to [500 mL/min]			N/A	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
5	13.90	200	-	0.5	22.15	6.98	0.210	0.45	37	94	Sample for:
10	14.10	200	-	1.0	21.67	6.93	0.216	0.13	23	79	VOCs* (Eurofins)
15	14.20	200	-	1.3	21.79	6.80	0.212	0.31	15	77	
20	14.50	200	-	1.5	21.94	6.56	0.186	0.35	47.6	94	
25	14.60	200	-	1.75	21.83	6.02	0.173	0.27	25.7	107	
30	14.70	200	-	2.00	21.71	6.40	0.170	0.36	19.41	111	
35	14.80	200	-	2.25	21.89	6.39	0.169	0.40	18.8	114	
40	14.80	200	-	2.50	21.97	6.39	0.168	0.41	15.7	115	
											Sample @ 14:15
											*Site Specific VOCs:
											1,1-Dichloroethene
											cis-1,2-Dichloroethene
											trans-1,2-Dichloroethene
											Methylene Chloride
											1,1,2-Trichloroethane
											Trichloroethene
											Vinyl Chloride

well volume = $3.14 (\text{PI}) \times \text{radius}^2 \times \text{height of water column}$. 2 in well = 0.163 gal/ft, 3 in = 0.367 gal/ft, 4 in = 0.653 gal/ft, 6 in = 1.469 gal/ft, 1 cu. ft. = 7.48 gal, 1 gal = 3.785 L, 1L = 0.264 gal, 0.5L/min = 0.132 gal/min

LOW FLOW SAMPLING FORM

Page _____ of _____

PROJECT	Former General Time Facility	H&A FILE NO.	128752-004
LOCATION	Athens, Georgia	PROJECT MGR.	N. Alla
CLIENT	Carpenter Technology Corporation	FIELD REP.	J. Korts
CONTRACTOR	None	DATE	3/20/18

Sampling Data:

Well ID: RW-4

Well Depth: 89.61 ft

Initial Depth To Water: 12.45 ft

Surge Device: Ground Fault

Start time: 1345

Depth To Top Of Screen: 59.61 ft

Depth Of Pump Intake: ~80 ft

Is the subject Present In Well: Yes No

Finish Time: 1445

Depth To Bottom Of Screen: 89.61 ft

Measuring Point: Toe

Ring Type: **LDF**

$$\text{well volume} = \pi(\text{PI}) \times \text{radius}^2 \times \text{height of water column.}$$

APPENDIX C

Historical Summary of VOC Concentrations

APPENDIX C
HISTORICAL SUMMARY OF VOC CONCENTRATIONS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Location Name	Sample Date	MW-1I					MW-1S																
		Mar-00	Dec-07	Mar-10	11/18/2010	12/21/2011	9/16/2015	9/9/2016	Mar-00	Dec-07	Mar-10	11/18/2010	12/21/2011	9/16/2015	9/9/2016	Mar-00	Dec-07	Mar-10	5/27/2009	8/19/2009	11/9/2009	3/24/2010	
Field Parameters																							
Conductivity, Field (mS/cm)	-	-	-	-	0.051	0.053	0.065	0.069	-	-	-	0.039	0.036	0.042	-	-	-	-	0.185	-	0.181	0.163	
Dissolved Oxygen, Field (mg/L)	-	-	-	-	8.38	8.64	6.58	3.79	-	-	-	3.02	8.32	0.86	-	-	-	-	1.11	-	1.09	4.28	
ORP, Field (mV)	-	-	-	-	167.3	142.9	204	183	-	-	-	104	149	84	-	-	-	-	101.5	-	77.4	-156.2	
pH, Field (NTU)	-	-	-	-	6.29	6.25	6.58	5.84	-	-	-	5.67	5.97	5.17	-	-	-	-	8.59	-	8.43	9.2	
Temperature, Field (Deg C)	-	-	-	-	18.71	18	19.44	28.76	-	-	-	19.23	17.4	21.31	-	-	-	-	20.37	-	17.64	18.83	
Turbidity, Field (NTU)	-	-	-	-	1.5	1.4	2.0	1.5	-	-	-	8.5	5.1	14.6	-	-	-	-	-	-	2.43	7.85	
General Chemistry (mg/L)																							
Alkalinity, Total (as CaCO ₃)	-	-	-	-	24.7	23.8	-	-	-	-	-	12.3	16.2	-	-	-	-	-	74.9	58.9	37.3	71	
Carbon Dioxide	-	-	-	-	57.7	-	-	-	-	-	-	68.5	-	-	-	-	-	-	66.3	52.4	185	52.5	
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3.5	3.8	3.4	3.3		
Nitrate	-	-	-	-	0.62	0.66	-	-	-	-	-	0.24	0.56	-	-	-	-	-	0.1	0.12	0.47	0.12	
Nitrite (as N)	-	-	-	-	< 0.10	< 0.1	-	-	-	-	-	< 0.10	< 0.1	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	
Nitrite/Nitrate Nitrogen	-	-	-	-	0.62	0.66	-	-	-	-	-	0.24	0.56	-	-	-	-	-	< 0.20	< 2	0.47	< 0.20	
Sulfate	-	-	-	-	< 2	< 5	-	-	-	-	-	< 2	< 5	-	-	-	-	-	13.3	12.7	14	14.6	
Sulfide	-	-	-	-	< 1	< 0.1	-	-	-	-	-	< 1	< 0.1	-	-	-	-	-	< 1.0	< 1	< 1	1.2	
Total Organic Carbon (TOC)	-	-	-	-	< 1	< 1	-	-	-	-	-	< 1	< 1	-	-	-	-	-	-	-	-	13.4	
Dissolved Gases(ug/L)																							
Ethane	-	-	-	-	< 1	< 10	-	-	-	-	-	< 1	< 10	-	-	-	-	-	< 1	< 1	< 1	< 1	
Ethene	-	-	-	-	< 1	< 10	-	-	-	-	-	< 1	< 10	-	-	-	-	-	< 1	< 1	< 1	< 1	
Methane	-	-	-	-	< 0.50	< 10	-	-	-	-	-	256	< 10	-	-	-	-	-	0.51	0.4 J	0.18 J	0.19 J	
Volatile Fatty Acids(mg/L)																							
Acetic Acid	-	-	-	-	-	0.16	-	-	-	-	-	-	0.13	-	-	-	-	-	-	-	-	-	-
Butyric Acid	-	-	-	-	-	0.11	-	-	-	-	-	-	0.086	-	-	-	-	-	-	-	-	-	-
Lactic Acid	-	-	-	-	-	0.11	-	-	-	-	-	-	0.14	-	-	-	-	-	-	-	-	-	-
Propionic Acid	-	-	-	-	-	0.070	-	-	-	-	-	-	0.058	-	-	-	-	-	-	-	-	-	-
Pyruvic Acid	-	-	-	-	-	< 0.15	-	-	-	-	-	-	< 0.15	-	-	-	-	-	-	-	-	-	-
Dissolved Hydrogen (nM)																							
Hydrogen	-	-	-	-	-	2.0	-	-	-	-	-	-	1.0	-	-	-	-	-	-	-	-	-	-
Inorganic Compounds(ug/L)																							
Iron, Dissolved	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron, Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron, Ferrous	-	-	-	-	-	< 0.10	-	-	-	-	-	-	0.92	-	-	-	-	-	0.15	< 0.10	< 0.10	0.12	-
Manganese, Dissolved	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese, Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds (ug/L)																							
Acetone	-	-	-	-	< 25	< 25	-	-	-	-	-	< 25	< 25	-	-	-	-	-	< 25	< 25	< 25	< 25	
Benzene	-	-	-	-	< 1	< 1	-	-	-	-	-	< 1	< 1	-	-	-	-	-	< 1	< 1	< 1	< 1	
Bromobenzene	-	-	-	-	-	< 1	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-
Bromochloromethane	-	-	-	-	< 1	< 1	-	-	-	-	-	< 1	< 1	-	-	-	-	-	< 1	< 1	< 1	< 1	
Bromodichloromethane	-	-	-	-	< 1	< 1	-	-	-	-	-	< 1	< 1	-	-	-	-	-	< 1	< 1	< 1	< 1	
Bromoform	-	-	-	-	< 1	< 1	-	-	-	-	-	< 1	< 1	-	-	-	-	-	< 1	< 1	< 1	< 1	
Bromomethane	-	-	-	-	-	< 2	-	-	-	-	-	< 2	< 2	-	-	-	-	-	< 1	< 1	< 2	< 1	
2-Butanone (MEK)	-	-	-	-	-	< 5	-	-	-	-	-	< 5	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	-	-	-	-	0.89 J	-	-	-	-	-	-	0.40 J	-	-	-	-	-	-	0.63	-	< 2	< 2	-
Carbon tetrachloride	-	-	-	-	< 1	< 1	-	-	-	-	-	< 1	< 1	-	-	-	-	-	< 1	< 1	< 1	< 1	
Chlorobenzene	-	-	-	-	< 1	< 1	-	-	-	-	-	< 1	< 1	-	-	-	-	-	< 1	< 1	< 1	< 1	
Chloroethane	-	-	-	-	< 2	< 1	-	-	-	-	-	< 2	< 1	-	-	-	-	-	< 2	< 2	< 2	< 2	
Chloroform	-	-	-	-	< 1	< 1	-	-	-	-	-	< 1	< 1	-	-	-	-	-	< 1	< 1	< 1	< 1	
Chloromethane	< 10	< 5	< 1	-	-	< 1	-	-	-	-	-	< 1	< 1	-	-	-	-	ND	ND	-	-	-	-
2-Chlorotoluene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorotoluene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	-	-	-	-	-	< 5	-	-	-	-	-	< 5	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	-	-	-	-	-	< 1	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane (EDB)	-	-	-	-	-	< 1	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	-	-	-	-	-	< 1	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	-	-	-	-	-	< 1	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	-	-	-	-	-	< 1	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	-	-	-	-	-	< 1	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	-	-	-	-	-	< 1	-	-	-	-	-	< 1	-	-	-	-							

Notes and Abbreviations:

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 3. Only detected compounds are shown in table.
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APPENDIX C
HISTORICAL SUMMARY OF VOC CONCENTRATIONS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

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CARPENTER - GENERAL TIME FACILITY
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APPENDIX C
HISTORICAL SUMMARY OF VOC CONCENTRATIONS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Location Name	MW-4I	MW-5I	MW-6I																		
Sample Date	Dec-07	11/12/2009	11/18/2010	12/22/2011	Mar-00	Aug-02	Dec-07	Mar-10	8/21/2009	3/24/2010	6/6/2010	9/30/2010	11/17/2010	12/27/2011	2/21/2012	9/17/2015	9/12/2016	Mar-00	Aug-02	Dec-07	May-09
Field Parameters																					
Conductivity, Field (mS/cm)	-	0.085	0.085	0.088	-	-	-	-	-	0.096	-	-	0.098	0.101	0.098	0.109	0.101	-	-	-	-
Dissolved Oxygen, Field (mg/L)	-	2.56	2.56	2.11	-	-	-	-	-	4.97	-	-	3.17	5.5	1.79	1.87	2.2	-	-	-	-
ORP, Field (mV)	-	159.2	159.2	19.5	-	-	-	-	-	-140.7	-	-	95.8	49.1	73.2	121	92	-	-	-	-
pH, Field (NTU)	-	5.99	5.99	6.21	-	-	-	-	-	6.36	-	-	6.27	6.53	6.39	6.8	6.26	-	-	-	-
Temperature, Field (Deg C)	-	15.76	15.76	17.4	-	-	-	-	-	23.32	-	-	23.41	20.5	21.7	24.71	26.36	-	-	-	-
Turbidity, Field (NTU)	-	6.6	6.6	6.3	-	-	-	-	-	3.62	-	-	13.7	5.1	2.3	0.0	0.0	-	-	-	-
General Chemistry (mg/L)																					
Alkalinity, Total (as CaCO3)	-	48.3	42.8	41	-	-	-	-	-	40.4	32.9	34	42.1	40.4	44.1	43.2	-	-	-	-	22.8
Carbon Dioxide	-	50	119	-	-	-	-	-	-	54	66.8	70	55.9	85.4	-	-	-	-	-	-	149
Chloride	-	5.1	-	-	-	-	-	-	-	3.4	3.4	3.1	-	-	-	-	-	-	-	-	7.2
Nitrate	-	0.74	0.66	0.67	-	-	-	-	-	0.81	1.2	0.83	0.73	0.72	0.84	0.84	-	-	-	-	1.1
Nitrite (as N)	-	< 0.10	< 0.10	< 0.1	-	-	-	-	-	< 0.10	0.1	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	-	-	-	-	< 0.10
Nitrite/Nitrate Nitrogen	-	0.74	0.66	0.67	-	-	-	-	-	0.81	1.3	0.83	0.73	0.72	0.84	0.84	-	-	-	-	1.1
Sulfate	-	< 2	< 2	< 5	-	-	-	-	-	< 2	6	< 2	< 2	< 2	< 5	< 5	-	-	-	-	< 2
Sulfide	-	< 1	< 1	< 0.1	-	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 0.1	< 0.1	-	-	-	-	< 1
Total Organic Carbon (TOC)	-	-	< 1	13.6	-	-	-	-	-	-	1.1	< 1	< 1	< 1	1.5	1.6	-	-	-	-	-
Dissolved Gases(ug/L)																					
Ethane	-	< 1	< 1	< 10	-	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 10	< 12.4	-	-	-	-	< 1
Ethene	-	< 1	< 1	< 10	-	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 10	< 12.4	-	-	-	-	< 1
Methane	-	< 0.50	0.26	< 10	-	-	-	-	-	< 0.50	0.17 J	0.39 J	0.46	0.87	< 10	< 6.6	-	-	-	-	< 0.5
Volatile Fatty Acids(mg/L)																					
Acetic Acid	-	-	-	< 0.070	-	-	-	-	-	-	-	-	-	-	< 0.070	0.016 J	-	-	-	-	-
Butyric Acid	-	-	-	< 0.050	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	-	-	-	-	-
Lactic Acid	-	-	-	< 0.10	-	-	-	-	-	-	-	-	-	-	0.13	0.76	-	-	-	-	-
Propionic Acid	-	-	-	< 0.050	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	-	-	-	-	-
Pyruvic Acid	-	-	-	< 0.15	-	-	-	-	-	-	-	-	-	-	< 0.15	< 0.15	-	-	-	-	-
Dissolved Hydrogen (nM)																					
Hydrogen	-	-	-	1.4	-	-	-	-	-	-	-	-	-	-	1.8	0.86	-	-	-	-	-
Inorganic Compounds(ug/L)																					
Iron, Dissolved	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron, Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron, Ferrous	-	0.11	< 0.10	-	-	-	-	-	-	0.42	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-	-	< 0.10
Manganese, Dissolved	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese, Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds (ug/L)																					
Acetone	-	< 25	< 25	< 25	-	-	-	-	-	< 25	< 25	< 25	< 25	< 25	< 25	< 25	-	-	-	-	-
Benzene	-	< 1	< 1	< 1	-	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1	-	-	-	-	-
Bromobenzene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromochloromethane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	-	-	< 1	< 1	< 1	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1	-	-	-	-	-
Bromoform	-	-	< 1	< 1	< 1	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1	-	-	-	-	-
Bromomethane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide	-	< 2	< 2	-	-	-	-	-	-	< 2	< 2	< 2	< 2	< 2	< 2	< 2	-	-	-	-	-
Carbon tetrachloride	-	< 1	< 1	< 1	-	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1	-	-	-	-	-
Chlorobenzene	-	< 1	< 1	< 1	-	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1	-	-	-	-	-
Chloroethane	-	< 2	< 2	< 1	-	-	-	-	-	< 2	< 2	< 2	< 2	< 2	< 2	< 2	-	-	-	-	-
Chloroform	-	0.64 J	0.59 J	< 1	-	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1	-	-	-	-	-
Chloromethane	-	< 10	-	-	< 10	-	< 10	< 5	< 1	-	-	-	-	-	-	-	-	-	< 20	< 20	< 5
2-Chlorotoluene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorotoluene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	-	-	< 1	< 1	< 1	-	-	-	-												

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APPENDIX C
HISTORICAL SUMMARY OF VOC CONCENTRATIONS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

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CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

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 3. Only detected compounds are shown in table.
 4. - Not analyzed.
 5. ND = Non Detect

Location Name	Sample Date	MW-9I	MW-10R	MW-10D	MW-11D	Mar-00	Apr-00	5/29/2009	8/20/2009	3/23/2010	6/30/2010	9/29/2010	11/17/2010	12/22/2011	2/20/2012	9/18/2015	9/8/2016	Mar-00	Aug-02	
		3/24/2010	6/29/2010	9/30/2010	12/21/2011	2/21/2012	9/17/2015	9/9/2016												
Field Parameters																				
Conductivity, Field (mS/cm)		0.123	-	-	0.122	0.129	0.137	0.169	-	-	0.082	-	0.596	-	-	0.683	0.98	0.87	0.288	0.678
Dissolved Oxygen, Field (mg/L)		0.72	-	-	0.35	0.39	2.59	0.32	-	-	12.8	-	0.12	-	-	0.53	0.69	-0.7	1.84	0.25
ORP, Field (mV)		-149	-	-	153.6	73.5	133	178	-	-	82.7	-	-291	-	-	-296	-335	-286.9	-75	-369
pH, Field (NTU)		5.97	-	-	6.18	6.23	6.72	6.11	-	-	8.19	-	7.32	-	-	6.85	7.03	7.3	6.99	7.7
Temperature, Field (Deg C)		19.47	-	-	19.6	18.4	24.67	25.40	-	-	16.47	-	13.71	-	-	15.86	16.7	15.7	18.12	19.2
Turbidity, Field (NTU)		66	-	-	3	1.3	0.0	0.0	-	-	-	-	0.96	-	-	3.7	5.1	4.8	2.4	0
General Chemistry (mg/L)																				
Alkalinity, Total (as CaCO ₃)		63	48	57.3	61.7	59.3	-	-	-	-	57.1	47.8	318	341	461	348	441	376	-	-
Carbon Dioxide		194	87	79.2	-	-	-	-	-	-	62.2	57.2	314	318	413	320	-	-	-	-
Chloride		5.7	5.1	-	-	-	-	-	-	-	6.3	7.9	65.5	70.7	-	-	-	-	-	-
Nitrate		0.53	0.55	0.5	0.48	0.48	-	-	-	-	< 0.1	< 0.10	< 0.10	< 0.10	0.17	< 0.2	< 0.2	-	-	-
Nitrite (as N)		0.15	< 0.10	< 0.10	< 0.1	< 0.1	-	-	-	-	< 0.1	< 0.10	< 0.10	< 0.10	1.5	0.77	-	-	-	-
Nitrite/Nitrate Nitrogen		0.68	0.55	0.5	0.48	0.48	-	-	-	-	< 0.1	< 0.20	< 0.20	< 0.20	< 0.2	< 0.2	-	-	-	-
Sulfate		3.2	< 2	2.1	< 5	< 5	-	-	-	-	< 2	< 2	12	7.7	5.8	14.2	5.2	7.8	-	-
Sulfide		< 1	< 1	< 1	< 0.1	< 0.1	-	-	-	-	2	3.3	12.1	26.4	42.4	29	57.8	4.6	-	-
Total Organic Carbon (TOC)		< 1	< 1	< 1	2.4	3.2	-	-	-	-	-	-	25.7	29.2	21.4	42.8	33.7	-	-	-
Dissolved Gases(ug/L)																				
Ethane		< 1	< 1	< 1	< 10	< 12.4	-	-	-	-	< 1	< 1	1.0	4.15	1.6	1.0	< 10	< 12.4	-	-
Ethene		< 1	< 1	< 1	< 10	< 12.4	-	-	-	-	16.6	15.4	2.7	< 1	1.8	3.91	< 10	< 12.4	-	-
Methane		0.59	2.6	10.4	< 10	7.3	-	-	-	-	228	366	16700	20400	19600	19700	28000	13000	-	-
Volatile Fatty Acids(mg/L)																				
Acetic Acid		-	-	-	0.084	0.012 J	-	-	-	-	-	-	-	-	-	1.8	0.82	-	-	
Butyric Acid		-	-	-	0.069	< 0.050	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	-	-	
Lactic Acid		-	-	-	0.10	0.032 J	-	-	-	-	-	-	-	-	-	0.17	0.32	-	-	
Propionic Acid		-	-	-	< 0.050	< 0.050	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	-	-	
Pyruvic Acid		-	-	-	< 0.15	< 0.15	-	-	-	-	-	-	-	-	-	< 0.15	< 0.15	-	-	
Dissolved Hydrogen (nM)																				
Hydrogen		-	-	-	1.0	2.7	-	-	-	-	-	-	-	-	-	-	-	-	-	
Inorganic Compounds(ug/L)																				
Iron, Dissolved		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Iron, Total		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Iron, Ferrous		< 0.10	< 0.10	< 0.50	-	-	-	-	-	-	< 0.10	0.13	< 0.10	< 0.10	0.24	0.11	-	-	-	-
Manganese, Dissolved		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Manganese, Total		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Volatile Organic Compounds (ug/L)																				
Acetone		< 25	< 25	< 500	< 25	-	-	-	-	-	13.8 J	-	10.3 J	15.3 J	19.1 J	< 25	-	-	-	-
Benzene		< 1	< 1	< 20	< 1	-	-	-	-	-	< 1	-	< 1	< 1	< 1	< 1	-	-	-	-
Bromobenzene		-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	< 1	-	-	-	
Bromochloromethane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1	-	-	-	
Bromodichloromethane		< 1	< 1	< 20	< 1	-	-	-	-	-	< 1	-	< 1	< 1	< 1	< 1	-	-	-	
Bromoform		< 1	< 1	< 20	< 1	-	-	-	-	-	< 1	-	< 1	< 1	< 1	< 1	-	-	-	
Bromomethane		-	-	-	-	< 2	-	-	-	-	-	-	-	-	-	< 2	-	-	-	
2-Butanone (MEK)		-	-	-	-	< 5	-	-	-	-	-	-	-	-	-	< 5	-	-	-	
Carbon disulfide		< 2	< 2	< 40	-															

APPENDIX C
HISTORICAL SUMMARY OF VOC CONCENTRATIONS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Location Name	Sample Date	Dec-07	5/29/2009	8/21/2009	3/23/2010	MW-11I	7/1/2010	9/29/2010	11/17/2010	12/20/2011	2/20/2012	9/18/2015	9/8/2016	Mar-00	Aug-02	Dec-07	5/29/2009	8/21/2009	3/23/2010	MW-11S	7/1/2010	9/29/2010	11/17/2010	12/20/2011	2/20/2012				
Field Parameters																													
Conductivity, Field (mS/cm)	-	0.093	-	0.076	-	-	0.082	0.08	0.08	0.108	0.096	-	-	-	-	0.052	-	0.068	-	-	0.085	0.035	0.053	-	0.085	0.035			
Dissolved Oxygen, Field (mg/L)	-	13	-	2.48	-	-	1.98	2.42	1.7	3.1	0.96	-	-	-	-	16.2	-	0.53	-	-	1.06	0.76	0.72	-	1.06	0.76			
ORP, Field (mV)	-	5.8	-	-137.6	-	-	146.3	154	136.4	220	246	-	-	-	-	29.4	-	-150	-	-	-181.1	187	80.5	-	-181.1	187			
pH, Field (NTU)	-	6.44	-	6.1	-	-	6.23	5.82	5.96	5.82	5.41	-	-	-	-	5.7	-	5.15	-	-	5.03	5.25	5.19	-	5.03	5.25			
Temperature, Field (Deg C)	-	17.5	-	-	16.13	-	-	16.23	16	15.3	18.74	19.45	-	-	-	-	16.8	-	-	13.78	-	-	17.47	16.3	13.6	-	17.47	16.3	
Turbidity, Field (NTU)	-	-	-	78	-	-	5.2	4.3	2.4	2.4	0	-	-	-	-	-	-	-	35.2	-	-	4.35	4.7	4.6	-	4.35	4.7		
General Chemistry (mg/L)																													
Alkalinity, Total (as CaCO ₃)	-	39.6	33	39.7	38	45.1	40.1	37.9	39.2	-	-	-	-	-	-	7.9	9	9.8	10	12	7.5	6.5	9.5	-	7.5	6.5			
Carbon Dioxide	-	110	89.2	126	146	134	82.5	-	-	-	-	-	-	-	-	84.8	92.1	127	83	130	70.6	-	-	-	-	-	-		
Chloride	-	4	4.6	9.4	4.3	-	-	-	-	-	-	-	-	-	-	5.4	6.3	14.5	6.3	-	-	-	-	-	-	-	-		
Nitrate	-	0.7	0.91	0.86	0.85	0.82	0.88	0.96	-	-	-	-	-	-	-	< 0.1	0.35	0.12	0.31	0.4	0.48	< 0.2	-	-	-	-	-	-	
Nitrite (as N)	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	-	-	-	-	-	-	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1		
Nitrite/Nitrate Nitrogen	-	0.7	0.91	0.86	0.85	0.82	0.88	0.96	-	-	-	-	-	-	-	< 0.1	0.35	0.20	0.31	0.4	0.48	< 0.2	-	-	-	-	-	-	
Sulfate	-	< 2	< 2	< 2	< 2	< 2	< 2	< 5	< 5	-	-	-	-	-	-	< 2	2	4.9	2.7	3	3.4	< 5	6.1	-	-	-	-	-	-
Sulfide	-	< 1	< 1	< 1	23.5	1	< 1	< 1	< 0.1	< 0.1	-	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1		
Total Organic Carbon (TOC)	-	-	-	-	< 1	< 1	< 1	1.8	1.8	-	-	-	-	-	-	-	-	-	-	< 1	< 1	< 1	< 1	< 1	2.9	-	-		
Dissolved Gases(ug/L)																													
Ethane	-	< 1	< 1	< 1	< 1	< 1	< 1	< 10	< 12.4	-	-	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 10	< 12.4	-	-	-	-		
Ethene	-	< 1	< 1	< 1	< 1	< 1	< 1	< 10	< 12.4	-	-	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 10	< 12.4	-	-	-	-		
Methane	-	< 0.5	0.76	7.13	0.93	0.40 J	0.38 J	< 10	< 6.6	-	-	-	-	-	-	6.2	0.65	52.7	2.91	3.07	14.8	< 10	< 6.6	-	-	-	-	-	-
Volatile Fatty Acids(mg/L)																													
Acetic Acid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Butyric Acid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Lactic Acid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Propionic Acid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Pyruvic Acid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Dissolved Hydrogen (nM)																													
Hydrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Inorganic Compounds(ug/L)																													
Iron, Dissolved	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Iron, Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Iron, Ferrous	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-	-	-	< 0.1	< 0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10			
Manganese, Dissolved	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Manganese, Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Volatile Organic Compounds (ug/L)																													
Acetone	-	< 250	-	< 130	< 250	< 250	< 250	< 25	-	-	-	-	-	-	-	< 25	-	< 25	< 25	< 130	< 130	< 25	-	-	-	-	-	-	
Benzene	-	< 10	-	< 5	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 1	< 1	< 1	< 5	< 5	< 1	-	-	-	-	-	-	
Bromobenzene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Bromochloromethane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Bromodichloromethane	-	< 10	-	< 5	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 1	< 1	< 1	< 5	< 5	< 1	-	-	-	-	-	-	
Bromoform	-	< 10	-	< 5	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1	< 1	< 1	< 1	< 5	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
Bromomethane	-	-	-	-																									

Notes and Abbreviations:

- Notes and Abbreviations:**

 1. Results shown in **bold** were detected.
 2. < - Not detected above the laboratory detection limit.
 3. Only detected compounds are shown in table.
 4. - Not analyzed.
 5. ND = Non Detect

APPENDIX C
HISTORICAL SUMMARY OF VOC CONCENTRATIONS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Notes and Abbreviations:

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 1. Results shown in **bold** were detected.
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APPENDIX C
HISTORICAL SUMMARY OF VOC CONCENTRATIONS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Location Name	Sample Date	12/22/2011	2/22/2012	11/12/2014	1/6/2015	2/23/2015	4/30/2015	9/16/2015	9/7/2016	Apr-00	Aug-02	Dec-07	5/27/2009	8/19/2009	11/9/2009	RW-1	3/22/2010	6/29/2010	10/1/2010	11/19/2010	8/2/2011	12/19/2011	2/21/2012	5/27/2009	
Field Parameters																									
Conductivity, Field (mS/cm)		0.498	0.649	-	-	-	-	0.626	5.19	-	-	-	0.156	-	0.141	0.201	-	-	-	0.141	0.079	0.04	0.15	0.079	
Dissolved Oxygen, Field (mg/L)		1.68	1.12	-	-	-	-	1.38	0.6	-	-	-	3.34	-	0.1	3.2	-	-	-	0.1	0.83	0.28	0.2	2.85	
ORP, Field (mV)		125.4	162.4	-	-	-	-	-21	-118	-	-	-	16.9	-	73	-161.9	-	-	-	73	162.1	162.8	3.8	31.7	
pH, Field (NTU)		5.32	5.42	-	-	-	-	6.31	6.15	-	-	-	6.19	-	5.75	6.68	-	-	-	5.75	5.81	5.31	5.95	5.89	
Temperature, Field (Deg C)		20.2	19.3	-	-	-	-	21.33	23.84	-	-	-	19.78	-	20.55	16.5	-	-	-	20.55	28.1	19.8	19.2	20.64	
Turbidity, Field (NTU)		5.2	1.9	-	-	-	-	8.7	41.3	-	-	-	-	-	1.23	3.67	-	-	-	1.23	4.8	-0.2	2.1	-	
General Chemistry (mg/L)																									
Alkalinity, Total (as CaCO ₃)		25.2	-	-	-	-	-	-	-	-	-	-	70.6	-	-	-	-	-	-	-	-	-	-	-	33
Carbon Dioxide		-	-	-	-	-	-	-	-	-	-	-	164	-	-	-	-	-	-	-	-	-	-	-	101
Chloride		-	-	-	-	-	-	-	-	-	-	-	4.1	-	-	-	-	-	-	-	-	-	-	-	3.6
Nitrate		5.9	5.8	-	< 0.10	< 0.10	0.66	-	-	-	-	-	0.31	-	-	-	-	-	-	-	0.21	-	-	-	0.76
Nitrite (as N)		0.24	0.18	-	< 0.050	< 0.050	< 0.050	-	-	-	-	-	< 0.10	-	-	-	-	-	-	-	< 0.1	-	-	-	< 0.1
Nitrite/Nitrate Nitrogen		6.2	6	-	-	-	-	-	-	-	-	-	0.31	-	-	-	-	-	-	-	0.21	-	-	-	0.76
Sulfate		166	-	186	128	111	156	-	-	-	-	-	< 2	-	-	-	-	-	-	-	< 5	-	-	-	< 2
Sulfide		< 0.1	< 0.1	-	-	-	-	-	-	-	-	-	< 1	-	-	-	-	-	-	-	-	-	-	-	< 1
Total Organic Carbon (TOC)		11.3	12	5.9	5380	292	14.3	-	-	-	-	-	-	-	-	-	-	-	-	-	3.5	-	-	-	-
Dissolved Gases(ug/L)																									
Ethane		< 10	< 12.6	-	-	-	-	-	-	-	-	-	1.84	-	-	-	-	-	-	-	< 10	-	-	-	< 1
Ethene		< 10	< 12.6	-	-	-	-	-	-	-	-	-	1.48	-	-	-	-	-	-	-	232	-	-	-	< 1
Methane		27.7	35.8	-	-	-	-	-	-	-	-	-	1640	-	-	-	-	-	-	-	< 10	-	-	-	8.05
Volatile Fatty Acids(mg/L)																									
Acetic Acid		< 0.070	0.28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Butyric Acid		< 0.050	0.17	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lactic Acid		< 0.10	0.30	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Propionic Acid		< 0.050	0.023 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyruvic Acid		< 0.15	< 0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Hydrogen (nM)																									
Hydrogen		4.7	6.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Inorganic Compounds(ug/L)																									
Iron, Dissolved		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron, Total		-	-	< 0.200	5.38	6.10	5.87	-	-	-	-	-	-	-	-	-	-	-	-	-	50	-	-	-	-
Iron, Ferrous		-	-	-	-	-	-	-	-	-	-	-	-	10.3	-	-	-	-	-	-	671	-	-	-	-
Manganese, Dissolved		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.10
Manganese, Total		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1220	-	-	-	-
Volatile Organic Compounds (ug/L)																									
Acetone		< 25	-	< 200	12000	2300	540	-	-	-	-	-	< 25	-	< 130	< 130	< 130	< 130	< 130	< 130	-	-	-	-	< 25
Benzene		< 1	-	< 10	< 10	< 10	< 10	-	-	-	-	-	< 1	-	< 5	< 5	< 5	< 5	< 5	< 5	-	-	-	-	< 1
Bromobenzene		< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromochloromethane		< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane		< 1	-	-	< 10	< 10	< 5	< 10	-	-	-	-	< 1	-	< 5	< 5	< 5	< 5	< 5	< 5	-	-	-	-	< 1
Bromoform		< 1	-	< 40	< 40	< 20	< 40	-	-	-	-	-	< 1	-	< 5	< 5	< 5	< 5	< 5	< 5	-	-	-	-	< 1
Bromomethane		< 2	-	< 10	< 10	< 5	< 10	-	-	-	-	-	< 2	-	-	-	-	-	-	-	-	-	-	-	< 2
2-Butanone (MEK)		< 5	-	< 100	< 100	< 50	< 100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5
Carbon disulfide		-	-	-	-	-	-	-	-	-	-	-	< 2	-	< 10	< 10	< 10	< 10	< 10	< 10	-	-	-	-	< 2
Carbon tetrachloride		< 1	-	< 10	< 10	< 5	< 10	-	-	-	-	-	< 1	-	< 5	< 5	< 5	< 5	< 5	< 5	-	-	-	-	< 1
Chlorobenzene		< 1	-	< 10	< 10	< 5	< 10	-	-	-	-	-	< 1	-	< 5	< 5	< 5	< 5	< 5	< 5	-	-	-	-	< 1
Chloroethane		< 1	-	< 10	< 10	< 5	< 10	-	-	-	-	-	< 2	-	< 10	< 10	< 10	< 10	< 10	< 10	-	-	-	-	< 2
Chloroform		3.1	-	< 10	11	< 5	< 10	-	-	-	-	-	1.4	-	< 5	< 5	< 5	< 5	< 5	< 5	1.4 J	-	-	-	3.2
Chloromethane		< 1	-	< 10	< 10	< 5	< 10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 25
2-Chlorotoluene		< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1
4-Chlorotoluene		< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 1
1,2-Dibromo-3-chloropropane		< 5	-	< 50	< 50	< 25	< 50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 5
Dibromochloromethane		< 1	-	< 10	< 10	< 5	< 10	-	-	-	-	-	< 1	-	< 5	< 5	< 5	< 5	< 5	< 5	-	-	-	-	< 1
1,2-Dibromoethane (EDB)</td																									

Notes and Abbreviations:

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 1. Results shown in **bold** were detected.
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APPENDIX C
HISTORICAL SUMMARY OF VOC CONCENTRATIONS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Location Name	Sample Date	RW-2										RW-3										SW-1									
		8/19/2009	11/9/2009	3/22/2010	6/29/2010	10/1/2010	11/19/2010	8/2/2011	12/19/2011	2/22/2012	11/12/2009	8/2/2011	12/19/2011	2/22/2012	9/16/2015	9/8/2016	8/3/2011	12/19/2011	2/22/2012	9/16/2015	9/8/2016	9/23/2013	10/13/2014	6/23/2015	9/18/2015	9/23/2013					
Field Parameters																															
Conductivity, Field (mS/cm)	-	0.07	0.068	-	-	0.07	0.084	0.07	0.72	-	0.471	0.131	0.146	0.282	0.205	0.14	0.08	0.087	0.111	0.094	-	-	-	-	-	0.106	-	-			
Dissolved Oxygen, Field (mg/L)	-	0.1	3.8	-	-	0.1	2.4	3.83	2.45	-	1.03	0.43	0.64	1.43	0.53	1.68	2.99	2.6	3.6	3.52	-	-	-	-	-	6.50	-	-			
ORP, Field (mV)	-	200.2	-103	-	-	200.2	609	152.9	108.4	-	-91.7	102.2	67.6	30	84	26.5	144.2	109.5	193	125	-	-	-	-	-	-44	-	-			
pH, Field (NTU)	-	5.94	6.03	-	-	5.94	3.38	6.13	6.15	-	11.1	8.95	9.5	7.95	6.54	7.14	6.54	6.66	7.09	6.26	-	-	-	-	-	7.44	-	-			
Temperature, Field (Deg C)	-	17.74	18.94	-	-	17.74	23.9	19.6	18.2	-	25.4	19.8	17.9	21.68	23.73	21.5	19.8	17.2	20.52	22.73	-	-	-	-	-	18.66	-	-			
Turbidity, Field (NTU)	-	0.21	2.5	-	-	0.21	0.2	11.5	1.5	-	1.9	5.1	4	0.5	57.2	22.8	5.8	4.6	3.7	243	-	-	-	-	-	-	7.5	-	-		
General Chemistry (mg/L)																															
Alkalinity, Total (as CaCO ₃)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Carbon Dioxide	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Chloride	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Nitrate	-	-	-	-	-	-	-	0.76	-	-	< 0.2	-	-	-	-	-	< 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nitrite (as N)	-	-	-	-	-	-	-	< 0.1	-	-	< 0.1	-	-	-	-	-	< 0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	
Nitrite/Nitrate Nitrogen	-	-	-	-	-	-	-	0.76	-	-	< 0.2	-	-	-	-	-	< 0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sulfate	-	-	-	-	-	-	-	< 5.0	-	-	31.6	-	-	-	-	-	10.9	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sulfide	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Total Organic Carbon (TOC)	-	-	-	-	-	-	-	1.6	-	-	4.2	-	-	-	-	-	2.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dissolved Gases(ug/L)																															
Ethane	-	-	-	-	-	-	-	-	< 10	-	-	< 10	-	-	-	-	< 10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethene	-	-	-	-	-	-	-	-	< 10	-	-	< 10	-	-	-	-	< 10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Methane	-	-	-	-	-	-	-	-	< 10	-	-	< 10	-	-	-	-	< 10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Fatty Acids(mg/L)																															
Acetic Acid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Butyric Acid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Lactic Acid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Propionic Acid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Pyruvic Acid	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Dissolved Hydrogen (nM)																															
Hydrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Inorganic Compounds(ug/L)																															
Iron, Dissolved	-	-	-	-	-	-	-	-	< 50	-	-	< 50	-	-	-	-	< 50	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron, Total	-	-	-	-	-	-	-	-	-	-	-	< 50	-	-	-	-	-	980	-	-	-	-									

Location Name Sample Date	10/13/2014	SW-2 6/23/2015	9/18/2015	S-2 11/12/2009	12/27/2011	S-5 11/12/2009	12/27/2011
Field Parameters							
Conductivity, Field (mS/cm)	-	-	0.105	-	-	-	-
Dissolved Oxygen, Field (mg/L)	-	-	6.86	-	-	-	-
ORP, Field (mV)	-	-	58	-	-	-	-
pH, Field (NTU)	-	-	7.49	-	-	-	-
Temperature, Field (Deg C)	-	-	19.92	-	-	-	-
Turbidity, Field (NTU)	-	-	19.1	-	-	-	-
General Chemistry (mg/L)							
Alkalinity, Total (as CaCO ₃)	-	-	-	-	-	-	-
Carbon Dioxide	-	-	-	-	-	-	-
Chloride	-	-	-	-	-	-	-
Nitrate	-	-	-	-	-	-	-
Nitrite (as N)	-	-	-	-	-	-	-
Nitrite/Nitrate Nitrogen	-	-	-	-	-	-	-
Sulfate	-	-	-	-	-	-	-
Sulfide	-	-	-	-	-	-	-
Total Organic Carbon (TOC)	-	-	-	-	-	-	-
Dissolved Gases(ug/L)							
Ethane	-	-	-	-	-	-	-
Ethene	-	-	-	-	-	-	-
Methane	-	-	-	-	-	-	-
Volatile Fatty Acids(mg/L)							
Acetic Acid	-	-	-	-	-	-	-
Butyric Acid	-	-	-	-	-	-	-
Lactic Acid	-	-	-	-	-	-	-
Propionic Acid	-	-	-	-	-	-	-
Pyruvic Acid	-	-	-	-	-	-	-
Dissolved Hydrogen (nM)							
Hydrogen	-	-	-	-	-	-	-
Inorganic Compounds(ug/L)							
Iron, Dissolved	-	-	-	-	-	-	-
Iron, Total	-	-	-	-	-	-	-
Iron, Ferrous	-	-	-	-	-	-	-
Manganese, Dissolved	-	-	-	-	-	-	-
Manganese, Total	-	-	-	-	-	-	-
Volatile Organic Compounds (ug/L)							
Acetone	-	-	-	< 25	< 25	< 25	< 25
Benzene	-	-	-	< 1	< 1	< 1	< 1
Bromobenzene	-	-	-	-	< 1	-	< 1
Bromochloromethane	-	-	-	-	< 1	-	< 1
Bromodichloromethane	-	-	-	< 1	< 1	< 1	< 1
Bromoform	-	-	-	< 1	< 1	< 1	< 1
Bromomethane	-	-	-	-	< 2	-	< 2
2-Butanone (MEK)	-	-	-	-	< 5	-	< 5
Carbon disulfide	-	-	-	< 2	-	< 2	-
Carbon tetrachloride	-	-	-	< 1	< 1	< 1	< 1
Chlorobenzene	-	-	-	< 1	< 1	< 1	< 1
Chloroethane	-	-	-	< 2	< 1	< 2	< 1
Chloroform	-	-	-	< 1	< 1	< 1	< 1
Chloromethane	-	-	-	-	< 1	-	< 1
2-Chlorotoluene	-	-	-	-	< 1	-	< 1
4-Chlorotoluene	-	-	-	-	< 1	-	< 1
1,2-Dibromo-3-chloropropane	-	-	-	-	< 5	-	< 5
Dibromochloromethane	-	-	-	< 1	< 1	< 1	< 1
1,2-Dibromoethane (EDB)	-	-	-	-	< 1	-	< 1
Dibromomethane	-	-	-	-	< 1	-	< 1
1,2-Dichlorobenzene	-	-	-	-	< 1	-	< 1
1,3-Dichlorobenzene	-	-	-	-	< 1	-	< 1
1,4-Dichlorobenzene	-	-	-	-	< 1	-	< 1
Dichlorodifluoromethane	-	-	-	-	< 1	-	< 1
1,1-Dichloroethane	< 5	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	-	-	-	-	< 1	< 1	< 1
1,1-Dichloroethene	-	-	-	-	< 1	< 1	< 1
cis-1,2-Dichloroethene	< 5	< 1	< 1	6.2	1.7	< 1	< 1
trans-1,2-Dichloroethene	< 5	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	-	-	-	-	< 1	< 1	< 1
1,3-Dichloropropane	-	-	-	-	< 1	-	< 1
2,2-Dichloropropane	-	-	-	-	< 1	-	< 1
1,1-Dichloropropene	-	-	-	-	< 1	-	< 1
cis-1,3-Dichloropropene	-	-	-	-	< 1	< 1	< 1
trans-1,3-Dichloropropene	-	-	-	-	< 1	-	< 1
Diisopropyl ether	-	-	-	-	< 1	-	< 1
Ethylbenzene	-	-	-	-	< 1	< 1	< 1
Hexachloro-1,3-butadiene	-	-	-	-	< 1	-	< 1
2-Hexanone	-	-	-	< 10	< 5	< 10	< 5
p-Isopropyltoluene	-	-	-	-	< 1	-	< 1
Methyl bromide	-	-	-	< 2	-	< 2	-
Methyl chloride	-	-	-	< 2	-	< 2	-
Methylene Chloride	< 5	< 4	< 4	< 2	< 2	< 2	< 2
Methyl ethyl ketone	-	-	-	< 5	-	< 5	-
4-Methyl-2-pentanone (MIBK)	-	-	-	< 5	< 5	< 5	< 5
Methyl-tert-butyl ether	-	-	-	-	< 1	-	< 1
Naphthalene	-	-	-	-	< 1	-	< 1
Styrene	-	-	-	-	< 1	< 1	< 1
1,1,2-Tetrachloroethane	-	-	-	-	< 1	-	< 1
1,1,2,2-Tetrachloroethane	-	-	-	< 1	< 1	< 1	< 1
Tetrachloroethene	-	-	-	-	< 1	< 1	< 1
Toluene	-	-	-	< 1	< 1	< 1	< 1
1,2,3-Trichlorobenzene	-	-	-	-	< 1	-	< 1
1,2,4-Trichlorobenzene	-	-	-	-	< 1	-	< 1
1,1,1-Trichloroethane	-	-	-	-	< 1	< 1	< 1
1,1,2-Trichloroethane	< 5	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	< 5	< 1	< 1	57.6	13.1	< 1	< 1
Trichlorofluoromethane	-	-	-	-	< 1	-	< 1
1,2,3-Trichloropropane	-	-	-	-	< 1	-	< 1
Vinyl acetate	-	-	-	-	< 2	-	< 2
Vinyl chloride	< 2	< 1	< 1	< 1	< 1	< 1	< 1
m,p-Xylene	-	-	-	-	< 2	-	< 2
o-Xylene	-	-	-	-	< 1	-	< 1
Xylene, Total	-	-	-	< 3	-	< 3	-

Notes and Abbreviations:

1. Results shown in **bold** were detected.
2. < - Not detected above the laboratory detection limit.
3. Only detected compounds are shown in table.
4. - Not analyzed.
5. ND = Non Detect

APPENDIX D

Labor Summary

APPENDIX D**LABOR SUMMARY**

GENERAL TIME CORPORATION - ATHENS, GA

VOLUNTARY REMEDIATION PROGRAM (HIS# 10355)

Month-Year	Type Service	Hours	Description
October-16	PE/PM	24	Project Management
	Support	90	Report Preparation
	Senior Geologist	3	Project Coordination
November-16	PE/PM	1.5	Project Management
	Senior Geologist	0.25	Project Coordination
December-16	PE/PM	0.5	Project Management
	Support	11	Technical
	Senior Geologist	0.25	Project Coordination
January-17	PE/PM	6	Project Management
	Senior Geologist	2	Project Coordination
	Support	17.25	Technical
February-17	PE/PM	21	Project Management
	Support	21	Sample Collection
	Senior Geologist	6	Project Coordination
	Support	21	Sample Collection
March-17	PE/PM	39.5	Project Management
	Senior Geologist	1	Project Coordination
	Support	143.75	Sample Collection/Report Preparation