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

by Haley & Aldrich, Inc.
Greenville, South Carolina

for Carpenter Technology Corporation
Reading, Pennsylvania

File No. 128752-003
October 2017





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13 October 2017
File No. 128752-003

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: October 2017 Semi-Annual Progress Report #7
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 Semi-annual Progress Reports to the Georgia Environmental Protection Division (EPD) describing activities that have been conducted during the prior six months. This report is the seventh 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.

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

Sincerely yours,
HALEY & ALDRICH, INC.

Mark Miesfeldt
Project Manager

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

13 October 2017

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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

13 Oct 2017

Date

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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 Semi-Annual Progress Report #6 in April 2017:

- Haley and Aldrich collected groundwater samples in September 2017. Groundwater samples were collected on and off the site to document current conditions and corroborate the Conceptual Site Model (CSM).
- Performance (post injection) groundwater samples were collected in June and September 2017 to monitor the effectiveness of the lactate injections and document the continued degradation of Site contaminants of concern (COCs).
- CTC continued to evaluate Enhanced In-Situ Bioremediation (EISB) as a remediation technology to address affected groundwater beneath the former manufacturing building.

3. Groundwater Monitoring Activities

This section of the report includes a summary of the groundwater monitoring activities conducted during September 2017 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 September 6th and September 19th, 2017. 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). Performance sampling points installed in the vicinity of the bioremediation pilot treatment area (MP-3, MP-7, MP-8, MW-16I and MW-16D) were also monitored for the same suite of analyses plus sulfate, total organic carbon (TOC), ethene, ethane, methane and ferrous iron. 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. All the wells included in the March 2017 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 calculate horizontal and vertical groundwater gradients, construct potentiometric surface maps, 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. These data are summarized in Table III.

The September 2017 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 0.010 feet/foot, also consistent with previous interpretations. 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 0.22 feet/day or 80 feet/year.

3.2 SUMMARY OF ESTIMATED VERTICAL GROUNDWATER GRADIENTS

Vertical groundwater gradients were calculated, where possible, using the September 2017 water elevation data. There is a low magnitude downward flow potential in the vicinity of the MW-2 and MW-9 well clusters. The most recent event indicates an upward vertical gradient in the vicinity of MW-16 cluster, reversed from the March 2017 timeframe. In the proximity to the North Oconee River (MW-11 well cluster), the vertical gradients in the unconsolidated overburden and between the bedrock and overburden are neutral. The calculated vertical gradients are provided in the table below.

Well Pair	Estimated Vertical Gradient*
MW-2S & MW-2I	-0.0150 feet/feet
MW-2I & MW-2D	-0.0416 feet/feet
MW-9I & MW-9D	-0.0038 feet/feet
MW-11S & MW-11I	0.0000 feet/feet
MW-11I & MW-11D	0.0001 feet/feet
MW-16I & MW-16D	0.0022 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 September 2017 sampling event include:

- TCE was detected during the last sampling event in monitoring well MW-16I at 9 µg/L. This is the first-time TCE has been detected since concentrations were biologically degraded to below detection levels in December 2016. Concentrations in MW-16I are below the risk reduction standard of 371 µg/L. 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 5,000 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 17,000 µg/L and 7,900 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 290 ug/L in February 2017 to 300 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 1000 ug/L in 2016 to 930 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
- 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 370 µg/L, while at MW-11S, TCE was detected at a concentration of 200 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.

3.4 REMEDIATION PROGRAM

As reported in the April 2016 semi-annual progress report, CTC has 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. A summary of the construction details was outlined in the April 2016 semiannual progress report. Analytical results of pre-injection and post injection groundwater sampling can be found in Table IV. Significant findings from ongoing performance monitoring are outlined below. Injection points and monitoring points are shown on Figure 6.

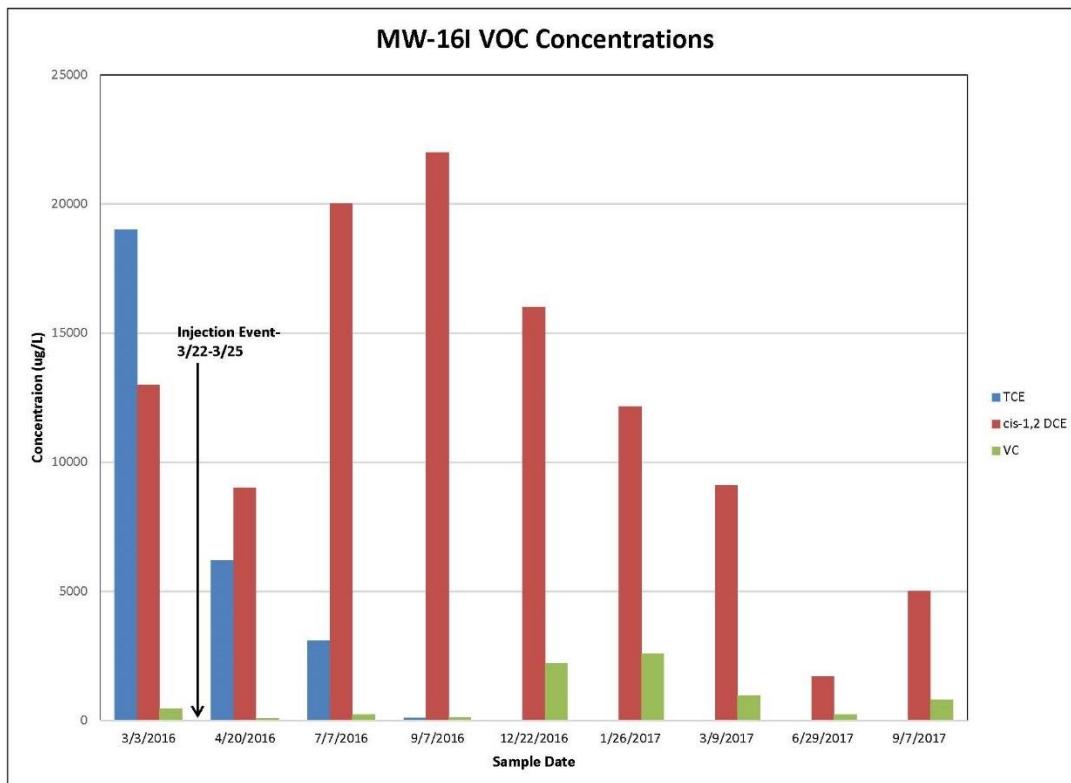
MW-16I:

The field parameters measured at MW-16I indicate that the injection event was successful in creating a more conducive environment for biological reductive dechlorination and shows that the well continues to be influence by the remedial injection event. The redox potential remains reducing at -121 mV, the pH has remained neutral at 7.13 s.u., and the dissolved oxygen concentration has remained low at 1.03 mg/L.

Geochemical parameters sampled still indicate a positive influence from the injection event. The organic carbon in the subsurface increased from 6.2 mg/L in the pre-injection baseline event to 15,200 mg/L in April 2016 and then decreased significantly to 93.4 mg/L during the September 2017 sampling event. This steady decrease in TOC concentrations indicates that the native bacteria are utilizing the electron donors to break down contamination. The concentration of ferrous iron has decreased from a high of 122 mg/L to 17.7 mg/L during the September 2017 sampling event. The concentration of ferrous iron is still higher than baseline sampling indicating that the iron present is in the reduced form consistent with a strongly reducing environment. The concentration of sulfate has decreased from a high of 209 mg/L to 8.8 mg/L in September 2017. The sulfate may have been utilized by sulfate reducing

bacteria stimulated from the injection event. Many types of sulfate reducing bacteria are capable of reductive dechlorination through co-metabolic processes. The concentration of dissolved ethene still indicate that the reductive dechlorination processes are continuing at this point with a concentration of 3,000 ug/L.

The well has experienced over 99.9% reduction in TCE concentrations from 19,000 ug/L during the pre-injection baseline sampling event in to 9 ug/L during the September 2017 event, and is experiencing significant decreases in 1,2-DCE and vinyl chloride concentrations. The decrease in the organic carbon concentration suggests that the rate of reduction will begin to slow down as the electron donor becomes depleted in the vicinity of MW-16I.



MW-16D:

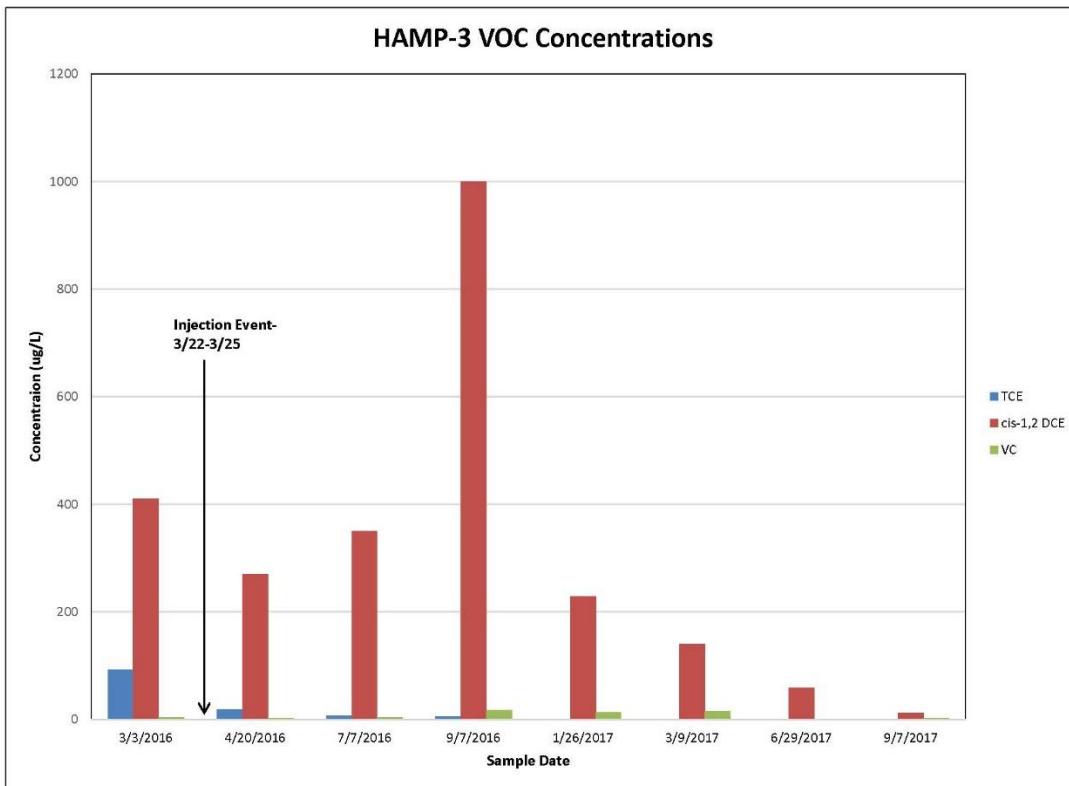
The field parameters measured at MW-16D indicate that the lactate injection event has had no effect on MW-16D. The well is located within the treatment area; however, it is screened deeper than the injection zone. There is no change in conductivity, a stable concentration of dissolved oxygen of 1.51 mg/L, a slight increase in the redox potential which remains oxidative at +193 mV, and a stable pH of 5.40 s.u. Geochemical parameters also show no significant changes in concentrations which supports the hypothesis that the deeper zone was not influenced by the injection event.

The concentrations of VOCs has changed slightly but remain within historical concentration ranges for TCE and cis-1,2-DCE with concentrations measured at 180 ug/L and 72 ug/L, respectively, during the September 2017 sampling event. The injection event was not designed or anticipated to have affected MW-16D. Any potential changes in concentration are most likely attributed to unstimulated biodegradation and natural dilution and dispersion of the contaminants at this location.

HAMP-3:

COC concentrations at MP-3 have decreased significantly following the remedial event with TCE currently below laboratory detection limits and cis-1,2-DCE and vinyl chloride present at 12 ug/L and 3 ug/L, respectively.

The field parameters measured at HAMP-3 indicate that the treatment zone is continuing to expand in the downgradient direction. Geochemical results indicate a strongly reducing environment to promote reductive dechlorination with redox potential around -181 mV, the pH is at 8.18 s.u., which is still within acceptable biodegradation ranges, and anaerobic dissolved oxygen concentrations at 1.08 mg/L. Total and ferrous iron indicate that the subsurface is reducing. Sulfate remains below the laboratory detection limit of 5 mg/L. Elevated methane concentration of 17,000 ug/L further support reducing conditions. In addition, there remains 471 mg/L of TOC present in the subsurface that will allow for continued biological activity at this location.



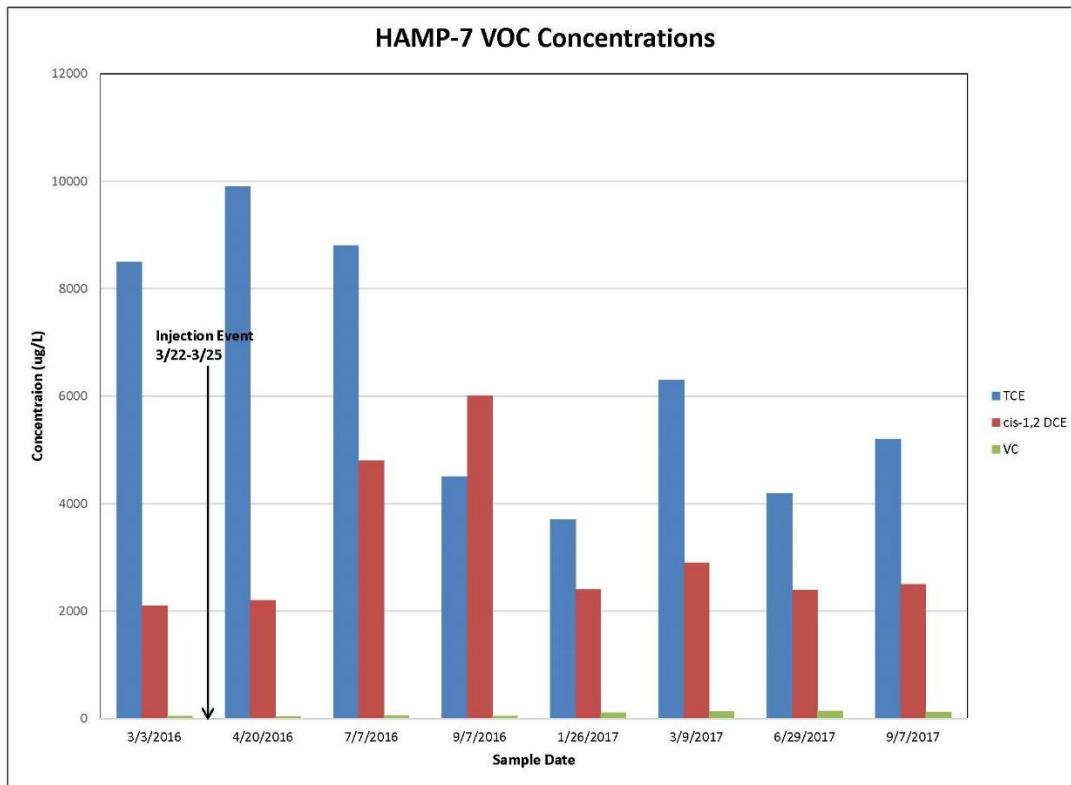
HAMP-7:

The field parameters measured at HAMP-7 indicate that following the initial injection the treatment zone expanded into the area surrounding this monitoring point. Active biodegradation continued through June 2017; however, the September field measurements indicate that the active treatment zone is beginning to contract. The anaerobic dissolved oxygen concentration is trending up at 1.42 mg/L though the ORP is still reducing at -70 mV while the pH remains neutral at 6.72 s.u.

Geochemical parameters initially indicated influence from the injection event but results from the September 2017 sampling event indicate that the remedial amendment may have been depleted in the vicinity of MP-7. Sulfate has remained constant from 25.2 mg/L in March 2017 to 26.6 mg/L in September 2017 and the concentration of iron has decreased significantly from 29.7 mg/L in March 2017 to 10.3 mg/l in September 2017. In addition, TOC concentrations have decreased significantly from 261 mg/L in March 2017 to 3.3 mg/L with low dissolved ethene and methane concentrations of 280 ug/L and 540 ug/L, respectively.

The VOC concentrations indicate stimulated reductive dechlorination near HAMP-7. Overall, TCE has decreased by 39% from 8,500 ug/L during the baseline event to 5,200 ug/L during the September 2017 sampling event., however the TCE measured in September 2017 has increased from the historical low

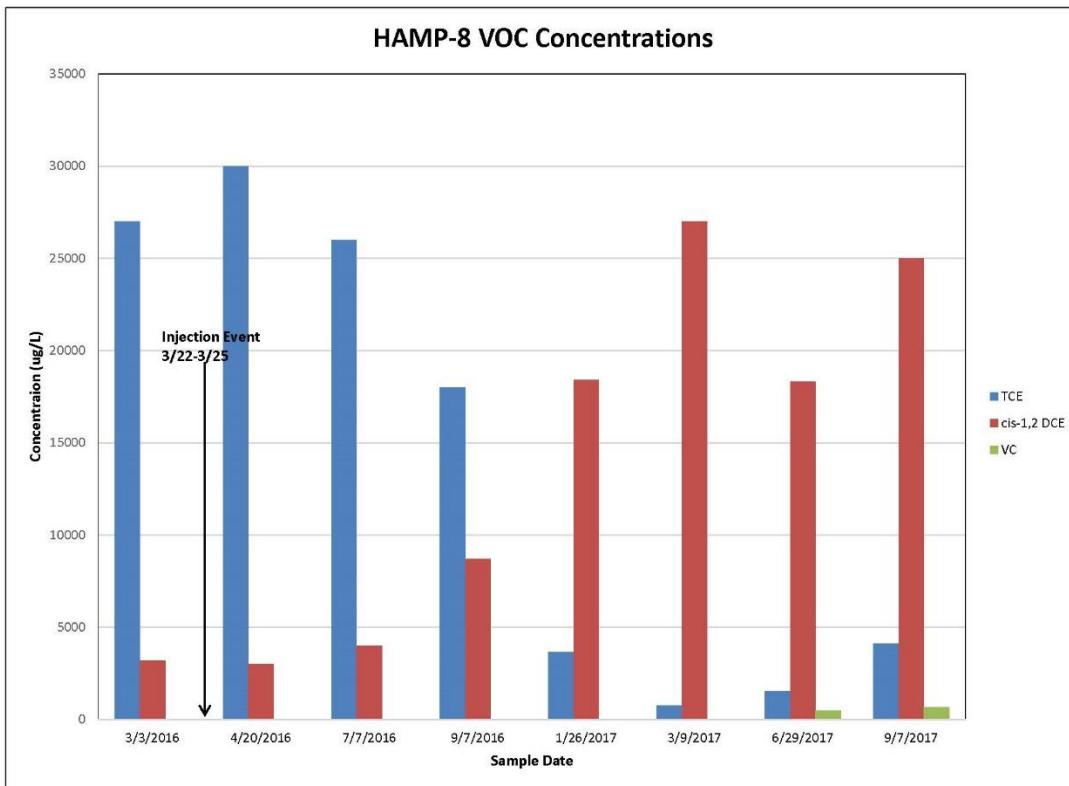
measured in January 2017. The concentration of daughter products cis-1,2-DCE and vinyl chloride have stayed relatively constant since the baseline event with cis-1,2-DCE and vinyl chloride increasing slightly.



HAMP-8:

The field parameters and geochemical parameters measured at HAMP-8 indicate that the monitoring point continues to experience an influence from the injection event. However, the field parameters indicate that subsurface conditions are beginning to revert to pre-injection conditions. Anaerobic dissolved oxygen concentration is trending up at 1.70 mg/L, though the ORP is still reducing at -65 mV. The pH remains neutral at 6.42 s.u. The concentration of sulfate has significantly increased to 34.0 mg/L and the concentration of ferrous iron has continued to decrease from 12.4 mg/L in March 2017 to 9.6 mg/L in the September 2017 sampling event. The concentration of TOC is down to 53.3 mg/L with lower dissolved ethene and methane concentrations of 650 ug/L and 110 ug/L, respectively.

The concentration of TCE has decreased by 85% from 27,000 ug/L during the baseline event to 4,100 ug/L during the September 2017 sampling event. The concentration of daughter products cis-1,2-DCE and vinyl chloride have increased since the baseline event to the September 2017 event from 3,200 ug/L to 25,000 ug/L and below the laboratory detection limit of 50 ug/L to 650 ug/L, respectively. Geochemically, the results indicate that the remedial amendment is being consumed in the vicinity of MP-8.



4. Conclusions

Evidence 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. However, the most recent sampling results 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 is planning to continue the pilot program in the fourth quarter of 2017 by building on previous studies and evaluating improvements to the delivery methods, to minimize short-circuiting and better distribute remediation amendments in the subsurface. The results of the ongoing pilot will be reported in the April 2018 semiannual progress report. An updated milestone schedule, including semiannual groundwater and surface water sampling, is provided on Figure 7.

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.

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

Notes:

- Volatile Organic Compounds (VOCs) include: Site Specific VOCs: cis-1,2-dichloroethene, 1,1,2-Trichloroethane, 1,1-Dichloroethene, Methylene chloride, trans-1,2-dichloroethene, Trichloroethene, and Vinyl Chloride
- Injection COC's: Sulfate, total organic carbon (TOC), ferrous iron, 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-1S 12/21/2011	MW-1S 9/16/2015	MW-1S 3/6/2017	MW-1S 9/6/2017	MW-2D 12/22/2011	MW-2D (DUP) 12/22/2011
			Units	mS/cm	0.053	0.065	0.069	0.061	0.022	0.036	0.042	0.028	0.032
Conductivity			mg/L	8.64	6.58	3.79	5.61	0.00	8.32	0.86	1.08	2.24	1.08
Dissolved Oxygen			mV	142.90	204	183	198	230	149	84	199	203	-30.1
ORP			s.u.	6.25	6.58	5.84	5.83	5.60	5.97	5.17	5.22	5.14	7.89
pH			°C	18	19.44	28.76	19.87	20.53	17.4	21.31	21.27	22.61	18.8
Temperature			NTU	1.4	2.0	1.5	0.0	0.0	5.1	14.6	83.4	26.3	3.4
General Chemistry (mg/L)													
Alkalinity, Total (as CaCO ₃)			mg/L	23.8	-	-	-	-	16.2	-	-	77.7	75.6
Nitrate			mg/L	0.66	-	-	-	-	0.56	-	-	< 0.2	< 0.2
Nitrite (as N)			mg/L	< 0.1	-	-	-	-	< 0.1	-	-	< 0.1	< 0.1
Nitrite/Nitrate Nitrogen			mg/L	0.66	-	-	-	-	0.56	-	-	< 0.2	< 0.2
Sulfate			mg/L	< 5	-	-	-	-	< 5	-	-	24.9	23.8
Sulfide			mg/L	< 0.1	-	-	-	-	< 0.1	-	-	< 0.1	< 0.1
Total Organic Carbon (TOC)			mg/L	< 1	-	-	-	-	< 1	-	-	1.7	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	-	-	< 10	< 10
Volatile Organic Compounds (ug/L)													
1,1,2-Trichloroethane	457		ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	-		ug/L	-	< 1	< 1	< 1	-	-	< 1	< 1	-	-
1,1-Dichloroethene	13571		ug/L	< 1	-	< 1	< 1	< 1	< 1	-	< 1	< 1	< 1
cis-1,2-Dichloroethene	-		ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Methylene chloride	328571		ug/L	< 2	< 4	< 4	< 4	< 4	< 2	< 4	< 4	< 2	< 2
trans-1,2-Dichloroethene	27143		ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	371		ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1.1
Vinyl chloride	386		ug/L	< 1	< 1	< 1	< 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-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-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-2S 12/21/2011	
			Units	mS/cm	0.167	-	0.229	0.225	0.244	0.064	0.068	0.087	0.105	0.096	0.06
Conductivity			mg/L	1.1	-	0.56	0.99	1.89	2.54	1.5	4.11	0.29	1.25	1.31	6.86
Dissolved Oxygen			mV	3.8	-	-53	-87	-10	151.9	61.4	83	109	208	191	156
ORP			s.u.	8.6	-	9.85	8.97	10.04	5.89	5.87	6.62	6.07	5.14	5.51	5.58
pH			°C	13.6	-	21.6	19.27	19.95	18.9	17.0	22.42	34.73	20.21	21.57	19
Temperature			NTU	2.4	-	7.91	0.00	8.10	5.1	3.0	1.0	8.2	43.9	24.8	2.2
General Chemistry (mg/L)															
Alkalinity, Total (as CaCO ₃)			mg/L	78.4	-	-	-	-	29.2	28.6	-	-	-	-	19.5
Nitrate			mg/L	< 0.2	-	-	-	-	1.5	0.44	-	-	-	-	0.43
Nitrite (as N)			mg/L	< 0.1	-	-	-	-	< 0.1	< 0.1	-	-	-	-	< 0.1
Nitrite/Nitrate Nitrogen			mg/L	< 0.2	-	-	-	-	1.5	0.44	-	-	-	-	0.43
Sulfate			mg/L	22.1	-	-	-	-	< 5	< 5	-	-	-	-	7.9
Sulfide			mg/L	< 0.1	-	-	-	-	< 0.1	< 0.1	-	-	-	-	< 0.1
Total Organic Carbon (TOC)			mg/L	1.4	-	-	-	-	1.8	2.2	-	-	-	-	3.7
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	< 6.6	-	-	-	-	< 10	< 6.6	-	-	-	-	11.2
Volatile Organic Compounds (ug/L)															
1,1,2-Trichloroethane	457		ug/L	-	-	< 1	< 1	< 1	2.7	-	< 10	< 10	< 20	< 20	< 1
1,1-Dichloroethane	-		ug/L	-	-	< 1	< 1	-	-	-	< 10	< 10	< 20	-	-
1,1-Dichloroethene	13571		ug/L	-	-	< 1	< 1	< 1	2.1	-	-	< 10	< 20	< 20	< 1
cis-1,2-Dichloroethene	-		ug/L	< 1	-	< 1	< 1	< 1	924	813	790	1600	1400	2000	1
Methylene chloride	328571		ug/L	-	-	< 4	< 4	< 4	< 2	-	< 40	< 40	< 20	< 80	< 2
trans-1,2-Dichloroethene	27143		ug/L	< 1	-	< 1	< 1	< 1	24.1	< 100	12	25	23	34	< 1
Trichloroethene	371		ug/L	< 1	-	4	2	2	11500	9430	7800	12000	14000	17000	2.9
Vinyl chloride	386		ug/L	< 1	-	< 1	< 1	< 1	1.3	< 100	< 10	< 10	< 20	< 20	< 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	Risk Reduction Standards - Sample Date	Target Groundwater Concentrations (ug/L)	MW-2S	MW-2S	MW-2S	MW-2S	MW-2S	MW-3I	MW-3I	MW-3I	MW-3I	MW-4I	
				2/20/2012	9/16/2015	9/7/2016	3/7/2017	9/6/2017	12/27/2011	9/17/2015	9/8/2016	3/8/2017	9/19/2017	12/22/2011
Conductivity			mS/cm	0.84	0.109	0.125	0.116	0.13	0.092	0.101	0.099	0.111	0.078	0.088
Dissolved Oxygen			mg/L	4.00	3.41	0.67	3.35	1.78	3.34	4.69	2.81	3.32	0	2.11
ORP			mV	52.1	192	131	223	199	78.6	110	70	47	173	19.5
pH			s.u.	5.7	6.39	5.63	6.00	6.27	6.27	7.61	6.00	6.14	5.64	6.21
Temperature			°C	16.2	22.38	35.85	19.35	21.33	18.5	21.59	24.4	20.62	23.65	17.4
Turbidity			NTU	4.0	0.2	38.3	11.8	0.0	4.8	0.2	29.5	132	9.3	6.3
General Chemistry (mg/L)														
Alkalinity, Total (as CaCO ₃)			mg/L	26.5	-	-	-	-	-	-	-	-	41	
Nitrate			mg/L	1.6	-	-	-	-	-	-	-	-	0.67	
Nitrite (as N)			mg/L	< 0.1	-	-	-	-	-	-	-	-	< 0.1	
Nitrite/Nitrate Nitrogen			mg/L	1.6	-	-	-	-	-	-	-	-	0.67	
Sulfate			mg/L	12	-	-	-	-	-	-	-	-	< 5	
Sulfide			mg/L	< 0.1	-	-	-	-	-	-	-	-	< 0.1	
Total Organic Carbon (TOC)			mg/L	2.7	-	-	-	-	-	-	-	-	13.6	
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	< 6.6	-	-	-	-	-	-	-	-	< 10	
Volatile Organic Compounds (ug/L)														
1,1,2-Trichloroethane	457		ug/L	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
1,1-Dichloroethane		-	ug/L	-	< 1	< 1	< 1	-	< 1	< 1	< 1	< 1	-	
1,1-Dichloroethene	13571		ug/L	-	-	5	< 1	< 1	< 1	-	< 1	< 1	< 1	
cis-1,2-Dichloroethene	-		ug/L	< 1	< 1	74	< 1	1	< 1	< 1	< 1	< 1	< 1	
Methylene chloride	328571		ug/L	-	< 4	< 4	< 4	< 4	< 2	< 4	< 4	< 4	< 2	
trans-1,2-Dichloroethene	27143		ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
Trichloroethene	371		ug/L	< 1	< 1	100	< 1	4	< 1	< 1	< 1	< 1	1.9	
Vinyl chloride	386		ug/L	< 1	< 1	< 1	< 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	Risk Reduction Standards - Sample Date	Target Groundwater Concentrations (ug/L)	Units	MW-5I	MW-5I	MW-5I	MW-5I	MW-5I	MW-5I	MW-6I	MW-6I	MW-6I	MW-6I
					12/27/2011	2/21/2012	9/17/2015	9/12/2016	3/7/2017	9/18/2017	12/19/2011	9/17/2015	9/9/2016	3/7/2017
Conductivity			mS/cm	0.101	0.098	0.109	0.101	0.116	0.080	0.74	0.082	0.094	0.097	0.07
Dissolved Oxygen			mg/L	5.5	1.79	1.87	2.2	2.15	0.00	1.33	3.85	0.76	1.19	0.00
ORP			mV	49.1	73.2	121	92	164	191	209.1	114	200	190	222
pH			s.u.	6.53	6.39	6.8	6.26	6.71	5.89	5.64	6.82	5.59	5.78	5.00
Temperature			°C	20.5	21.7	24.71	26.36	22.89	26.88	19.3	23.84	24.21	20.54	23.29
Turbidity			NTU	5.1	2.3	0.0	0.0	5.4	36.7	7.9	0.0	9.8	57.1	48.9
General Chemistry (mg/L)														
Alkalinity, Total (as CaCO ₃)			mg/L	44.1	43.2	-	-	-	-	-	-	-	-	-
Nitrate			mg/L	0.84	0.84	-	-	-	-	-	-	-	-	-
Nitrite (as N)			mg/L	< 0.1	< 0.1	-	-	-	-	-	-	-	-	-
Nitrite/Nitrate Nitrogen			mg/L	0.84	0.84	-	-	-	-	-	-	-	-	-
Sulfate			mg/L	< 5	< 5	-	-	-	-	-	-	-	-	-
Sulfide			mg/L	< 0.1	< 0.1	-	-	-	-	-	-	-	-	-
Total Organic Carbon (TOC)			mg/L	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	< 6.6	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds (ug/L)														
1,1,2-Trichloroethane	457		ug/L	< 1	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	-		ug/L	-	-	< 1	< 1	< 1	< 1	-	< 1	< 1	< 1	-
1,1-Dichloroethene	13571		ug/L	< 1	-	-	< 1	< 1	< 1	< 1	-	< 1	< 1	< 1
cis-1,2-Dichloroethene	-		ug/L	2.8	2.2	3	3	3	3	70.6	< 1	49	41	40
Methylene chloride	328571		ug/L	< 2	-	< 4	< 4	< 4	< 1	< 2	< 4	< 4	< 4	< 1
trans-1,2-Dichloroethene	27143		ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	371		ug/L	96.1	< 1	81	78	74	80	438	7	410	290	300
Vinyl chloride	386		ug/L	< 1	< 1	< 1	< 1	< 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-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-8I 12/27/2011	MW-8I 10/13/2014	MW-8I 9/17/2015	MW-8I 9/12/2016	MW-8I 3/7/2017	
			Units	mS/cm	0.122	0.124	0.126	0.118	0.138	0.098	0.312	-	0.32	0.246
Conductivity			mg/L	0.35	0.12	0.58	0.57	0.40	0.00	7.85	-	2.1	1.32	5.1
Dissolved Oxygen			mV	45.9	21	129	67	128	147	149	-	193	155	198
ORP			s.u.	6.2	6.19	6.46	6.15	6.59	5.70	5.46	-	5.85	5.47	6.1
pH			°C	18.8	19.3	23.43	26.54	19.22	23.2	16.2	-	25.8	28.83	18.68
Temperature			NTU	5	0.9	0.0	0.0	3.2	0.31	4.2	-	2.5	0	16.9
Turbidity														
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	< 5	< 1	< 1	< 1
1,1-Dichloroethane	-		ug/L	-	-	< 1	< 1	< 1	-	-	< 1	< 1	< 1	< 1
1,1-Dichloroethene	13571		ug/L	< 1	-	-	< 1	< 1	< 1	< 1	< 5	-	< 1	< 1
cis-1,2-Dichloroethene	-		ug/L	2.5	2.3	3	2	2	3	< 1	< 5	< 1	< 1	< 1
Methylene chloride	328571		ug/L	< 2	-	< 4	< 4	< 4	< 1	< 2	< 5	< 4	< 4	< 4
trans-1,2-Dichloroethene	27143		ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 1	< 1
Trichloroethene	371		ug/L	2.3	1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 1	< 1
Vinyl chloride	386		ug/L	< 1	< 1	5	3	3	3	< 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.
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TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

Field Parameters	Location Name	Risk Reduction Standards - Sample Date	Target Groundwater Concentrations (ug/L)	MW-8I	MW-9D	MW-9D	MW-9D	MW-9D	MW-9D	MW-9D	MW-9I	MW-9I	MW-9I	MW-9I
				9/19/2017	12/21/2011	2/21/2012	9/17/2015	9/9/2016	3/7/2017	9/19/2017	12/21/2011	2/21/2012	9/17/2015	9/9/2016
Conductivity			mS/cm	0.238	0.166	0.167	0.203	0.184	0.220	0.052	0.122	0.129	0.137	0.169
Dissolved Oxygen			mg/L	0.00	0.51	0.27	1.72	0.57	5.21	1.72	0.35	0.39	2.59	0.32
ORP			mV	224	-171	-115	51	-151	-47	-54	153.6	73.5	133	178
pH			s.u.	5.28	8.62	8.8	7.85	8.19	9.16	8.75	6.18	6.23	6.72	6.11
Temperature			°C	25.55	19.9	18.4	27.4	24.49	17.86	21.96	19.6	18.4	24.67	25.40
Turbidity			NTU	19.5	1.5	4	0.5	0	10.5	6.95	3	1.3	0.0	0.0
General Chemistry (mg/L)														
Alkalinity, Total (as CaCO ₃)			mg/L	-	84.4	84.8	-	-	-	-	61.7	59.3	-	-
Nitrate			mg/L	-	< 0.2	< 0.2	-	-	-	-	0.48	0.48	-	-
Nitrite (as N)			mg/L	-	< 0.1	< 0.1	-	-	-	-	< 0.1	< 0.1	-	-
Nitrite/Nitrate Nitrogen			mg/L	-	< 0.2	< 0.2	-	-	-	-	0.48	0.48	-	-
Sulfate			mg/L	-	9.1	9.2	-	-	-	-	< 5	< 5	-	-
Sulfide			mg/L	-	< 0.1	< 0.1	-	-	-	-	< 0.1	< 0.1	-	-
Total Organic Carbon (TOC)			mg/L	-	2.2	2.7	-	-	-	-	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	< 6.6	-	-	-	-	< 10	7.3	-	-
Volatile Organic Compounds (ug/L)														
1,1,2-Trichloroethane	457		ug/L	< 1	< 1	-	< 1	< 1	< 1	< 1	< 1	-	< 1	< 2
1,1-Dichloroethane	-		ug/L	-	-	-	< 1	< 1	< 1	-	-	-	< 1	< 2
1,1-Dichloroethene	13571		ug/L	< 1	< 1	-	-	< 1	< 1	< 1	1.2	-	-	2
cis-1,2-Dichloroethene	-		ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	113	91.9	34	87
Methylene chloride	328571		ug/L	< 1	< 2	-	< 4	< 4	< 4	< 1	< 2	-	< 4	< 4
trans-1,2-Dichloroethene	27143		ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 10	< 1	< 2
Trichloroethene	371		ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	1110	1070	420	1000
Vinyl chloride	386		ug/L	< 1	1.2	1.2	< 1	1	1	< 1	< 1	< 10	< 1	< 2

Notes and Abbreviations:

1. Results shown in **bold** were detected.
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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-9I 3/7/2017	MW-9I 9/19/2017	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-11I 12/20/2011	MW-11I 2/20/2012	MW-11I 9/18/2015	MW-11I 9/8/2016
			Units	mS/cm	0.147	0.124	0.98	0.87	0.288	0.678	0.859	0.792	0.08	0.08
Conductivity			mg/L	3.19	0.00	0.69	-0.7	1.84	0.25	0.47	4.44	2.42	1.7	3.1
Dissolved Oxygen			mV	193	221	-335	-286.9	-75	-369	-339	-296	154	136.4	220
ORP			s.u.	6.27	5.62	7.03	7.3	6.99	7.7	6.89	8.34	5.82	5.96	5.82
pH			°C	18.31	21.93	16.7	15.7	18.12	19.2	14.93	15.96	16	15.3	18.74
Temperature			NTU	-	1.09	5.1	4.8	2.4	0.0	3.3	0.0	4.3	2.4	2.4
Turbidity														0.0
General Chemistry (mg/L)														
Alkalinity, Total (as CaCO ₃)			mg/L	-	-	441	376	-	-	-	37.9	39.2	-	-
Nitrate			mg/L	-	-	< 0.2	< 0.2	-	-	-	0.88	0.96	-	-
Nitrite (as N)			mg/L	-	-	1.5	0.77	-	-	-	< 0.1	< 0.1	-	-
Nitrite/Nitrate Nitrogen			mg/L	-	-	< 0.2	< 0.2	-	-	-	0.88	0.96	-	-
Sulfate			mg/L	-	-	5.2	7.8	-	-	-	< 5	< 5	-	-
Sulfide			mg/L	-	-	57.8	4.6	-	-	-	< 0.1	< 0.1	-	-
Total Organic Carbon (TOC)			mg/L	-	-	42.8	33.7	-	-	-	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	-	-	28000	13000	-	-	-	< 10	< 6.6	-	-
Volatile Organic Compounds (ug/L)														
1,1,2-Trichloroethane	457		ug/L	< 1	< 1	< 1	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	-		ug/L	< 1	-	-	-	< 1	< 1	< 1	-	-	< 1	< 1
1,1-Dichloroethene	13571		ug/L	< 1	3	< 1	-	-	< 1	< 1	< 1	-	-	< 1
cis-1,2-Dichloroethene	-		ug/L	62	89	8	7.7	< 1	1	1	2	50	33.4	44
Methylene chloride	328571		ug/L	< 4	< 1	< 2	-	< 4	< 4	< 4	< 4	< 2	-	< 4
trans-1,2-Dichloroethene	27143		ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 1
Trichloroethene	371		ug/L	630	930	< 1	< 1	< 1	3	< 1	< 1	766	540	490
Vinyl chloride	386		ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 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	Risk Reduction Standards - Sample Date	Target Groundwater Concentrations (ug/L)	Units	MW-11I	MW-11I	MW-11S	MW-11S	MW-11S	MW-11S	MW-11S	MW-11S	MW-14D	MW-14I	MW-16D
					3/8/2017	9/7/2017	12/20/2011	2/20/2012	9/18/2015	9/8/2016	3/8/2017	9/7/2017	12/20/2011	12/20/2011	12/22/2011
Conductivity			mS/cm	0.11	0.035	0.035	0.053	0.161	0.056	0.077	0.018	0.105	0.06	0.088	
Dissolved Oxygen			mg/L	2.35	1.99	0.76	0.72	3.67	0.24	0.8	1.04	3.1	1.48	3.51	
ORP			mV	204	218	187	80.5	261	330	147	192	154.9	85.1	84	
pH			s.u.	6.13	8.45	5.25	5.19	4.56	4.26	5.24	4.32	6.28	6.13	5.85	
Temperature			°C	16.61	17.18	16.3	13.6	19.83	23.84	16.93	18.27	16	15.4	19.9	
Turbidity			NTU	-	0.0	4.7	4.6	37.5	20.6	-	3.00	0.9	5.7	3.1	
General Chemistry (mg/L)															
Alkalinity, Total (as CaCO ₃)			mg/L	-	-	6.5	9.5	-	-	-	-	51.3	26	30.5	
Nitrate			mg/L	-	-	0.48	< 0.2	-	-	-	-	< 0.2	< 0.2	1.1	
Nitrite (as N)			mg/L	-	-	< 0.1	< 0.1	-	-	-	-	< 0.1	< 0.1	< 0.1	
Nitrite/Nitrate Nitrogen			mg/L	-	-	0.48	< 0.2	-	-	-	-	< 0.2	< 0.2	1.1	
Sulfate			mg/L	-	-	< 5	6.1	-	-	-	-	< 5	< 5	10.3	
Sulfide			mg/L	-	-	< 0.1	< 0.1	-	-	-	-	< 0.1	< 0.1	< 0.1	
Total Organic Carbon (TOC)			mg/L	-	-	2	2.9	-	-	-	-	1.5	1.5	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	-	-	-	-	< 10	30	< 10	
Volatile Organic Compounds (ug/L)															
1,1,2-Trichloroethane	457		ug/L	< 1	< 1	< 1	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	-		ug/L	< 1	-	-	-	< 1	< 1	< 1	-	-	-	-	-
1,1-Dichloroethene	13571		ug/L	< 1	1	< 1	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	-		ug/L	41	44	26.7	50.9	30	29	72	33	< 1	< 1	< 1	34.2
Methylene chloride	328571		ug/L	< 4	< 4	< 2	-	< 4	< 4	< 4	< 4	< 2	< 2	< 2	< 2
trans-1,2-Dichloroethene	27143		ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Trichloroethene	371		ug/L	340	370	356	183	260	280	150	220	< 1	< 1	114	
Vinyl chloride	386		ug/L	< 1	< 1	< 1	< 1	< 1	< 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.
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TABLE II
GROUNDWATER AND SURFACE WATER ANALYTICAL RESULTS
CARPENTER - GENERAL TIME FACILITY
ATHENS, GEORGIA

	Location Name	Risk Reduction Standards -		MW-16D	MW-16D (DUP)	MW-16D	MW-16D	MW-16D	MW-16D	MW-16D	MW-16D	MW-16D	MW-16D	
	Sample Date	Target Groundwater Concentrations (ug/L)	Units	2/22/2012	2/22/2012	9/16/2015	3/3/2016	4/20/2016	7/7/2016	9/7/2016	1/26/2017	3/9/2017	6/29/2017	9/7/2017
Field Parameters														
Conductivity		mS/cm	0.105	-		0.112	0.112	0.109	0.114	0.103	0.118	0.115	0.142	0.037
Dissolved Oxygen		mg/L	1.97	-		2.55	1.93	1.15	1.78	1.59	2.41	2.59	2.87	1.51
ORP		mV	124.3	-		176	137	166	93	266	95	229	-38	193
pH		s.u.	5.99	-		6.37	6.24	5.37	6.46	5.28	5.98	5.29	6.31	5.4
Temperature		°C	18.9	-		20.73	18.86	20.85	21.23	26.78	19.73	17.07	22.52	21.53
Turbidity		NTU	2.3	-		4.7	0.00	0.6	0.8	0	0.3	-	3.2	0
General Chemistry (mg/L)														
Alkalinity, Total (as CaCO ₃)		mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Nitrate		mg/L	1.2	1.2	-	-	-	-	-	-	-	-	-	-
Nitrite (as N)		mg/L	< 0.1	< 0.1	-	-	-	-	-	-	-	-	-	-
Nitrite/Nitrate Nitrogen		mg/L	1.2	1.2	-	-	-	-	-	-	-	-	-	-
Sulfate		mg/L	-	-	-	8.1	7.9	7.4	8.1	-	7.2	-	8	-
Sulfide		mg/L	< 0.1	< 0.1	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon (TOC)		mg/L	1.9	1.8	-	< 1.0	1.2	< 1.0	1.0	-	< 1.0	-	< 1.0	-
Iron		mg/L	-	-	-	-	-	< 0.200	< 0.200	-	< 0.200	-	< 0.200	-
Iron, Ferrous		mg/L	-	-	-	< 0.05	0.095	0.088	< 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
Ethene		ug/L	-	-	-	-	-	-	-	-	-	< 5.0	-	< 5.0
Methane		ug/L	< 6.6	< 6.6	-	-	-	-	-	-	-	< 5.0	-	< 5.0
Volatile Organic Compounds (ug/L)														
1,1,2-Trichloroethane	457	ug/L	-	-	< 1	< 1.0	< 1.0	< 1.0	< 1	-	< 1	-	< 1	< 1
1,1-Dichloroethane	-	ug/L	-	-	< 1	< 1.0	< 1.0	< 1.0	< 1	-	< 1	-	< 1	-
1,1-Dichloroethene	13571	ug/L	-	-	-	-	-	-	< 1	-	< 1	-	< 1	< 1
cis-1,2-Dichloroethene	-	ug/L	28.8	28.2	36	37.0	35.0	38.0	43	49.9	50	45.3	72	-
Methylene chloride	328571	ug/L	-	-	< 4	< 4.0	< 4.0	< 4.0	< 4	-	< 4	-	< 4	< 4
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 1	< 1	< 1.0	< 1.0	< 1.0	< 1	-	< 1	-	< 1	1
Trichloroethene	371	ug/L	95.9	90.4	110	110	120	110	110	126.2	130	123	180	-
Vinyl chloride	386	ug/L	< 1	< 1	< 1	< 1.0	< 1.0	< 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	Risk Reduction Standards - Sample Date	Target Groundwater Concentrations (ug/L)	MW-16I	MW-16I	MW-16I										
				12/22/2011	2/22/2012	9/16/2015	3/3/2016	4/20/2016	7/7/2016	9/7/2016	12/22/2016	1/26/2017	3/9/2017	6/29/2017	9/7/2017	
Conductivity			mS/cm	0.498	0.649	0.626	0.771	24.9	7.5	5.19	2.97	2.33	2.06	1.58	1.29	
Dissolved Oxygen			mg/L	1.68	1.12	1.38	0.00	0.00	0.19	0.6	1.54	1.72	0.45	5.07	1.03	
ORP			mV	125.4	162.4	-21	-13	-155	-128	-118	-73	-139	-134	-104	-121	
pH			s.u.	5.32	5.42	6.31	6.37	7.04	6.95	6.15	6.4	6.24	6.46	7.06	7.13	
Temperature			°C	20.2	19.3	21.33	19.49	20.72	21.05	23.84	20.37	19.78	17.31	22.24	20.77	
Turbidity			NTU	5.2	1.9	8.7	32.6	488	58.1	41.3	20.6	68.2	1.68	77.6	16.0	
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	< 5.0	< 5.0	-	< 5.0	-	8.8	
Sulfide			mg/L	< 0.1	< 0.1	-	-	-	-	-	-	-	-	-		
Total Organic Carbon (TOC)			mg/L	11.3	12	-	6.2	15200	2900	3020	746	-	384	-	93.4	
Iron			mg/L	-	-	-	-	-	75.7	107	50.3	-	35.8	-	16.5	
Iron, Ferrous			mg/L	-	-	-	-	2.5	63.8	78.9	122	55.1	-	36.4	-	17.7
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	
Ethene			ug/L	-	-	-	-	-	-	-	-	-	3200	-	3000	
Methane			ug/L	27.7	35.8	-	-	-	-	-	-	-	2000	-	4700	
Volatile Organic Compounds (ug/L)																
1,1,2-Trichloroethane	457		ug/L	9.1	-	< 20	< 20	< 10	< 20	< 1	< 10	-	< 20	-	< 5	
1,1-Dichloroethane	-		ug/L	-	-	< 20	< 20	< 10	< 20	5	< 10	-	< 20	-	-	
1,1-Dichloroethene	13571		ug/L	3.2	-	-	-	-	-	12	14	-	< 20	-	7	
cis-1,2-Dichloroethene	-		ug/L	7360	10600	15000	13000	9000	20000	22000	16000	12151.5	9100	1696.8	5000	
Methylene chloride	328571		ug/L	5.2	-	< 80	< 80	< 40	< 80	< 4	< 40	-	< 80	-	< 20	
trans-1,2-Dichloroethene	27143		ug/L	126	< 100	48	37	190	360	250	560	-	270	-	88	
Trichloroethene	371		ug/L	17800	19700	13000	19000	6200	3100	97	< 10	< 1000	< 20	< 200	9	
Vinyl chloride	386		ug/L	109	164	570	440	75	240	110	2200	2581.1	950	219.3	800	

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)	RW-1 12/19/2011	RW-1 2/21/2012	RW-2 12/19/2011	RW-2 2/22/2012	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-4 12/19/2011
			Units	mS/cm	0.04	0.15	0.07	0.72	0.131	0.146	0.282	0.205	0.173
Conductivity			mg/L	0.38	0.2	3.83	2.45	0.43	0.64	1.43	0.53	0.77	2.19
Dissolved Oxygen			mV	162.8	3.8	152.9	108.4	102.2	67.6	30	84	66	169
ORP			s.u.	5.31	5.95	6.13	6.15	8.95	9.5	7.95	6.54	6.67	5.87
pH			°C	19.8	19.2	19.6	18.2	19.8	17.9	21.68	23.73	21.54	20.57
Temperature			NTU	-0.2	2.1	11.5	1.5	5.1	4	0.5	57.2	18.4	28.7
Turbidity													5.8
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	-	-	-	-	-	-	-	-	-	-
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	-	4.5	-	< 20	< 20	< 10	< 10	< 1
1,1-Dichloroethane	-	ug/L	-	-	-	-	-	-	< 20	< 20	< 10	-	-
1,1-Dichloroethene	13571	ug/L	< 1	-	< 1	-	6.5	-	-	39	21	26	< 1
cis-1,2-Dichloroethene	-	ug/L	404	784	3	2.6	678	768	770	900	740	750	< 1
Methylene chloride	328571	ug/L	< 2	-	< 2	-	23.6	-	< 80	< 80	< 40	< 40	< 2
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 5	< 1	< 1	29.2	< 100	33	51	40	40	< 1
Trichloroethene	371	ug/L	987	2390	39.8	38.9	13100	16300	13000	13000	9000	7900	11.8
Vinyl chloride	386	ug/L	9.6	35.3	< 1	< 1	2.1	< 100	< 20	< 20	< 10	< 10	< 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-4 2/22/2012	RW-4 9/16/2015	RW-4 9/8/2016	RW-4 3/9/2017	RW-4 9/8/2017	S-2 12/27/2011	S-5 12/27/2011	SW-1 9/23/2013	SW-1 10/13/2014	SW-1 9/18/2015	SW-1 10/19/2016	
			Units	mS/cm	0.087	0.111	0.094	0.087	0.095	-	-	-	0.106	0.126
Conductivity			mg/L	2.6	3.6	3.52	5.25	3.9	-	-	-	-	6.50	20.38
Dissolved Oxygen			mV	109.5	193	125	150	145	-	-	-	-	-44	144
ORP			s.u.	6.66	7.09	6.26	5.97	7.04	-	-	-	-	7.44	6.62
pH			°C	17.2	20.52	22.73	18.99	20.04	-	-	-	-	18.66	20.49
Temperature			NTU	4.6	3.7	243	1.18	3.47	-	-	-	-	7.5	11.7
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	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 1	
1,1-Dichloroethane	-	ug/L	-	< 1	< 1	< 1	-	-	-	-	-	< 1	< 1	
1,1-Dichloroethene	13571	ug/L	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 5	-	< 1	
cis-1,2-Dichloroethene	-	ug/L	< 1	< 1	< 1	< 1	< 1	1.7	< 1	< 1	< 5	< 1	< 1	
Methylene chloride	328571	ug/L	-	< 4	< 4	< 4	< 4	< 2	< 2	< 5	< 5	< 4	< 4	
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 1	
Trichloroethene	371	ug/L	7.6	8	5	6	7	13.1	< 1	< 1	< 5	< 1	< 1	
Vinyl chloride	386	ug/L	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 2	< 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 3/8/2017	SW-1 9/7/2017	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
				mS/cm	0.092	0.099	-	-	0.105	0.114	0.090
Conductivity			mg/L	12.77	8.99	-	-	6.86	12.61	9.00	7.00
Dissolved Oxygen			mV	174	-129	-	-	58	179	146	160
ORP			s.u.	5.74	8.66	-	-	7.49	6.42	6.31	6.72
pH			°C	16.42	18.65	-	-	19.92	23.29	13.00	27.05
Temperature			NTU	28.2	17.5	-	-	19.1	21.4	282	26.2
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	< 5	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethane	-	ug/L	< 1	-	-	-	< 1	< 1	< 1	< 1	-
1,1-Dichloroethene	13571	ug/L	< 1	< 1	< 1	< 5	-	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	-	ug/L	< 1	< 1	< 1	< 5	< 1	< 1	< 1	< 1	< 1
Methylene chloride	328571	ug/L	< 4	< 4	< 5	< 5	< 4	< 4	< 4	< 4	< 1
trans-1,2-Dichloroethene	27143	ug/L	< 1	< 1	< 1	< 5	< 1	< 1	< 1	< 1	< 1
Trichloroethene	371	ug/L	< 1	< 1	< 1	< 5	< 1	< 1	< 1	< 1	< 1
Vinyl chloride	386	ug/L	< 1	< 1	< 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 III
POTENTIOMETRIC SURFACE 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	9/6/2017	641.30	4.5 - 14.5	7.06	634.24	
MW-1I	9/6/2017	641.10	20.0 - 25.0	7.10	634.00	
MW-2S	9/6/2017	637.30	10.0 - 20.0	17.25	620.05	
MW-2I	9/6/2017	637.40	76.5 - 86.5	18.35	619.05	
MW-2D	9/6/2017	635.50	216.5 - 226.5	22.27	613.23	
MW-3I	9/6/2017	639.70	89.5 - 99.5	16.17	623.53	
MW-5I	9/6/2017	623.50	31.5 - 41.5	11.72	611.78	
MW-6I	9/6/2017	622.80	61.0 - 71.0	9.48	613.32	
MW-7I	9/6/2017	619.10	26.5 - 36.5	8.72	610.38	
MW-8I	9/6/2017	618.70	5.0 - 15.0	9.49	609.21	
MW-9I	9/6/2017	613.20	44.5 - 54.5	8.85	604.35	
MW-9D	9/6/2017	613.40	181.4 - 201.4	9.63	603.77	
MW-11S	9/6/2017	611.00	3.0 - 13.0	8.79	602.21	
MW-11I	9/6/2017	610.90	22.0 - 32.0	8.69	602.21	
MW-11D	9/6/2017	611.90	277.3 - 287.3	9.67	602.23	
MW-16I	9/6/2017	643.60	20.0 - 30.0	19.62	623.98	
MW-16D	9/6/2017	643.60	47.0 - 57.0	19.56	624.04	
RW-1	9/6/2017	639.70	26.5 - 46.5	18.62	621.08	
RW-2	9/6/2017	639.20	70.0 - 90.0	18.90	620.30	
RW-3	9/6/2017	633.90	70.0 - 90.0	14.73	619.17	
RW-4	9/6/2017	633.70	75.0 - 95.0	13.62	620.08	

TABLE IV
INJECTION GROUNDWATER MONITORING PARAMETERS
CARPENTER - GENERAL TIME FACILITY

Page 1 of 3

	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 9/7/2017	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
Field Parameters													
Conductivity	mS/cm	0.112	0.109	0.114	0.103	0.118	0.115	0.037	0.771	24.9	7.5	5.19	2.97
Dissolved Oxygen	mg/L	1.93	1.15	1.78	1.59	2.41	2.59	1.51	0.00	0.00	0.19	0.6	1.54
ORP	mV	137	166	93	266	95	229	193	-13	-155	-128	-118	-73
pH	s.u.	6.24	5.37	6.46	5.28	5.98	5.29	5.4	6.37	7.04	6.95	6.15	6.4
Temperature	°C	18.86	20.85	21.23	26.78	19.73	17.07	21.53	19.49	20.72	21.05	23.84	20.37
Turbidity	NTU	0.00	0.6	0.8	0	0.3	-	0	32.6	488	58.1	41.3	20.6
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	8.1	7.9	7.4	8.1	-	7.2	8	209	50	< 5.0	< 5.0	< 5.0
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon (TOC)	mg/L	< 1.0	1.2	< 1.0	1.0	-	< 1.0	< 1.0	6.2	15200	2900	3020	746
Iron	mg/L	-	-	< 0.200	< 0.200	-	< 0.200	< 0.200	-	-	75.7	107	50.3
Iron, Ferrous	mg/L	< 0.05	0.095	0.088	< 0.050	-	< 0.050	< 0.050	2.5	63.8	78.9	122	55.1
Volatile Fatty Acids (mg/L)													
Acetic Acid	mg/L	-	< 5.0	-	-	-	< 5.0	-	-	< 500	1900	2000	730
Propionic Acid	mg/L	-	< 5.0	-	-	-	< 5.0	-	-	< 500	2200	2200	440
Pyruvic Acid	mg/L	-	< 5.0	-	-	-	< 5.0	-	-	< 500	< 25	< 50	< 10
Butyric Acid	mg/L	-	< 5.0	-	-	-	< 5.0	-	-	< 500	33	360	350
Lactic Acid	mg/L	-	< 10	-	-	-	< 5.0	-	-	37000	2200	120	< 20
Dissolved Gases (ug/L)													
Ethane	ug/L	-	-	-	-	-	< 5.0	< 5.0	-	-	-	-	-
Ethene	ug/L	-	-	-	-	-	< 5.0	< 5.0	-	-	-	-	-
Methane	ug/L	-	-	-	-	-	< 5.0	< 5.0	-	-	-	-	-
Volatile Organic Compounds (ug/L)													
1,1,2-Trichloroethane	ug/L	< 1.0	< 1.0	< 1.0	< 1	-	< 1	< 1	< 20	< 10	< 20	< 1	< 10
1,1-Dichloroethene	ug/L	-	-	-	< 1	-	< 1	< 1	-	-	-	12	14
cis-1,2-Dichloroethene	ug/L	37.0	35.0	38.0	43	49.9	50	72	13000	9000	20000	22000	16000
Methylene chloride	ug/L	< 4.0	< 4.0	< 4.0	< 4	-	< 4	< 4	< 80	< 40	< 80	< 4	< 40
trans-1,2-Dichloroethene	ug/L	< 1.0	< 1.0	< 1.0	< 1	-	< 1	1	37	190	360	250	560
Trichloroethene	ug/L	110	120	110	110	126.2	130	180	19000	6200	3100	97	< 10
Vinyl chloride	ug/L	< 1.0	< 1.0	< 1.0	< 1	< 5.0	< 1	< 1	440	75	240	110	2200

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

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	Location Name Sample Date	MW-16I 1/26/2017	MW-16I 3/9/2017	MW-16I 9/7/2017	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 9/7/2017	HAMP-7 3/3/2016	HAMP-7 4/20/2016
Field Parameters		Units											
Conductivity	mS/cm	2.33	2.06	1.29	0.871	0.562	0.688	4.83	4.97	6.18	3.82	0.237	0.255
Dissolved Oxygen	mg/L	1.72	0.45	1.03	0.00	0.00	0.16	4.13	0.96	0.83	1.08	0	0
ORP	mV	-139	-134	-121	-151	-131	-171	-162	-166	-167	-181	197	156
pH	s.u.	6.24	6.46	7.13	7.69	7.24	8.42	6.77	6.93	7.05	8.18	6.00	5.39
Temperature	°C	19.78	17.31	20.77	18.27	20.46	20.19	23.39	19.70	17.81	20.77	20.03	20.69
Turbidity	NTU	68.2	1.68	16.0	37.9	11.8	11.1	16.0	16.9	-	251	8.6	16.3
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	-	< 5.0	8.8	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0	< 5.0	41.2	43.8
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon (TOC)	mg/L	-	384	93.4	4.3	2	48.2	1900	-	2290	471	1.6	6.4
Iron	mg/L	-	35.8	16.5	-	-	0.7	42.9	-	47.0	30.4	-	-
Iron, Ferrous	mg/L	-	36.4	17.7	2.00	0.77	0.7	47.9	-	46.9	29.5	< 0.05	0.05
Volatile Fatty Acids (mg/L)													
Acetic Acid	mg/L	-	420	-	-	< 5.0	12	2400	-	1400	-	-	< 5.0
Propionic Acid	mg/L	-	170	-	-	< 5.0	84	3200	-	1700	-	-	< 5.0
Pyruvic Acid	mg/L	-	< 5.0	-	-	< 5.0	< 5.0	< 50	-	< 5.0	-	-	< 5.0
Butyric Acid	mg/L	-	120	-	-	< 5.0	< 5.0	110	-	100	-	-	< 5.0
Lactic Acid	mg/L	-	< 10.0	-	-	< 10	< 10	160	-	< 10	-	-	< 10
Dissolved Gases (ug/L)													
Ethane	ug/L	-	6.5	5.6	-	-	-	-	-	< 5.0	28	-	-
Ethene	ug/L	-	3200	3000	-	-	-	-	-	97	50	-	-
Methane	ug/L	-	2000	4700	-	-	-	-	-	16000	17000	-	-
Volatile Organic Compounds (ug/L)													
1,1,2-Trichloroethane	ug/L	-	< 20	< 5	< 2.0	< 1.0	< 1.0	< 1.0	-	< 1.0	< 1.0	< 20	< 10
1,1-Dichloroethene	ug/L	-	< 20	7	-	-	2	-	-	< 1.0	< 1.0	-	-
cis-1,2-Dichloroethene	ug/L	12151.5	9100	5000	410.0	270.0	350	1000	228.7	140	12	2100	2200
Methylene chloride	ug/L	-	< 80	< 20	< 8.0	< 4.0	< 4.0	< 4.0	-	< 4.0	< 4.0	< 80	< 40
trans-1,2-Dichloroethene	ug/L	-	270	88	< 2.0	2	3	16	-	14	7	< 20	12
Trichloroethene	ug/L	<1000	< 20	9	92	19	7	6	ND	< 1.0	< 1.0	8500	9900
Vinyl chloride	ug/L	2581.1	950	800	4	3	4	17	13.4	15	3	48	33

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

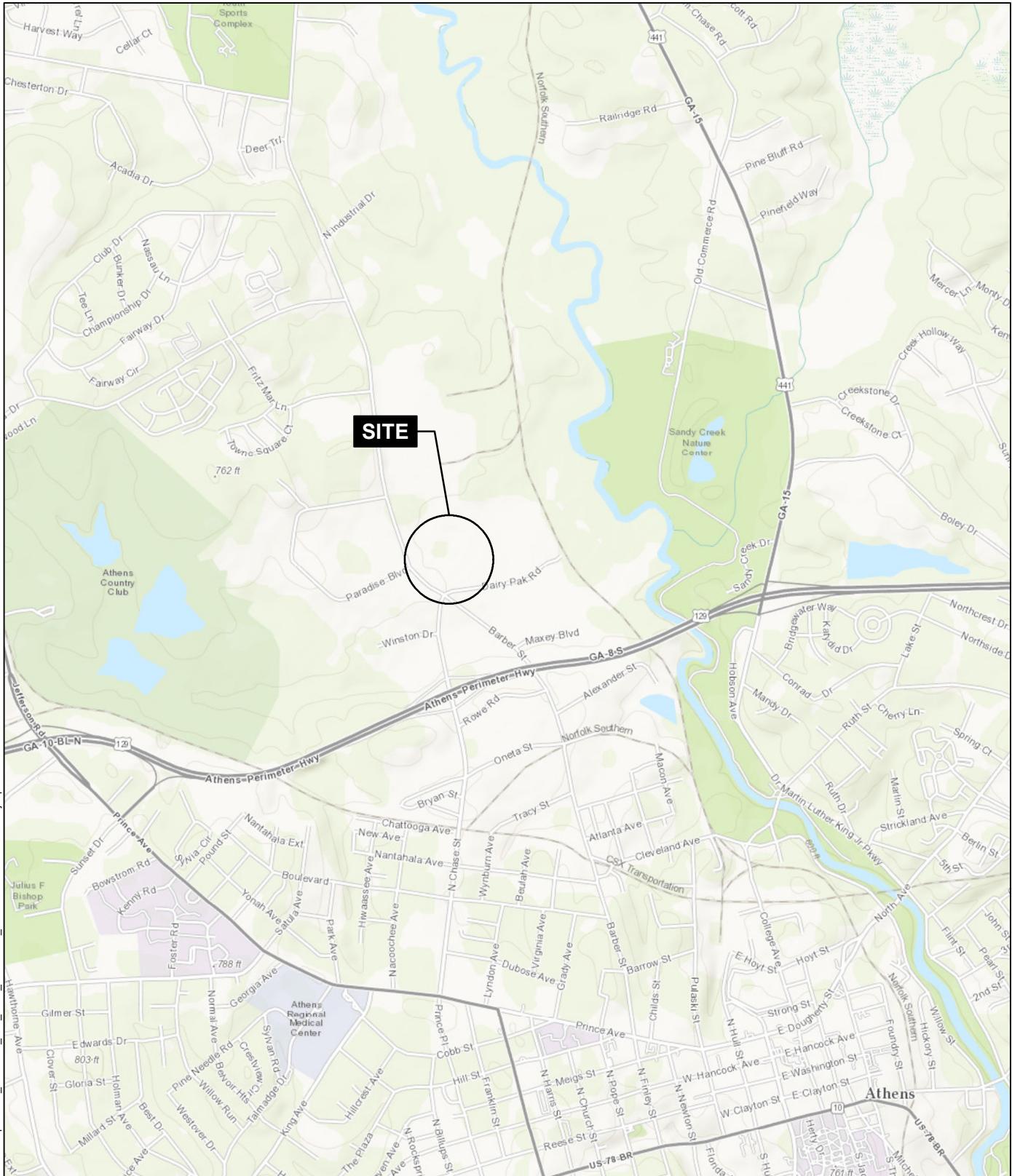
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Field Parameters	Location Name Sample Date												
		Units											
Conductivity	mS/cm	1.72	2.56	3.04	2.00	0.222	0.644	0.514	1.49	1.93	1.55	1.34	0.327
Dissolved Oxygen	mg/L	0.06	0.24	0.62	0.36	1.42	0	0	0.13	0.25	0.76	0.38	1.7
ORP	mV	-107	-112	-178	-156	-70	99	145	-75	-125	-167	-165	-65
pH	s.u.	6.85	6.29	6.65	6.90	6.72	5.29	5.13	6.53	5.94	6.37	6.60	6.42
Temperature	°C	18.08	26.26	20.37	17.93	21.69	18.8	20.18	20.37	25.9	19.46	17.26	26.11
Turbidity	NTU	40.6	17.6	82.7	0.0	108	15.1	6.8	16.1	21.7	42.2	0.0	35.7
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	31.0	23.8	-	25.2	26.6	152	139	91.9	30.0	-	5.4	34.0
Sulfide	mg/L	-	-	-	-	-	-	-	-	-	-	-	-
Total Organic Carbon (TOC)	mg/L	461	955	-	261	3.3	5.3	1	453	782	-	156	53.3
Iron	mg/L	33.6	79.2	-	33.8	8.81	-	-	11.6	61.3	-	14.7	7.7
Iron, Ferrous	mg/L	45.5	93.0	-	29.7	10.3	1.3	0.05	14.7	74.8	-	12.4	9.6
Volatile Fatty Acids (mg/L)													
Acetic Acid	mg/L	280	530	-	170	-	-	< 5.0	170	710	-	240	-
Propionic Acid	mg/L	370	650	-	350	-	-	< 5.0	120	520	-	58	-
Pyruvic Acid	mg/L	< 5.0	< 5.0	-	< 5.0	-	-	< 5.0	< 5.0	< 5.0	-	< 5.0	-
Butyric Acid	mg/L	< 5.0	81	-	74	-	-	< 5.0	19	39	-	< 5.0	-
Lactic Acid	mg/L	320	340	-	< 10	-	-	35	760	350	-	< 10	-
Dissolved Gases (ug/L)													
Ethane	ug/L	-	-	-	< 5.0	< 5.0	-	-	-	-	-	< 5.0	< 5.0
Ethene	ug/L	-	-	-	310	280	-	-	-	-	-	< 5.0	650
Methane	ug/L	-	-	-	7500	540	-	-	-	-	-	110	110
Volatile Organic Compounds (ug/L)													
1,1,2-Trichloroethane	ug/L	< 10	< 5.0	-	< 2	< 5.0	57	< 100	< 20	< 20	-	< 50	< 50
1,1-Dichloroethene	ug/L	-	11	-	6	8	-	-	-	< 20	-	< 50	79
cis-1,2-Dichloroethene	ug/L	4800	6000	2397.7	2900	2500	3200	3000	4000	8700	18419.8	27000	25000
Methylene chloride	ug/L	< 40	< 20	-	< 8	< 20	< 200	< 400	< 80	< 80	-	< 200	< 200
trans-1,2-Dichloroethene	ug/L	18	16	-	17	17	< 50	< 100	120	200	-	98	86
Trichloroethene	ug/L	8800	4500	3703.4	6300	5200	27000	30000	26000	18000	3650	760	4100
Vinyl chloride	ug/L	53	50	114.6	130	120	< 50	< 100	25	< 20	ND	< 50	650

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.

FIGURES



**HALEY
ALDRICH**

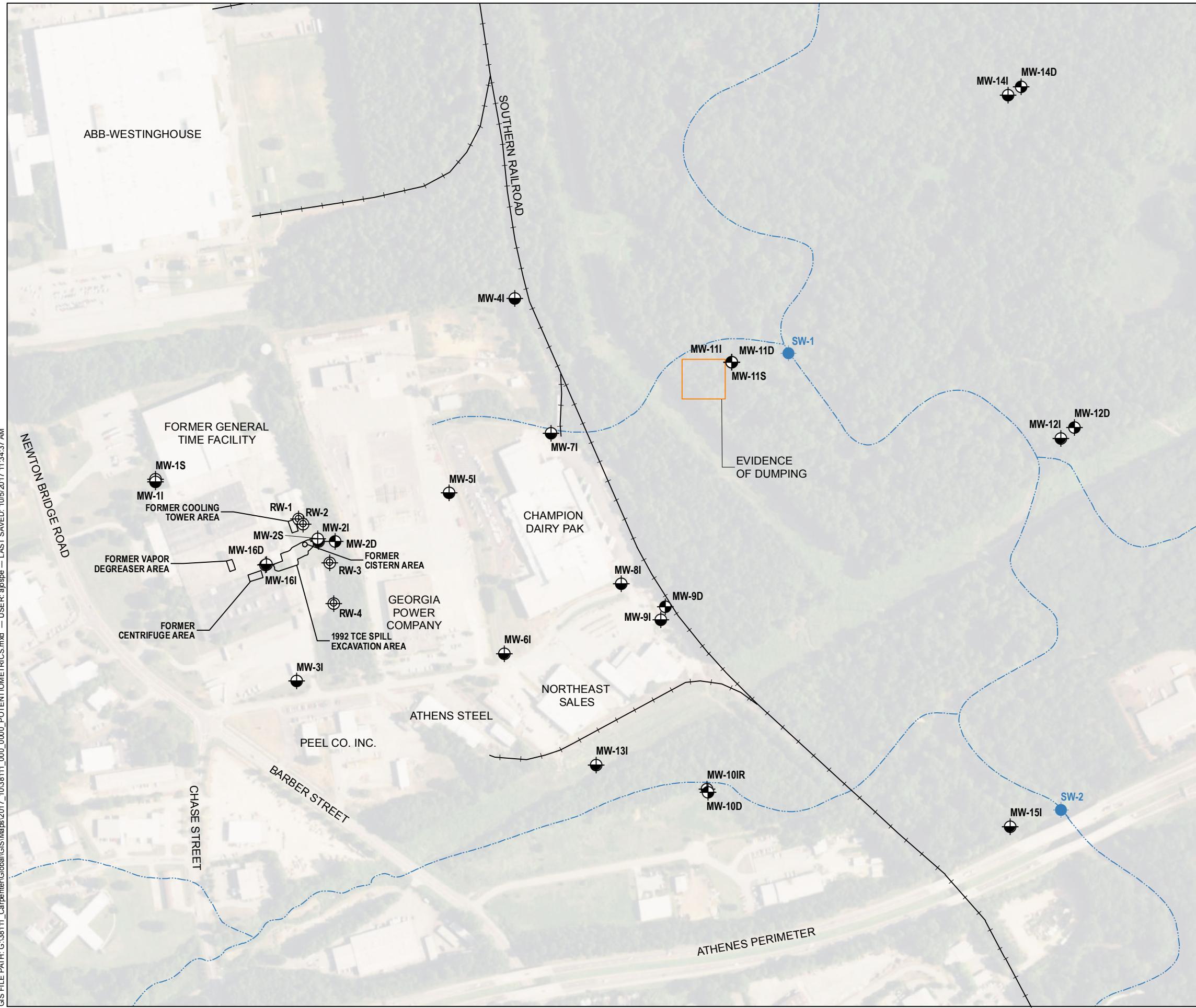
GENERAL TIME FACILITY
ATHENS, GEORGIA

SITE LOCATION MAP

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

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

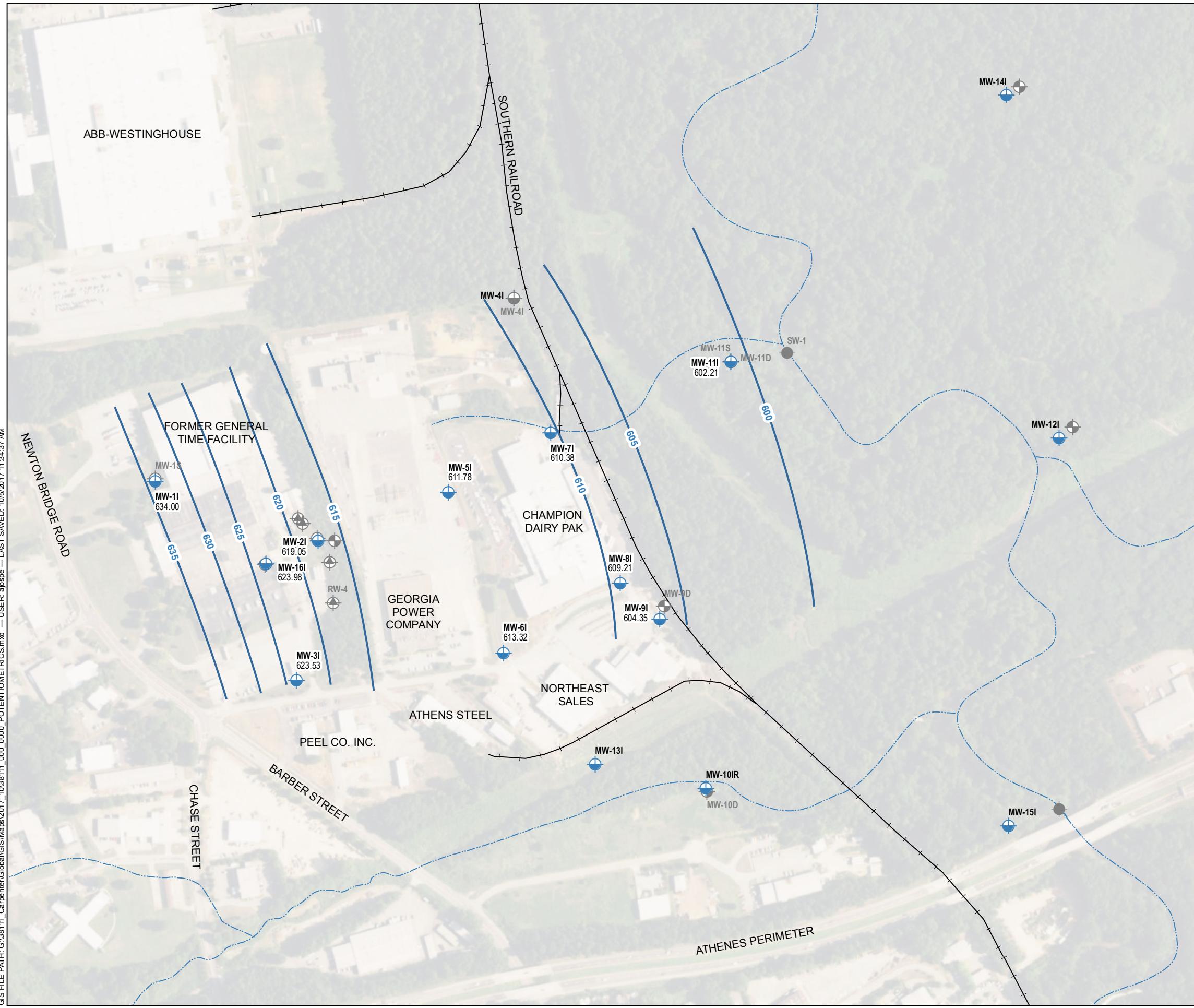
HALEY ALDRICH

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

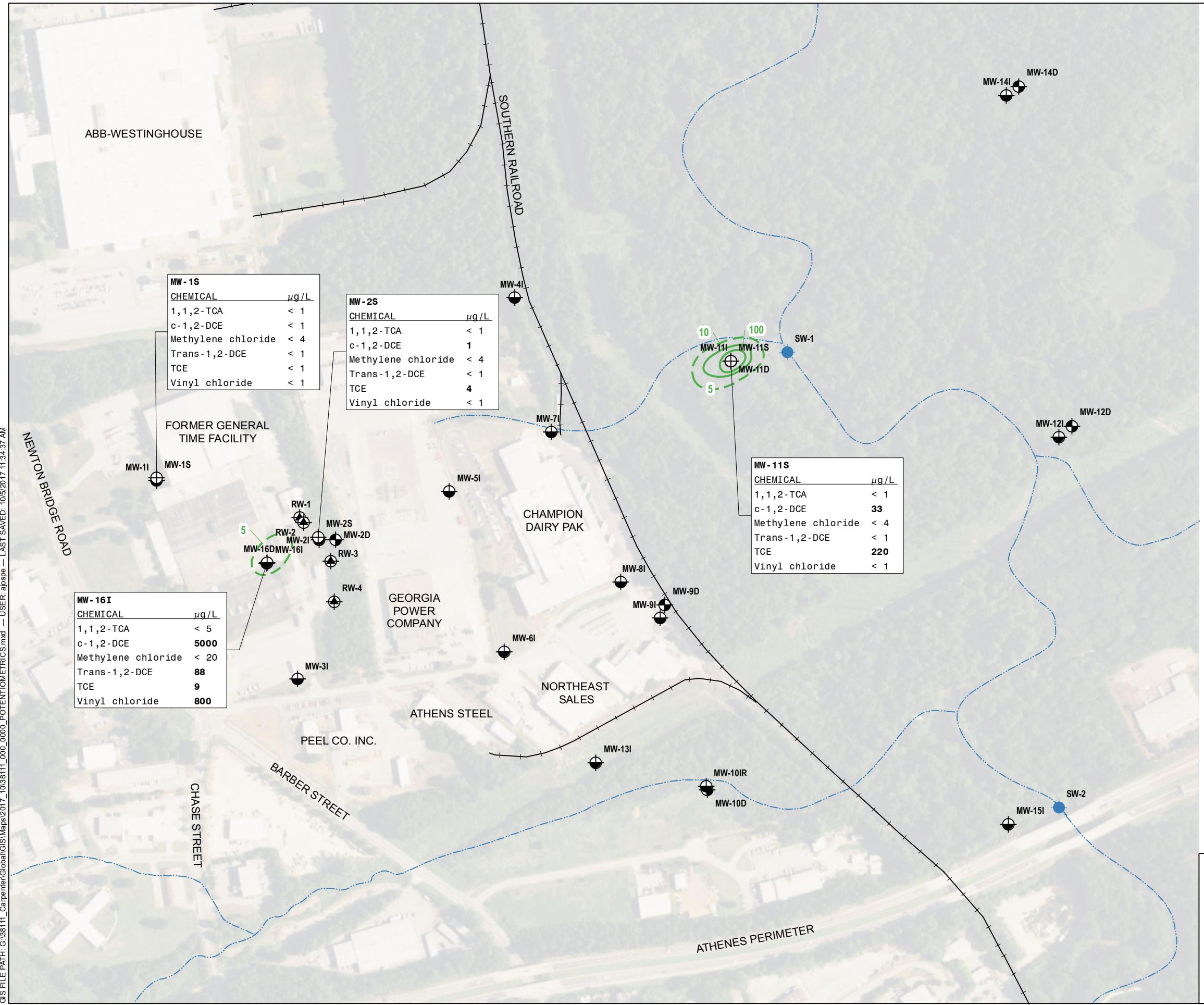
HALEY
ALDRICH

GENERAL TIME FACILITY
ATHENS, GEORGIA

POTENIOMETRIC SURFACE
SEPTEMBER 2017

OCTOBER 2017

FIGURE 3



LEGEND

- NORTH OCONEE RIVER SURFACE WATER SAMPLING LOCATION
 - SHALLOW MONITORING WELL
 - △ INTERMEDIATE MONITORING WELL
 - ◆ DEEP MONITORING WELL
 - ▲ RECOVERY MONITORING WELL

— TCE ISOCONCENTRATION CONTOUR $\mu\text{g/L}$, DASHED WHERE INFERRED

— STREAM

— RAILROAD

NOTES

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



A horizontal scale bar with a black segment on the left and a white segment on the right. The number '400' is centered above the white segment, and '800' is at the end of the white segment. Below the scale bar, the text 'SCALE IN FEET' is written.

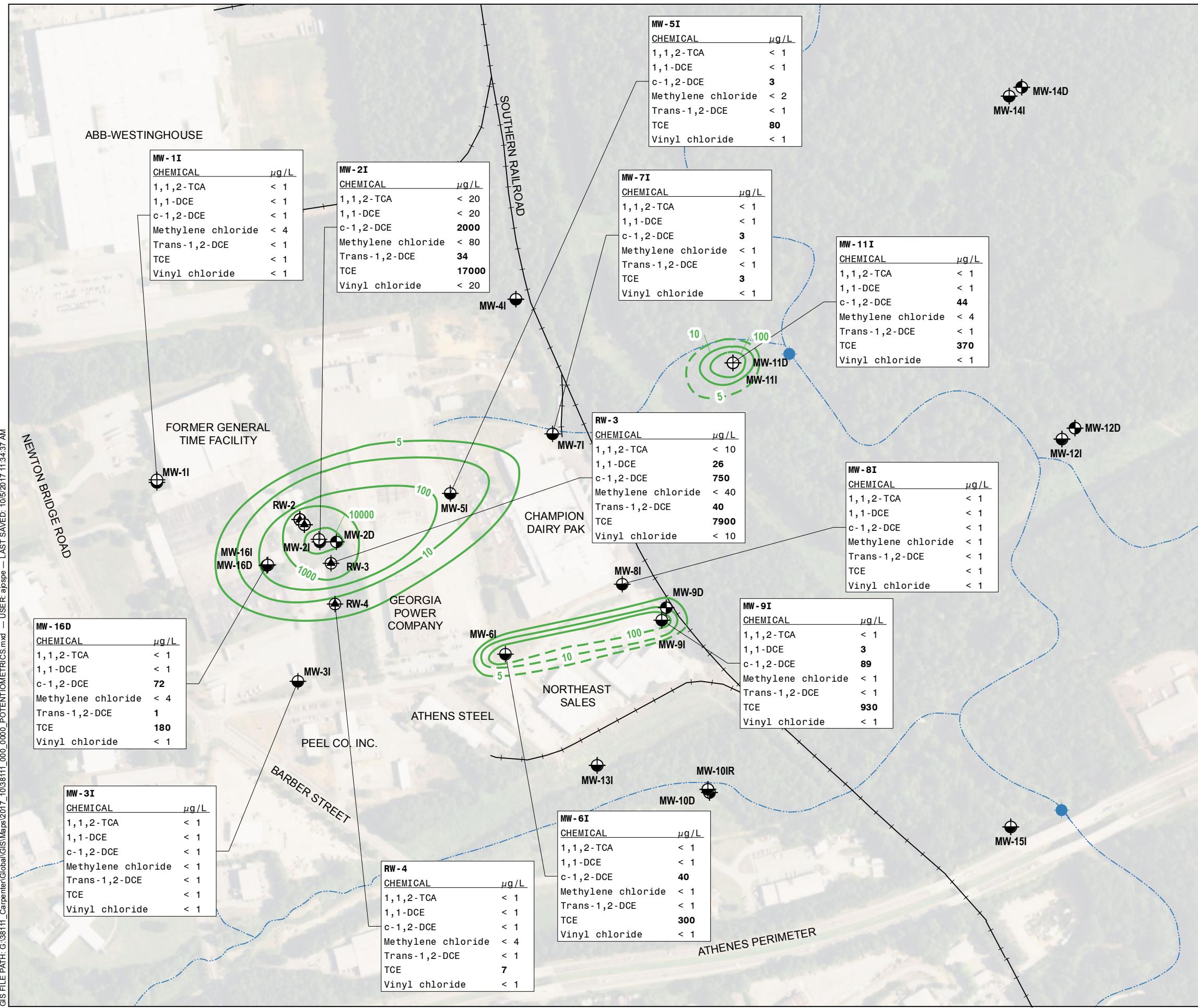
**HALEY
ALDRICH**

**GENERAL TIME FACILITY
ATHENS, GEORGIA**

DISTRIBUTION OF TCE IN SHALLOW GROUNDWATER SEPTEMBER 2017

OCTOBER 2017

FIGURE 4



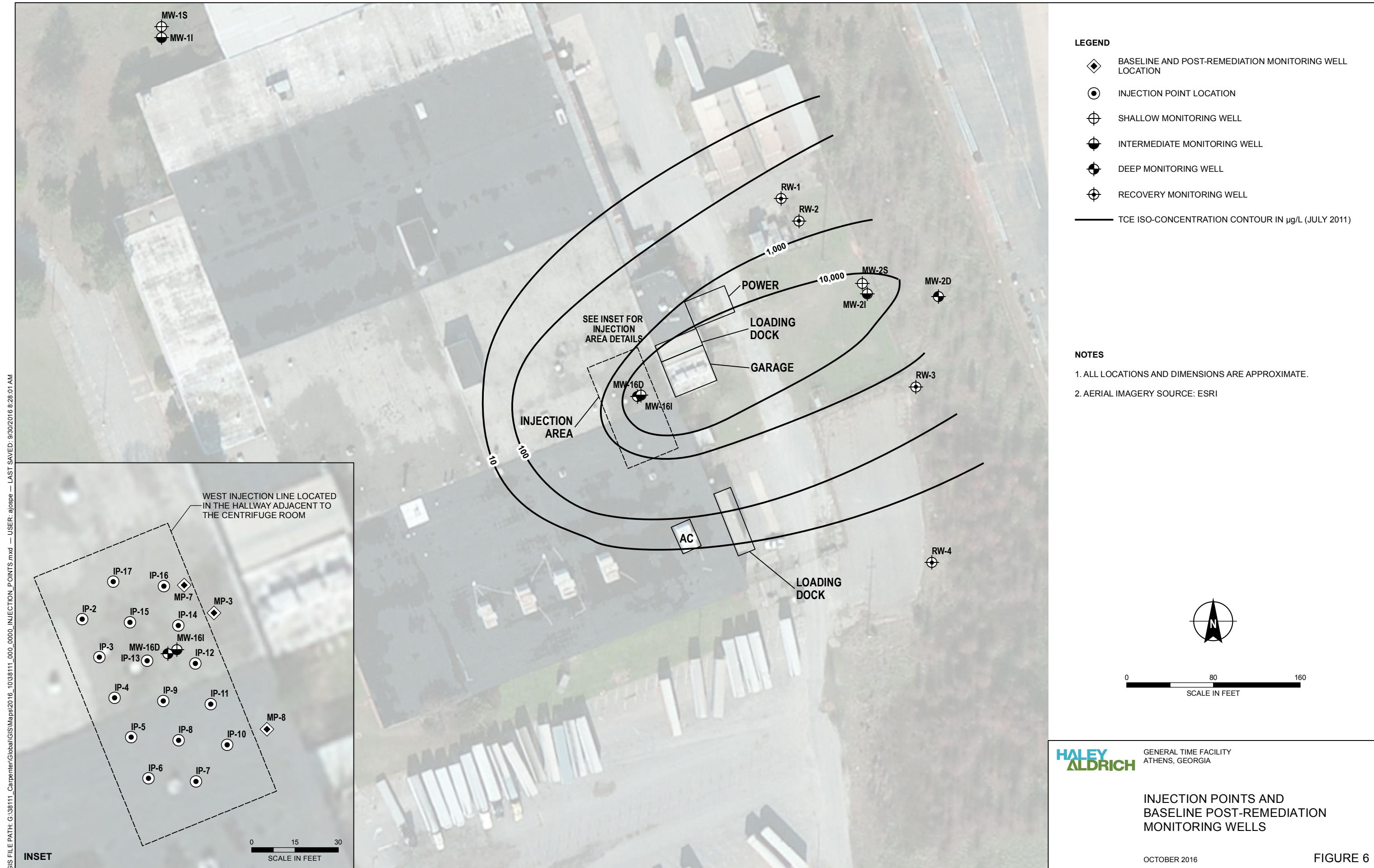


FIGURE 7
PROJECT MILESTONE SCHEDULE
GENERAL TIME FACILITY ATHENS GEORGIA

No.	TASK	2013				2014				2015				2016				2017				2018			
		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

October Semiannual Progress Report Submittals include the annual groundwater and surface water sampling and analysis

APPENDIX A

Analytical Report

Carpenter Technology Corporation
Chemical Technology Group
EPA Lab Code: PA00963
PA Accredited Lab ID#: 06-00688
NJ Laboratory Certification ID#: PA002



Chemical Analysis Report

Specimen ID	1773-WE-002	Requestor	Sean McGowan
Copies	smcgowan@cartech.com		

Sample Information

Description	Well - Miscellaneous Groundwater Monitoring Well
Location	Former General Time site
Request ID	MW-16D
Sampled	6/29/2017 0829
Submitted	7/3/2017 11:03:27 AM
Reported	07/10/2017
Taken by	J. Yonts
Method	Grab
Volume	3 x 40 mL

Comments:

This analysis report was reviewed and approved by:

A handwritten signature in black ink that reads "Tim O'Sullivan".

Carpenter Technology Corporation
R&D Chemical Laboratory
Volatile Organics Analysis Report

Sample Name:	MW-16D	Date Received:		
Data File Name:	1773-WE-002.D	Sample Wt/Vol:	5 ml	
Analysis Date:	07/ 7/17	Moisture Content:	100 %	
Dilution Factor:	1	GC/MS Column:	DB-VRX	
Operator:	MMB			
Compound Name	Analysis Result	Units	Data Qualifiers	Limit of Quantitation
Vinyl chloride	<1.0	ug/L		5.0
cis-1,2-Dichloroethene	45.3	ug/L		5.0
Trichloroethene	123.0	ug/L		5.0
Tetrachloroethene	<1.0	ug/L		5.0

GC/MS analysis performed using EPA Method 624

Limit of Quantitation adjusted based upon sample dilution factor.

Data Qualifiers:	B Analyte also detected in blank	J Estimated Value
	D Compound quantitated on diluted sample	N.D. None Detected
	E Concentration exceeded the calibration range of the instrument	

Carpenter Technology Corporation
Chemical Technology Group
EPA Lab Code: PA00963
PA Accredited Lab ID#: 06-00688
NJ Laboratory Certification ID#: PA002



Chemical Analysis Report

Specimen ID	1773-WE-003	Requestor	Sean McGowan
Copies	smcgowan@cartech.com		

Sample Information

Description	Well - Miscellaneous Groundwater Monitoring Well
Location	Former General Time site
Request ID	MW-16I
Sampled	6/29/2017 0950
Submitted	7/3/2017 11:03:55 AM
Reported	07/10/2017
Taken by	J. Yonts
Method	Grab
Volume	3 x 40 mL

Comments:

This analysis report was reviewed and approved by:

A handwritten signature in black ink, appearing to read "Tim O'Gorman".

**Carpenter Technology Corporation
R&D Chemical Laboratory
Volatile Organics Analysis Report**

Sample Name:	MW-16I	Date Received:		
Data File Name:	1773-WE-003.D	Sample Wt/Vol:	5 ml	
Analysis Date:	07/7/17	Moisture Content:	100 %	
Dilution Factor:	200	GC/MS Column:	DB-VRX	
Operator:	MMB			
Analysis nd Name	<u>Result</u>	<u>Units</u>	<u>Data Qualifiers</u>	<u>Limit of Quantitation</u>
	219.3	ug/L	JD	1000.0
	1696.8	ug/L	D	1000.0
	<200.0	ug/L		1000.0
	<200.0	ug/L		1000.0

GC/MS analysis performed using EPA Method 624

Limit of Quantitation adjusted based upon sample dilution factor.

Data Qualifiers: B Analyte also detected in blank J Estimated Value
D Compound quantitated on diluted sample N.D. None Detected
E Concentration exceeded the calibration range of the instrument

Carpenter Technology Corporation
Chemical Technology Group
EPA Lab Code: PA00963
PA Accredited Lab ID#: 06-00688
NJ Laboratory Certification ID#: PA002



Chemical Analysis Report

Specimen ID	1773-WE-004	Requestor	Sean McGowan
Copies	smcgowan@cartech.com		

Sample Information

Description	Well - Miscellaneous Groundwater Monitoring Well
Location	Former General Time site
Request ID	MP-3
Sampled	6/29/2017 1043
Submitted	7/3/2017 11:04:19 AM
Reported	07/10/2017
Taken by	J. Yonts
Method	Grab
Volume	3 x 40 mL

Comments:

This analysis report was reviewed and approved by:

A handwritten signature in black ink that reads "Tim O'Gorman". It is written in a cursive style with a long, sweeping line for the surname.

Carpenter Technology Corporation
R&D Chemical Laboratory
Volatile Organics Analysis Report

Sample Name:	MP-3	Date Received:		
Data File Name:	1773-WE-004.D	Sample Wt/Vol:	5 ml	
Analysis Date:	07/ 7/17	Moisture Content:	100 %	
Dilution Factor:	10	GC/MS Column:	DB-VRX	
Operator:	MMB			
		Analysis	Data	
		Result	Qualifiers	Limit of Quantitation

Compound Name				
Vinyl chloride	<10.0	ug/L		50.0
cis-1,2-Dichloroethene	56.4	ug/L	D	50.0
Trichloroethene	<10.0	ug/L		50.0
Tetrachloroethene	<10.0	ug/L		50.0

GC/MS analysis performed using EPA Method 624

Limit of Quantitation adjusted based upon sample dilution factor.

Data Qualifiers:	B Analyte also detected in blank	J Estimated Value
	D Compound quantitated on diluted sample	N.D. None Detected
	E Concentration exceeded the calibration range of the instrument	

Carpenter Technology Corporation
Chemical Technology Group
EPA Lab Code: PA00963
PA Accredited Lab ID#: 06-00688
NJ Laboratory Certification ID#: PA002



Chemical Analysis Report

Specimen ID	1773-WE-005	Requestor	Sean McGowan
Copies	smcgowan@cartech.com		

Sample Information

Description	Well - Miscellaneous Groundwater Monitoring Well
Location	Former General Time site
Request ID	MP-7
Sampled	6/29/2017 1149
Submitted	7/3/2017 11:04:37 AM
Reported	07/10/2017
Taken by	J. Yonts
Method	Grab
Volume	3 x 40 mL

Comments:

This analysis report was reviewed and approved by:

A handwritten signature in black ink, appearing to read "Tim O'Neal".

Carpenter Technology Corporation
R&D Chemical Laboratory
Volatile Organics Analysis Report

Sample Name:	MP-7	Date Received:		
Data File Name:	1773-WE-005.D	Sample Wt/Vol:	5 ml	
Analysis Date:	07/ 7/17	Moisture Content:	100 %	
Dilution Factor:	100	GC/MS Column:	DB-VRX	
Operator:	MMB			
		Analysis	Data	
		Result	Qualifiers	Limit of Quantitation
Compound Name				

Vinyl chloride	144.8	ug/L	JD	500.0
cis-1,2-Dichloroethene	2390.6	ug/L	D	500.0
Trichloroethene	4184.9	ug/L	D	500.0
Tetrachloroethene	<100.0	ug/L		500.0

GC/MS analysis performed using EPA Method 624

Limit of Quantitation adjusted based upon sample dilution factor.

Data Qualifiers:	B Analyte also detected in blank	J Estimated Value
	D Compound quantitated on diluted sample	N.D. None Detected
	E Concentration exceeded the calibration range of the instrument	

Carpenter Technology Corporation
Chemical Technology Group
EPA Lab Code: PA00963
PA Accredited Lab ID#: 06-00688
NJ Laboratory Certification ID#: PA002



Chemical Analysis Report

Specimen ID	1773-WE-006	Requestor	Sean McGowan
Copies	smcgowan@cartech.com		

Sample Information

Description	Well - Miscellaneous Groundwater Monitoring Well
Location	Former General Time site
Request ID	MP-8
Sampled	6/29/2017 1329
Submitted	7/3/2017 11:04:53 AM
Reported	07/10/2017
Taken by	J. Yonts
Method	Grab
Volume	3 x 40 mL

Comments:

This analysis report was reviewed and approved by:

Tim O'Sullivan

Carpenter Technology Corporation
R&D Chemical Laboratory
Volatile Organics Analysis Report

Sample Name:	MP-8	Date Received:	
Data File Name:	1773-WE-006.D	Sample Wt/Vol:	5 ml
Analysis Date:	07/ 7/17	Moisture Content:	100 %
Dilution Factor:	200	GC/MS Column:	DB-VRX
Operator:	MMB		
		Analysis	Data
		Result	Qualifiers
Compound Name		Units	Limit of Quantitation
Vinyl chloride	468.9	ug/L	1000.0
cis-1,2-Dichloroethene	18321.6	ug/L	1000.0
Trichloroethene	1539.0	ug/L	1000.0
Tetrachloroethene	<200.0	ug/L	1000.0

GC/MS analysis performed using EPA Method 624

Limit of Quantitation adjusted based upon sample dilution factor.

Data Qualifiers:	B Analyte also detected in blank	J Estimated Value
	D Compound quantitated on diluted sample	N.D. None Detected
	E Concentration exceeded the calibration range of the instrument	

Carpenter Technology Corporation
Chemical Technology Group
EPA Lab Code: PA00963
PA Accredited Lab ID#: 06-00688
NJ Laboratory Certification ID#: PA002



Chemical Analysis Report

Specimen ID	1773-WE-007	Requestor	Sean McGowan
Copies	smcgowan@cartech.com		

Sample Information

Description	Well - Miscellaneous Groundwater Monitoring Well
Location	Former General Time site
Request ID	Field Blank
Sampled	6/29/2017 1329
Submitted	7/3/2017 11:05:13 AM
Reported	07/10/2017
Taken by	J. Yonts
Method	Grab
Volume	2 x 40 mL
Comments:	

This analysis report was reviewed and approved by:

A handwritten signature in black ink that reads "Tim O'Sullivan".

**Carpenter Technology Corporation
R&D Chemical Laboratory
Volatile Organics Analysis Report**

Sample Name:	Field Blank	Date Received:	
Data File Name:	1773-WE-007.D	Sample Wt/Vol:	5 ml
Analysis Date:	07/ 7/17	Moisture Content:	100 %
Dilution Factor:	1	GC/MS Column:	DB-VRX
Operator:	MMB		
Compound Name	Analysis	Units	Data
	Result		Qualifiers
Vinyl chloride	<1.0	ug/L	
cis-1,2-Dichloroethene	<1.0	ug/L	
Trichloroethene	<1.0	ug/L	
Tetrachloroethene	<1.0	ug/L	

GC/MS analysis performed using EPA Method 624

Limit of Quantitation adjusted based upon sample dilution factor.

Data Qualifiers:	B Analyte also detected in blank	J Estimated Value
	D Compound quantitated on diluted sample	N.D. None Detected
	E Concentration exceeded the calibration range of the instrument	

Carpenter Technology Corporation
Chemical Technology Group
EPA Lab Code: PA00963
PA Accredited Lab ID#: 06-00688
NJ Laboratory Certification ID#: PA002



Chemical Analysis Report

Specimen ID	1773-WE-008	Requestor	Sean McGowan
Copies	smcgowan@cartech.com		

Sample Information

Description	Well - Miscellaneous Groundwater Monitoring Well
Location	Former General Time site
Request ID	Trip Blank
Sampled	6/29/2017 1329
Submitted	7/3/2017 11:05:33 AM
Reported	07/10/2017
Taken by	J. Yonts
Method	Grab
Volume	2 x 40 mL

Comments:

This analysis report was reviewed and approved by:

A handwritten signature in black ink, appearing to read "Sean McGowan".

Carpenter Technology Corporation
R&D Chemical Laboratory
Volatile Organics Analysis Report

Sample Name:	Trip Blank	Date Received:	
Data File Name:	1773-WE-008.D	Sample Wt/Vol:	5 ml
Analysis Date:	07/ 7/17	Moisture Content:	100 %
Dilution Factor:	1	GC/MS Column:	DB-VRX
Operator:	MMB		
Compound Name	Analysis	Data	Limit of Quantitation
	Result	Units	Qualifiers
Vinyl chloride	<1.0	ug/L	5.0
cis-1,2-Dichloroethene	<1.0	ug/L	5.0
Trichloroethene	<1.0	ug/L	5.0
Tetrachloroethene	<1.0	ug/L	5.0

GC/MS analysis performed using EPA Method 624

Limit of Quantitation adjusted based upon sample dilution factor.

Data Qualifiers:	B Analyte also detected in blank	J Estimated Value
	D Compound quantitated on diluted sample	N.D. None Detected
	E Concentration exceeded the calibration range of the instrument	



Lancaster Laboratories
Environmental

2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

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: September 25, 2017

Project: Former General Time

Account #: 00435
Group Number: 1848259
PO Number: 128752-003
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>Collection Information</u>	<u>ELLE#</u>
MW-1S Grab Groundwater	09/06/2017 14:12	9200014
MW-1I Grab Groundwater	09/06/2017 14:26	9200015
MW-2I Grab Groundwater	09/06/2017 15:54	9200016
MW-2S Grab Groundwater	09/06/2017 16:01	9200017
MW-11D Grab Groundwater	09/07/2017 09:05	9200018
MW-11I Grab Groundwater	09/07/2017 09:16	9200019
MW-11S Grab Groundwater	09/07/2017 10:19	9200020
SW-1 Grab Groundwater	09/07/2017 10:50	9200021
MW-16D Grab Groundwater	09/07/2017 12:22	9200022
MW-16I Grab Groundwater	09/07/2017 12:41	9200023
MP-3 Grab Groundwater	09/07/2017 14:50	9200024
MP-7 Grab Groundwater	09/07/2017 14:52	9200025
MP-8 Grab Groundwater	09/08/2017 08:45	9200026
RW-3 Grab Groundwater	09/08/2017 10:12	9200027
RW-4 Grab Groundwater	09/08/2017 11:37	9200028
MW-2D Grab Groundwater	09/08/2017 13:57	9200029
TB Water	09/08/2017 14:00	9200030

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



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Sample Description: MW-1S Grab Groundwater
Carpenter Site - Athens, GAELLE Sample # WW 9200014
ELLE Group # 1848259
Account # 00435**Project Name:** Former General Time

Collected: 09/06/2017 14:12 by SL

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

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FGT1S

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	< 4	4	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	P172553AA	09/13/2017 07:28	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172553AA	09/13/2017 07:28	Kevin D Kelly	1



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Sample Description: MW-1I Grab Groundwater
Carpenter Site - Athens, GAELLE Sample # WW 9200015
ELLE Group # 1848259
Account # 00435**Project Name:** Former General Time

Collected: 09/06/2017 14:26 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FGT1I

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	< 4	4	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	P172561AA	09/13/2017 16:24	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172561AA	09/13/2017 16:24	Daniel H Heller	1



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

ELLE Sample # WW 9200016
ELLE Group # 1848259
Account # 00435

Project Name: Former General Time

Collected: 09/06/2017 15:54 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FGT2I

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	2,000	20	20
10335	trans-1,2-Dichloroethene	156-60-5	34	20	20
10335	Methylene Chloride	75-09-2	< 80	80	20
10335	1,1,2-Trichloroethane	79-00-5	< 20	20	20
10335	Trichloroethene	79-01-6	17,000	200	200
10335	Vinyl Chloride	75-01-4	< 20	20	20

Sample Comments

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

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	P172553AA	09/13/2017 07:54	Kevin D Kelly	20
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P172553AA	09/13/2017 08:20	Kevin D Kelly	200
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172553AA	09/13/2017 07:54	Kevin D Kelly	20
01163	GC/MS VOA Water Prep	SW-846 5030B	2	P172553AA	09/13/2017 08:20	Kevin D Kelly	200



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Sample Description: MW-2S Grab Groundwater
Carpenter Site - Athens, GAELLE Sample # WW 9200017
ELLE Group # 1848259
Account # 00435**Project Name:** Former General Time

Collected: 09/06/2017 16:01 by SL

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

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FGT2S

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	< 4	4	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	4	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	P172561AA	09/13/2017 16:50	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172561AA	09/13/2017 16:50	Daniel H Heller	1



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Sample Description: MW-11D Grab Groundwater
Carpenter Site - Athens, GA**ELLE Sample #** WW 9200018
ELLE Group # 1848259
Account # 00435**Project Name:** Former General Time

Collected: 09/07/2017 09:05 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FG11D

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	2	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 4	4	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	P172561AA	09/13/2017 17:16	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172561AA	09/13/2017 17:16	Daniel H Heller	1



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Sample Description: MW-11I Grab Groundwater
Carpenter Site - Athens, GA**ELLE Sample #** WW 9200019
ELLE Group # 1848259
Account # 00435**Project Name:** Former General Time

Collected: 09/07/2017 09:16 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FG11I

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	44	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 4	4	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	370	10	10
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	P172561AA	09/13/2017 17:42	Daniel H Heller	1
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P172561AA	09/13/2017 19:52	Daniel H Heller	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172561AA	09/13/2017 17:42	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	P172561AA	09/13/2017 19:52	Daniel H Heller	10



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Sample Description: MW-11S Grab Groundwater
Carpenter Site - Athens, GA**ELLE Sample #** WW 9200020
ELLE Group # 1848259
Account # 00435**Project Name:** Former General Time

Collected: 09/07/2017 10:19 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FG11S

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	33	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	Methylene Chloride	75-09-2	< 4	4	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	220	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	P172561AA	09/13/2017 18:34	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172561AA	09/13/2017 18:34	Daniel H Heller	1



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Sample Description: SW-1 Grab Groundwater
Carpenter Site - Athens, GAELLE Sample # WW 9200021
ELLE Group # 1848259
Account # 00435**Project Name:** Former General Time

Collected: 09/07/2017 10:50 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FGTS1

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	< 4	4	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	P172561AA	09/13/2017 19:00	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172561AA	09/13/2017 19:00	Daniel H Heller	1



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

ELLE Sample # WW 9200022
ELLE Group # 1848259
Account # 00435

Project Name: Former General Time

Collected: 09/07/2017 12:22 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FG16D

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	72	1	1
10335	trans-1,2-Dichloroethene	156-60-5	1	1	1
10335	Methylene Chloride	75-09-2	< 4	4	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	180	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	8.0	5.0	5
	SM 5310 C-2000		mg/l	mg/l	
00273	Total Organic Carbon	n.a.	< 1.0	1.0	1
	SM 3500-Fe B 1997		mg/l	mg/l	
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	P172561AA	09/13/2017 19:26	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172561AA	09/13/2017 19:26	Daniel H Heller	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	172550007A	09/12/2017 11:55	Johanna C Kennedy	1
01754	Iron	SW-846 6010B	1	172540184805	09/15/2017 04:25	Jonathan J Allen	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	172540184805	09/13/2017 06:45	Lisa J Cooke	1
00228	Sulfate	EPA 300.0	2	17257987106B	09/15/2017 06:34	Clinton M Wilson	5
00273	Total Organic Carbon	SM 5310 C-2000	1	17256667603A	09/13/2017 20:25	Drew M Gerhart	1



Lancaster Laboratories
Environmental

Analysis Report

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

ELLE Sample # WW 9200022
ELLE Group # 1848259
Account # 00435

Project Name: Former General Time

Collected: 09/07/2017 12:22 by SL

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

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FG16D

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	17255834401A	09/12/2017 18:45	Daniel S Smith	1



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

ELLE Sample # WW 9200023
ELLE Group # 1848259
Account # 00435

Project Name: Former General Time

Collected: 09/07/2017 12:41 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FG16I

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	7	5	5
10335	cis-1,2-Dichloroethene	156-59-2	5,000	20	20
10335	trans-1,2-Dichloroethene	156-60-5	88	5	5
10335	Methylene Chloride	75-09-2	< 20	20	5
10335	1,1,2-Trichloroethane	79-00-5	< 5	5	5
10335	Trichloroethene	79-01-6	9	5	5
10335	Vinyl Chloride	75-01-4	800	5	5
GC Miscellaneous	RSKSOP-175 modified		ug/l	ug/l	
07105	Ethane	74-84-0	5.6	5.0	1
07105	Ethene	74-85-1	3,000	100	20
07105	Methane	74-82-8	4,700	100	20
Metals	SW-846 6010B		mg/l	mg/l	
01754	Iron	7439-89-6	16.5	0.200	1
Wet Chemistry	EPA 300.0		mg/l	mg/l	
00228	Sulfate	14808-79-8	8.8	5.0	5
	SM 5310 C-2000		mg/l	mg/l	
00273	Total Organic Carbon	n.a.	93.4	5.0	5
	SM 3500-Fe B 1997		mg/l	mg/l	
08344	Ferrous Iron	n.a.	17.7	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	P172554AA	09/13/2017 07:15	Kevin D Kelly	20
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	Y172581AA	09/15/2017 19:14	Linda C Pape	5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172554AA	09/13/2017 07:15	Kevin D Kelly	20
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Y172581AA	09/15/2017 19:14	Linda C Pape	5
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	172550007A	09/12/2017 12:13	Johanna C Kennedy	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	172550007A	09/13/2017 12:45	Johanna C Kennedy	20



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Sample Description: MW-16I Grab Groundwater
Carpenter Site - Athens, GA**ELLE Sample #** WW 9200023
ELLE Group # 1848259
Account # 00435**Project Name:** Former General Time

Collected: 09/07/2017 12:41 by SL

Carpenter Technology Corp.-PA

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Reading PA 19612-4662

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FG16I

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	172540184805	09/15/2017 04:29	Jonathan J Allen	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	172540184805	09/13/2017 06:45	Lissa J Cooke	1
00228	Sulfate	EPA 300.0	2	17257987106B	09/15/2017 06:50	Clinton M Wilson	5
00273	Total Organic Carbon	SM 5310 C-2000	1	17256667603B	09/15/2017 07:19	Drew M Gerhart	5
08344	Ferrous Iron	SM 3500-Fe B 1997	1	17255834401A	09/12/2017 18:45	Daniel S Smith	100



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

ELLE Sample # WW 9200024
ELLE Group # 1848259
Account # 00435

Project Name: Former General Time

Collected: 09/07/2017 14:50 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FGTM3

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	12	1	1
10335	trans-1,2-Dichloroethene	156-60-5	7	1	1
10335	Methylene Chloride	75-09-2	< 4	4	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
GC Miscellaneous	RSKSOP-175 modified		ug/l	ug/l	
07105	Ethane	74-84-0	28	5.0	1
07105	Ethene	74-85-1	50	5.0	1
07105	Methane	74-82-8	17,000	1,000	200
The container used for the methane analysis was submitted with headspace.					
A preserved vial was submitted for the methane analysis.					
However, the pH at the time of analysis was 4.					
A preserved vial was submitted for the ethane and ethene analysis.					
However, the pH at the time of analysis was 7.					
Metals	SW-846 6010B		mg/l	mg/l	
01754	Iron	7439-89-6	30.4	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.	471	25.0	25
	SM 3500-Fe B 1997		mg/l	mg/l	
08344	Ferrous Iron	n.a.	29.5	5.0	100

Sample Comments

PA DEP Lab Certification ID 36-00037, Expiration Date: 1/31/18.
Preservation requirements were not met. The pH preservation of all non-volatile containers was checked upon receipt at the laboratory. The container for the following analysis was not within specification and was adjusted accordingly by the laboratory: Total Organic Carbon

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

ELLE Sample # WW 9200024
 ELLE Group # 1848259
 Account # 00435

Project Name: Former General Time

Collected: 09/07/2017 14:50 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FGTM3

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	P172554AA	09/13/2017 04:14	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172554AA	09/13/2017 04:14	Kevin D Kelly	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	172550007A	09/12/2017 12:31	Johanna C Kennedy	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	172550007A	09/13/2017 13:03	Johanna C Kennedy	200
01754	Iron	SW-846 6010B	1	172540184805	09/15/2017 04:32	Jonathan J Allen	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	172540184805	09/13/2017 06:45	Lisa J Cooke	1
00228	Sulfate	EPA 300.0	2	17257987106B	09/15/2017 07:06	Clinton M Wilson	5
00273	Total Organic Carbon	SM 5310 C-2000	1	17256667603B	09/15/2017 07:32	Drew M Gerhart	25
08344	Ferrous Iron	SM 3500-Fe B 1997	1	17255834401A	09/12/2017 18:45	Daniel S Smith	100



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

ELLE Sample # WW 9200025
ELLE Group # 1848259
Account # 00435

Project Name: Former General Time

Collected: 09/07/2017 14:52 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FGTM7

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	8	5	5
10335	cis-1,2-Dichloroethene	156-59-2	2,500	50	50
10335	trans-1,2-Dichloroethene	156-60-5	17	5	5
10335	Methylene Chloride	75-09-2	< 20	20	5
10335	1,1,2-Trichloroethane	79-00-5	< 5	5	5
10335	Trichloroethene	79-01-6	5,200	50	50
10335	Vinyl Chloride	75-01-4	120	5	5
GC Miscellaneous	RSKSOP-175 modified		ug/l	ug/l	
07105	Ethane	74-84-0	< 5.0	5.0	1
07105	Ethene	74-85-1	280	5.0	1
07105	Methane	74-82-8	540	25	5
Metals	SW-846 6010B		mg/l	mg/l	
01754	Iron	7439-89-6	8.81	0.200	1
Wet Chemistry	EPA 300.0		mg/l	mg/l	
00228	Sulfate	14808-79-8	26.6	5.0	5
	SM 5310 C-2000		mg/l	mg/l	
00273	Total Organic Carbon	n.a.	3.3	1.0	1
	SM 3500-Fe B 1997		mg/l	mg/l	
08344	Ferrous Iron	n.a.	10.3	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	P172554AA	09/13/2017 05:32	Kevin D Kelly	5
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P172554AA	09/13/2017 05:58	Kevin D Kelly	50
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172554AA	09/13/2017 05:32	Kevin D Kelly	5
01163	GC/MS VOA Water Prep	SW-846 5030B	2	P172554AA	09/13/2017 05:58	Kevin D Kelly	50
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	172550007A	09/12/2017 12:48	Johanna C Kennedy	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	172550007A	09/13/2017 13:21	Johanna C Kennedy	5

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Sample Description: MP-7 Grab Groundwater
Carpenter Site - Athens, GA**ELLE Sample #** WW 9200025
ELLE Group # 1848259
Account # 00435**Project Name:** Former General Time

Collected: 09/07/2017 14:52 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FGTM7

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	172550184801	09/13/2017 13:16	Patrick J Engle	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	172550184801	09/12/2017 21:27	Annamaria Kuhns	1
00228	Sulfate	EPA 300.0	2	17257987106B	09/15/2017 07:22	Clinton M Wilson	5
00273	Total Organic Carbon	SM 5310 C-2000	1	17256667603B	09/15/2017 07:46	Drew M Gerhart	1
08344	Ferrous Iron	SM 3500-Fe B 1997	1	17255834401A	09/12/2017 18:45	Daniel S Smith	100



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

ELLE Sample # WW 9200026
ELLE Group # 1848259
Account # 00435

Project Name: Former General Time

Collected: 09/08/2017 08:45 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FGTM8

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	79	50	50
10335	cis-1,2-Dichloroethene	156-59-2	25,000	500	500
10335	trans-1,2-Dichloroethene	156-60-5	86	50	50
10335	Methylene Chloride	75-09-2	< 200	200	50
10335	1,1,2-Trichloroethane	79-00-5	< 50	50	50
10335	Trichloroethene	79-01-6	4,100	50	50
10335	Vinyl Chloride	75-01-4	650	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	650	25	5
07105	Methane	74-82-8	110	5.0	1
Metals	SW-846 6010B		mg/l	mg/l	
01754	Iron	7439-89-6	7.74	0.200	1
Wet Chemistry	EPA 300.0		mg/l	mg/l	
00228	Sulfate	14808-79-8	34.0	5.0	5
	SM 5310 C-2000		mg/l	mg/l	
00273	Total Organic Carbon	n.a.	53.3	1.0	1
	SM 3500-Fe B 1997		mg/l	mg/l	
08344	Ferrous Iron	n.a.	9.6	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	P172554AA	09/13/2017 08:07	Kevin D Kelly	50
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P172554AA	09/13/2017 08:33	Kevin D Kelly	500
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172554AA	09/13/2017 08:07	Kevin D Kelly	50
01163	GC/MS VOA Water Prep	SW-846 5030B	2	P172554AA	09/13/2017 08:33	Kevin D Kelly	500
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	172550007A	09/12/2017 13:06	Johanna C Kennedy	1
07105	Volatile Headspace Hydrocarbon	RSKSOP-175 modified	1	172550007A	09/13/2017 13:38	Johanna C Kennedy	5



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Sample Description: MP-8 Grab Groundwater
Carpenter Site - Athens, GA**ELLE Sample #** WW 9200026
ELLE Group # 1848259
Account # 00435**Project Name:** Former General Time

Collected: 09/08/2017 08:45 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FGTM8

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01754	Iron	SW-846 6010B	1	172550184801	09/13/2017 13:19	Patrick J Engle	1
01848	ICP-WW, 3005A (tot rec) - U3	SW-846 3005A	1	172550184801	09/12/2017 21:27	Annamaria Kuhns	1
00228	Sulfate	EPA 300.0	2	17257987106B	09/15/2017 07:39	Clinton M Wilson	5
00273	Total Organic Carbon	SM 5310 C-2000	1	17256667603B	09/15/2017 07:59	Drew M Gerhart	1
08344	Ferrous Iron	SM 3500-Fe B 1997	1	17255834401A	09/12/2017 18:45	Daniel S Smith	50



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Sample Description: RW-3 Grab Groundwater
Carpenter Site - Athens, GAELLE Sample # WW 9200027
ELLE Group # 1848259
Account # 00435**Project Name:** Former General Time

Collected: 09/08/2017 10:12 by SL

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

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FGTR3

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	26	10	10
10335	cis-1,2-Dichloroethene	156-59-2	750	10	10
10335	trans-1,2-Dichloroethene	156-60-5	40	10	10
10335	Methylene Chloride	75-09-2	< 40	40	10
10335	1,1,2-Trichloroethane	79-00-5	< 10	10	10
10335	Trichloroethene	79-01-6	7,900	100	100
10335	Vinyl Chloride	75-01-4	< 10	10	10

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	P172554AA	09/13/2017 06:23	Kevin D Kelly	10
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P172554AA	09/13/2017 06:49	Kevin D Kelly	100
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172554AA	09/13/2017 06:23	Kevin D Kelly	10
01163	GC/MS VOA Water Prep	SW-846 5030B	2	P172554AA	09/13/2017 06:49	Kevin D Kelly	100



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Sample Description: RW-4 Grab Groundwater
Carpenter Site - Athens, GAELLE Sample # WW 9200028
ELLE Group # 1848259
Account # 00435**Project Name:** Former General Time

Collected: 09/08/2017 11:37 by SL

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

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FGTR4

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	< 4	4	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	7	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	P172554AA	09/13/2017 04:40	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172554AA	09/13/2017 04:40	Kevin D Kelly	1



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Sample Description: MW-2D Grab Groundwater
Carpenter Site - Athens, GAELLE Sample # WW 9200029
ELLE Group # 1848259
Account # 00435**Project Name:** Former General Time

Collected: 09/08/2017 13:57 by SL

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

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FGT2D

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	< 4	4	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	2	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	P172554AA	09/13/2017 05:06	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172554AA	09/13/2017 05:06	Kevin D Kelly	1



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Sample Description: TB Water
Carpenter Site - Athens, GA

ELLE Sample # WW 9200030
ELLE Group # 1848259
Account # 00435

Project Name: Former General Time

Collected: 09/08/2017 14:00

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

Submitted: 09/09/2017 09:45

Reported: 09/25/2017 11:36

FGTTB

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	< 4	4	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	P172554AA	09/12/2017 23:29	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172554AA	09/12/2017 23:29	Kevin D Kelly	1

Quality Control Summary

Client Name: Carpenter Technology Corp.-PA
Reported: 09/25/2017 11:36

Group Number: 1848259

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	LOQ
	ug/l	ug/l
Batch number: P172553AA	Sample number(s): 9200014, 9200016	
1,1-Dichloroethene	< 1	1
cis-1,2-Dichloroethene	< 1	1
trans-1,2-Dichloroethene	< 1	1
Methylene Chloride	< 4	4
1,1,2-Trichloroethane	< 1	1
Trichloroethene	< 1	1
Vinyl Chloride	< 1	1
Batch number: P172554AA	Sample number(s): 9200023-9200030	
1,1-Dichloroethene	< 1	1
cis-1,2-Dichloroethene	< 1	1
trans-1,2-Dichloroethene	< 1	1
Methylene Chloride	< 4	4
1,1,2-Trichloroethane	< 1	1
Trichloroethene	< 1	1
Vinyl Chloride	< 1	1
Batch number: P172561AA	Sample number(s): 9200015, 9200017-9200022	
1,1-Dichloroethene	< 1	1
cis-1,2-Dichloroethene	< 1	1
trans-1,2-Dichloroethene	< 1	1
Methylene Chloride	< 4	4
1,1,2-Trichloroethane	< 1	1
Trichloroethene	< 1	1
Vinyl Chloride	< 1	1
Batch number: Y172581AA	Sample number(s): 9200023	
1,1-Dichloroethene	< 1	1
trans-1,2-Dichloroethene	< 1	1
Methylene Chloride	< 4	4
1,1,2-Trichloroethane	< 1	1
Trichloroethene	< 1	1
Vinyl Chloride	< 1	1
Batch number: 172550007A	Sample number(s): 9200022-9200026	
Ethane	< 5.0	5.0
Ethene	< 5.0	5.0
Methane	< 5.0	5.0
	mg/l	mg/l
Batch number: 172540184805	Sample number(s): 9200022-9200024	
Iron	< 0.200	0.200

*- 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: 09/25/2017 11:36

Group Number: 1848259

Method Blank (continued)

Analysis Name	Result	LOQ
	mg/l	mg/l
Batch number: 172550184801	Sample number(s): 9200025-9200026	
Iron	< 0.200	0.200
Batch number: 17256667603A	Sample number(s): 9200022	
Total Organic Carbon	< 1.0	1.0
Batch number: 17256667603B	Sample number(s): 9200023-9200026	
Total Organic Carbon	< 1.0	1.0
Batch number: 17257987106B	Sample number(s): 9200022-9200026	
Sulfate	< 1.0	1.0
Batch number: 17255834401A	Sample number(s): 9200022-9200026	
Ferrous Iron	< 0.050	0.050

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: P172553AA	Sample number(s): 9200014, 9200016								
1,1-Dichloroethene	20	18.62			93		76-124		
cis-1,2-Dichloroethene	20	21.74			109		80-120		
trans-1,2-Dichloroethene	20	20.99			105		80-120		
Methylene Chloride	20	21.04			105		80-120		
1,1,2-Trichloroethane	20	21.98			110		80-120		
Trichloroethene	20	21.33			107		80-120		
Vinyl Chloride	20	19.18			96		63-121		
Batch number: P172554AA	Sample number(s): 9200023-9200030								
1,1-Dichloroethene	20	18.73			94		76-124		
cis-1,2-Dichloroethene	20	21.09			105		80-120		
trans-1,2-Dichloroethene	20	20.78			104		80-120		
Methylene Chloride	20	20.72			104		80-120		
1,1,2-Trichloroethane	20	21.53			108		80-120		
Trichloroethene	20	20.68			103		80-120		
Vinyl Chloride	20	18.78			94		63-121		
Batch number: P172561AA	Sample number(s): 9200015, 9200017-9200022								
1,1-Dichloroethene	20	20.4			102		76-124		
cis-1,2-Dichloroethene	20	22.16			111		80-120		
trans-1,2-Dichloroethene	20	21.69			108		80-120		
Methylene Chloride	20	21.47			107		80-120		
1,1,2-Trichloroethane	20	21.56			108		80-120		
Trichloroethene	20	20.97			105		80-120		
Vinyl Chloride	20	19.62			98		63-121		
Batch number: Y172581AA	Sample number(s): 9200023								

* 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: 09/25/2017 11:36

Group Number: 1848259

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-Dichloroethene	20	23.3			116		76-124		
trans-1,2-Dichloroethene	20	22.59			113		80-120		
Methylene Chloride	20	21.15			106		80-120		
1,1,2-Trichloroethane	20	20.49			102		80-120		
Trichloroethene	20	21.5			108		80-120		
Vinyl Chloride	20	20.31			102		63-121		
	ug/l	ug/l	ug/l	ug/l					
Batch number: 172550007A	Sample number(s): 9200022-9200026								
Ethane	58.4	59.33	58.4	58.35	102	100	85-115	2	20
Ethene	60.8	61.2	60.8	60.09	101	99	83-115	2	20
Methane	59.8	64.56	59.8	63.28	108	106	85-115	2	20
	mg/l	mg/l	mg/l	mg/l					
Batch number: 172540184805	Sample number(s): 9200022-9200024								
Iron	1.00	1.02			102		80-120		
Batch number: 172550184801	Sample number(s): 9200025-9200026								
Iron	1.00	1.02			102		80-120		
	mg/l	mg/l	mg/l	mg/l					
Batch number: 17256667603A	Sample number(s): 9200022								
Total Organic Carbon	25	25.05			100		91-113		
Batch number: 17256667603B	Sample number(s): 9200023-9200026								
Total Organic Carbon	25	25.05			100		91-113		
Batch number: 17257987106B	Sample number(s): 9200022-9200026								
Sulfate	7.50	6.83	7.50	6.91	91	92	90-110	1	20
	mg/l	mg/l	mg/l	mg/l					
Batch number: 17255834401A	Sample number(s): 9200022-9200026								
Ferrous Iron	0.400	0.395			99		93-105		

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: P172553AA	Sample number(s): 9200014, 9200016 UNSPK: P201193									
1,1-Dichloroethene	< 2	40	42.95	40	42.31	107	106	76-124	2	30
cis-1,2-Dichloroethene	< 2	40	46.11	40	45.72	115	114	80-120	1	30
trans-1,2-Dichloroethene	< 2	40	45.42	40	44.95	114	112	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: 09/25/2017 11:36

Group Number: 1848259

MS/MSD (continued)

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
Methylene Chloride	< 8	40	43.98	40	43.68	110	109	80-120	1	30
1,1,2-Trichloroethane	< 2	40	45.22	40	45.6	113	114	80-120	1	30
Trichloroethene	< 2	40	47.74	40	47.66	119	119	80-120	0	30
Vinyl Chloride	< 2	40	45.12	40	43.01	113	108	63-121	5	30
Batch number: P172554AA	Sample number(s): 9200023-9200030 UNSPK: P200884									
1,1-Dichloroethene	< 1	20	21.13	20	20.99	106	105	76-124	1	30
cis-1,2-Dichloroethene	< 1	20	22.17	20	22.58	111	113	80-120	2	30
trans-1,2-Dichloroethene	< 1	20	22.21	20	22.72	111	114	80-120	2	30
Methylene Chloride	< 4	20	21.95	20	21.22	110	106	80-120	3	30
1,1,2-Trichloroethane	< 1	20	21.84	20	22.15	109	111	80-120	1	30
Trichloroethene	< 1	20	21.05	20	21.83	105	109	80-120	4	30
Vinyl Chloride	< 1	20	22.58	20	21.77	113	109	63-121	4	30
Batch number: P172561AA	Sample number(s): 9200015,9200017-9200022 UNSPK: P200887									
1,1-Dichloroethene	< 1	20	21.09	20	20.51	105	103	76-124	3	30
cis-1,2-Dichloroethene	< 1	20	22.33	20	22.62	112	113	80-120	1	30
trans-1,2-Dichloroethene	< 1	20	21.84	20	21.94	109	110	80-120	0	30
Methylene Chloride	< 4	20	21.46	20	21.74	107	109	80-120	1	30
1,1,2-Trichloroethane	< 1	20	21.41	20	22.07	107	110	80-120	3	30
Trichloroethene	< 1	20	20.9	20	21.85	104	109	80-120	4	30
Vinyl Chloride	< 1	20	22.05	20	21.58	110	108	63-121	2	30
Batch number: Y172581AA	Sample number(s): 9200023 UNSPK: P202062									
1,1-Dichloroethene	< 1	20	25.35	20	25.38	127*	127*	76-124	0	30
trans-1,2-Dichloroethene	< 1	20	23.95	20	24.08	120	120	80-120	1	30
Methylene Chloride	< 4	20	22.55	20	22.81	113	114	80-120	1	30
1,1,2-Trichloroethane	< 1	20	82.09	20	78.57	410*	393*	80-120	4	30
Trichloroethene	< 1	20	24.94	20	23.91	125*	120	80-120	4	30
Vinyl Chloride	< 1	20	23.11	20	22.81	116	114	63-121	1	30
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 172540184805	Sample number(s): 9200022-9200024 UNSPK: P199562									
Iron	< 0.200	1.00	0.970	1.00	0.951	97	95	75-125	2	20
Batch number: 172550184801	Sample number(s): 9200025-9200026 UNSPK: P195766									
Iron	< 0.200	1.00	1.02	1.00	1.02	102	102	75-125	0	20
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 17256667603A	Sample number(s): 9200022 UNSPK: P199384									
Total Organic Carbon	< 1.0	10	10.18			102		64-148		
Batch number: 17256667603B	Sample number(s): 9200023-9200026 UNSPK: P202348									
Total Organic Carbon	< 1.0	10	10.23			102		64-148		
Batch number: 17257987106B	Sample number(s): 9200022-9200026 UNSPK: P198566									
Sulfate	32.12	25	59.83			111*		90-110		

*- 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: 09/25/2017 11:36

Group Number: 1848259

MS/MSD (continued)

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

Analysis Name	Unspiked	MS Spike	MS	MSD Spike	MSD	MS	MSD	MS/MSD	RPD	RPD
	Conc	Added	Conc	Added	Conc	%Rec	%Rec	Limits		Max
	mg/l	mg/l	mg/l	mg/l	mg/l					
Batch number: 17255834401A	Sample number(s): 9200022-9200026 UNSPK: 9200024									
Ferrous Iron	29.47	40	67.7	40	69.21	96	99	93-105	2	6

Laboratory Duplicate

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

Analysis Name	BKG Conc	DUP Conc	DUP RPD	DUP RPD Max
	mg/l	mg/l		
Batch number: 172540184805	Sample number(s): 9200022-9200024 BKG: P199562			
Iron	< 0.200	< 0.200	0 (1)	20
Batch number: 172550184801	Sample number(s): 9200025-9200026 BKG: P195766			
Iron	< 0.200	< 0.200	0 (1)	20
Batch number: 17256667603A	Sample number(s): 9200022 BKG: P199384			
Total Organic Carbon	< 1.0	< 1.0	0 (1)	9
Batch number: 17256667603B	Sample number(s): 9200023-9200026 BKG: P202348			
Total Organic Carbon	< 1.0	< 1.0	0 (1)	9
Batch number: 17257987106B	Sample number(s): 9200022-9200026 BKG: P198566			
Sulfate	32.12	31.88	1	15
Batch number: 17255834401A	Sample number(s): 9200022-9200026 BKG: 9200024			
Ferrous Iron	29.47	29.97	2	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: P172553AA

*- 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: 09/25/2017 11:36

Group Number: 1848259

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: P172553AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9200014	100	103	111	104
9200016	101	104	111	106
Blank	100	105	110	103
LCS	100	105	103	102
MS	100	104	102	105
MSD	100	104	102	105
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: P172554AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9200024	101	103	112	108
9200025	101	103	113	109
9200026	99	103	113	108
9200027	101	106	112	108
9200028	101	103	113	109
9200029	100	103	112	109
9200030	100	105	111	106
Blank	101	106	111	107
LCS	100	104	104	103
MS	100	104	104	104
MSD	99	103	104	104
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: P172561AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9200015	99	103	111	110
9200017	99	102	111	109
9200018	99	102	111	112
9200019	99	103	111	108
9200020	99	103	111	106
9200021	98	102	112	108
9200022	100	103	110	107
Blank	99	102	110	105
LCS	100	104	103	102
MS	99	105	104	103
MSD	100	106	104	102

*- 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: 09/25/2017 11:36

Group Number: 1848259

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: VOCs- 5ml Water by 8260B
Batch number: P172561AA

Limits: 80-120 80-120 80-120 80-120

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: Y172581AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9200023	103	104	97	94
Blank	100	101	97	93
LCS	99	101	98	95
MS	100	101	101	101
MSD	100	101	100	101

Limits: 80-120 80-120 80-120 80-120

Analysis Name: Volatile Headspace Hydrocarbon
Batch number: 172550007A

Propene	
9200022	94
9200023	86
9200024	93
9200025	90
9200026	87
Blank	102
LCS	105
LCSD	101

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 # 16018259

Sample # 9200014-30

COC # 555245

Client Information		Matrix		Analysis Requested		For Lab Use Only			
				Preservation and Filtration Codes					
Client: <u>Haley and Aldrich</u>	Acct. #:	<input type="checkbox"/>	<input checked="" type="checkbox"/> Tissue	638	08	35	55		
Project Name/#: <u>Former General Time</u>	PWSID #:	<input type="checkbox"/>	<input type="checkbox"/> Ground	57	91				
Project Manager: <u>Naji Aila</u>	P.O. #: <u>128752-003</u>	<input type="checkbox"/>	<input type="checkbox"/> Surface						
Sampler: <u>Sean Lewis</u>	Quote #:	<input type="checkbox"/>	<input type="checkbox"/> Other:						
State where samples were collected: <u>Georgia</u>	For Compliance: <u>Yes</u> <input type="checkbox"/> <u>No</u> <input type="checkbox"/>	<input type="checkbox"/> Soil	<input type="checkbox"/> Sediment	<input type="checkbox"/> VOCs	<input type="checkbox"/> Iron	<input type="checkbox"/> Ferric	<input type="checkbox"/> Sulfate		
		<input type="checkbox"/> Grab	<input type="checkbox"/> Composite						
		<input type="checkbox"/> Water	<input type="checkbox"/> NPDES						
		<input type="checkbox"/> Other:							
Sample Identification		Collected		Total # of Containers	Preservation Codes				
		Date	Time		638	08	35	55	
MW-15	9-6-17	1412	X	2	X				
MW-1E	9-6-17	1426	X	2	X				
MW-2I	9-6-17	1554	X	2	X				
MW-25	9-6-17	1601	X	2	X				
MW-110	9-7-17	0905	X	2	X				
MW-11I	9-7-17	0916	X	2	X				
MW-11S	9-7-17	1019	Y	2	X				
SW-1	9-7-17	1050	X	2	X				
MW-16D	9-7-17	1022	X	11	X	X	X	X	
MW-16I	9-7-17	1142	Y	11	X	X	X	X	
Turnaround Time (TAT) Requested (please circle)				Relinquished by	Date	Time	Received by	Date	Time
Standard				<u>Sean Lewis</u>	9-8-17	1500			
Rush									
(Rush TAT is subject to laboratory approval and surcharge.)									
Date results are needed: _____									
E-mail address: _____									
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)								
Type III (Reduced non-CLP)	NJ DKQP	TX TRRP-13							
NYSDEC Category A or B	MA MCP	CT RCP							
EDD Required? Yes No If yes, format: _____				Relinquished by	Commercial Carrier: UPS <input type="checkbox"/> FedEx <input checked="" type="checkbox"/> Other _____				
Site-Specific QC (MS/MSD/Dup)? Yes No (If yes, indicate QC sample and submit triplicate sample volume.)					Temperature upon receipt <u>75</u> °C				

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7044 0717

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # U35

For Eurofins Lancaster Laboratories Environmental use only

Group # 1848259 Sample # 9200014-30

COC # 555244

Client Information		Matrix		Analysis Requested										For Lab Use Only					
				Preservation and Filtration Codes															
				38 08 35 55 57 91															
Client: <i>Haley and Aldrich</i>		Acct. #:		<input type="checkbox"/> Soil	<input type="checkbox"/> Sediment	<input type="checkbox"/> Tissue	<input checked="" type="checkbox"/> Ground	<input type="checkbox"/> Potable	<input type="checkbox"/> NPDES	<input type="checkbox"/> Surface	<input type="checkbox"/> Other:	<input type="checkbox"/> VOCs	<input type="checkbox"/> Iron	<input type="checkbox"/> Ferric Iron	<input type="checkbox"/> Sulfate	<input type="checkbox"/> Methane, Ethene, Ethene	<input type="checkbox"/> TOC	<input type="checkbox"/>	FSC:
Project Name#: <i>Former General Tire</i>		PWSID #:		<input type="checkbox"/> Grab	<input type="checkbox"/> Composite	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<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#:	
Project Manager: <i>Nagi Alta</i>		P.O. #: <i>128752-003</i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	211356	
Sampler: <i>Sean Lewis</i>		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"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
State where samples were collected: <i>Georgia</i>		For Compliance: <i>Yes <input type="checkbox"/> No <input type="checkbox"/></i>		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Sample Identification		Collected		<input type="checkbox"/> Grab	<input type="checkbox"/> Soil	<input type="checkbox"/> Sediment	<input type="checkbox"/> Tissue	<input type="checkbox"/> Water	<input type="checkbox"/> NPDES	<input type="checkbox"/> Surface	<input type="checkbox"/> Other:	Total # of Containers		Preservation Codes					
		Date	Time									VOCs	Iron	Ferric Iron	Sulfate	Methane, Ethene, Ethene	TOC	H=HCl	T=Thiosulfate
MP-3	9-7-17	1450	X									X	X	X	X	X	X		
MP-7	9-7-17	1451	X									X	X	X	X	X	X		
MP-8	9-8-17	0848	X									X	X	X	X	X	X		
RW-3	9-8-17	1012	X									3	X						
RW-4	9-8-17	1137	X									3	X						
MW-2D	9-8-17	1357	X									3	X						
TB	9-8-17	1400	X									1	X						
Turnaround Time (TAT) Requested (please circle)				Relinquished by		Date		Time		Received by		Date		Time					
Standard		Rush		<i>Chelsea West</i>		8/30/17		8:21		<i>Sean Lewis</i>		9-3-17		1600					
(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>		9-8-17		1500											
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)	EDD Required? Yes If yes, format:		Relinquished by		Date		Time		Received by		Date		Time					
Type III (Reduced non-CLP)	NJ DKQP TX TRRP-13			<i>Sean Lewis</i>		9/19/17		9:45											
NYSDEC Category A or B	MA MCP CT RCP	Site-Specific QC (MS/MSD/Dup)? Yes (If yes, indicate QC sample and submit triplicate sample volume.)		Relinquished by Commercial Carrier: UPS <input type="checkbox"/> FedEx <input checked="" type="checkbox"/> Other						Temperature upon receipt		15 °C							

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

Delivery Method:	<u>Fed Ex</u>	Arrival Timestamp:	<u>09/09/2017 9:45</u>
Number of Packages:	<u>1</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 \geq 6mm:	Yes
Paperwork Enclosed:	Yes	VOA IDs (\geq 6mm):	See Below
Samples Intact:	Yes	Total Trip Blank Qty:	<u>1</u>
Missing Samples:	No	Trip Blank Type:	HCl
Extra Samples:	No	Air Quality Samples Present:	No
Discrepancy in Container Qty on COC:	No		

VOA Vial IDs (Headspace \geq 6mm): MW-11D (1 of 2)

Unpacked by Simon Nies (25112) at 10:38 on 09/09/2017

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	1.5	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.



Lancaster Laboratories
Environmental

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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: September 26, 2017

Project: Former General Time

Account #: 00435
Group Number: 1852585
PO Number: 128752-002
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>Collection Information</u>	<u>ELLE#</u>
MW-9I Grab Groundwater	09/19/2017 09:05	9218265
MW-9D Grab Groundwater	09/19/2017 09:08	9218266
MW-7I Grab Groundwater	09/19/2017 10:05	9218267
MW-8I Grab Groundwater	09/19/2017 10:49	9218268
MW-3I Grab Groundwater	09/19/2017 11:31	9218269
MW-6I Grab Groundwater	09/19/2017 13:23	9218270
MW-5I Grab Groundwater	09/19/2017 14:16	9218271
SW-2 Grab Groundwater	09/19/2017 14:50	9218272
FB Grab Water	09/19/2017 14:20	9218273
TB Water	09/19/2017 14:50	9218274

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

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Sample Description: MW-91 Grab Groundwater
Carpenter Site - Athens, GA

ELLE Sample # WW 9218265
ELLE Group # 1852585
Account # 00435

Project Name: Former General Time

Collected: 09/19/2017 09:05 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/20/2017 09:40

Reported: 09/26/2017 18:52

CSA01

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	3	1	1
10335	cis-1,2-Dichloroethene	156-59-2	89	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	930	10	10
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	P172651AA	09/22/2017 21:27	Daniel H Heller	1
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P172651AA	09/22/2017 21:53	Daniel H Heller	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172651AA	09/22/2017 21:27	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	P172651AA	09/22/2017 21:53	Daniel H Heller	10



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Sample Description: MW-9D Grab Groundwater
Carpenter Site - Athens, GAELLE Sample # WW 9218266
ELLE Group # 1852585
Account # 00435**Project Name:** Former General Time

Collected: 09/19/2017 09:08 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/20/2017 09:40

Reported: 09/26/2017 18:52

CSA02

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	P172652AA	09/22/2017 14:45	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172652AA	09/22/2017 14:45	Daniel H Heller	1



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Sample Description: MW-7I Grab Groundwater
Carpenter Site - Athens, GAELLE Sample # WW 9218267
ELLE Group # 1852585
Account # 00435**Project Name:** Former General Time

Collected: 09/19/2017 10:05 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/20/2017 09:40

Reported: 09/26/2017 18:52

CSA03

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	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	< 1	1	1
10335	Vinyl Chloride	75-01-4	3	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	P172652AA	09/22/2017 16:03	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172652AA	09/22/2017 16:03	Daniel H Heller	1



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Sample Description: MW-8I Grab Groundwater
Carpenter Site - Athens, GA**ELLE Sample #** WW 9218268
ELLE Group # 1852585
Account # 00435**Project Name:** Former General Time

Collected: 09/19/2017 10:49 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/20/2017 09:40

Reported: 09/26/2017 18:52

CSA04

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	P172652AA	09/22/2017 16:29	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172652AA	09/22/2017 16:29	Daniel H Heller	1



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Sample Description: MW-3I Grab Groundwater
Carpenter Site - Athens, GAELLE Sample # WW 9218269
ELLE Group # 1852585
Account # 00435**Project Name:** Former General Time

Collected: 09/19/2017 11:31 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/20/2017 09:40

Reported: 09/26/2017 18:52

CSA05

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	P172652AA	09/22/2017 16:55	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172652AA	09/22/2017 16:55	Daniel H Heller	1



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Sample Description: MW-6I Grab Groundwater
Carpenter Site - Athens, GAELLE Sample # WW 9218270
ELLE Group # 1852585
Account # 00435**Project Name:** Former General Time

Collected: 09/19/2017 13:23 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/20/2017 09:40

Reported: 09/26/2017 18:52

CSA06

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	40	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	300	10	10
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	P172652AA	09/22/2017 17:21	Daniel H Heller	1
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	P172652AA	09/22/2017 17:47	Daniel H Heller	10
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172652AA	09/22/2017 17:21	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	P172652AA	09/22/2017 17:47	Daniel H Heller	10



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Sample Description: MW-5I Grab Groundwater
Carpenter Site - Athens, GAELLE Sample # WW 9218271
ELLE Group # 1852585
Account # 00435**Project Name:** Former General Time

Collected: 09/19/2017 14:16 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/20/2017 09:40

Reported: 09/26/2017 18:52

CSA07

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	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	80	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	P172652AA	09/22/2017 18:13	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172652AA	09/22/2017 18:13	Daniel H Heller	1



2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300 • Fax: 717-656-2681 • www.LancasterLabs.com

Sample Description: SW-2 Grab Groundwater
Carpenter Site - Athens, GAELLE Sample # WW 9218272
ELLE Group # 1852585
Account # 00435**Project Name:** Former General Time

Collected: 09/19/2017 14:50 by SL

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

Submitted: 09/20/2017 09:40

Reported: 09/26/2017 18:52

CSA08

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	P172652AA	09/22/2017 18:39	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172652AA	09/22/2017 18:39	Daniel H Heller	1



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Sample Description: FB Grab Water
Carpenter Site - Athens, GAELLE Sample # WW 9218273
ELLE Group # 1852585
Account # 00435**Project Name:** Former General Time

Collected: 09/19/2017 14:20 by SL

Carpenter Technology Corp.-PA

PO Box 14662

Reading PA 19612-4662

Submitted: 09/20/2017 09:40

Reported: 09/26/2017 18:52

CSA09

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	P172652AA	09/22/2017 13:53	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172652AA	09/22/2017 13:53	Daniel H Heller	1



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Sample Description: TB Water
Carpenter Site - Athens, GAELLE Sample # WW 9218274
ELLE Group # 1852585
Account # 00435**Project Name:** Former General Time

Collected: 09/19/2017 14:50

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

Submitted: 09/20/2017 09:40

Reported: 09/26/2017 18:52

CSA10

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	P172652AA	09/22/2017 14:19	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P172652AA	09/22/2017 14:19	Daniel H Heller	1

Quality Control Summary

Client Name: Carpenter Technology Corp.-PA
Reported: 09/26/2017 18:52

Group Number: 1852585

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	LOQ
	ug/l	ug/l
Batch number: P172651AA	Sample number(s): 9218265	
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: P172652AA	Sample number(s): 9218266-9218274	
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	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ug/l	ug/l	ug/l	ug/l					
Batch number: P172651AA	Sample number(s): 9218265								
1,1-Dichloroethene	20	17.58			88		76-124		
cis-1,2-Dichloroethene	20	19.81			99		80-120		
trans-1,2-Dichloroethene	20	19.67			98		80-120		
Methylene Chloride	20	19.14			96		80-120		
1,1,2-Trichloroethane	20	19.5			97		80-120		
Trichloroethene	20	19.04			95		80-120		
Vinyl Chloride	20	14.69			73		63-121		
Batch number: P172652AA	Sample number(s): 9218266-9218274								
1,1-Dichloroethene	20	18.3			92		76-124		
cis-1,2-Dichloroethene	20	21.16			106		80-120		
trans-1,2-Dichloroethene	20	21.07			105		80-120		
Methylene Chloride	20	20.26			101		80-120		
1,1,2-Trichloroethane	20	20.92			105		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.

Quality Control Summary

Client Name: Carpenter Technology Corp.-PA
Reported: 09/26/2017 18:52

Group Number: 1852585

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
Trichloroethene	20	19.82			99		80-120		
Vinyl Chloride	20	15.65			78		63-121		

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: P172651AA		Sample number(s): 9218265 UNSPK: P218004								
1,1-Dichloroethene	< 1	20	19.5	20	20.34	97	102	76-124	4	30
cis-1,2-Dichloroethene	< 1	20	21.43	20	22.55	107	113	80-120	5	30
trans-1,2-Dichloroethene	< 1	20	21.04	20	21.58	105	108	80-120	3	30
Methylene Chloride	< 1	20	20.22	20	21.12	101	106	80-120	4	30
1,1,2-Trichloroethane	< 1	20	21.56	20	22.29	108	111	80-120	3	30
Trichloroethene	< 1	20	20.39	20	21.72	102	109	80-120	6	30
Vinyl Chloride	< 1	20	16.48	20	17.24	82	86	63-121	5	30
Batch number: P172652AA		Sample number(s): 9218266-9218274 UNSPK: 9218266								
1,1-Dichloroethene	< 1	20	20.25	20	20.19	101	101	76-124	0	30
cis-1,2-Dichloroethene	< 1	20	21.06	20	21.66	105	108	80-120	3	30
trans-1,2-Dichloroethene	< 1	20	21.32	20	21.53	107	108	80-120	1	30
Methylene Chloride	< 1	20	20.34	20	21.13	102	106	80-120	4	30
1,1,2-Trichloroethane	< 1	20	21.19	20	22.11	106	111	80-120	4	30
Trichloroethene	< 1	20	20.82	20	21.53	104	108	80-120	3	30
Vinyl Chloride	0.964	20	18.9	20	18.45	90	87	63-121	2	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. 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: P172651AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9218265	105	106	110	105
Blank	104	105	109	104
LCS	102	104	103	101

*- 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 SummaryClient Name: Carpenter Technology Corp.-PA
Reported: 09/26/2017 18:52

Group Number: 1852585

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: P172651AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
MS	102	106	102	100
MSD	103	106	100	100
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: P172652AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9218266	103	106	110	107
9218267	103	103	110	107
9218268	102	103	111	106
9218269	103	102	110	106
9218270	104	106	111	107
9218271	103	104	111	106
9218272	104	106	109	106
9218273	101	103	111	107
9218274	101	103	111	107
Blank	103	103	111	106
LCS	101	106	105	103
MS	102	105	104	102
MSD	101	103	103	102
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

eurofins

Lancaster Laboratories
Environmental

Acct. # 435

For Eurofins Lancaster Laboratories Environmental use only

Group # 1852585 Sample # 9218265-74

COC # 555247

Client Information		Matrix		Analysis Requested		For Lab Use Only		
				Preservation and Filtration Codes				
				H				
Client: <i>Haley and Aldrich</i>	Acct. #:	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>			SCR#:	
Project Name/#: <i>Former general time</i>	PWSID #:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Project Manager: <i>Nugui Alina</i>	P.O. #: <i>1A8752-001</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Sampler: <i>Sean Lewis and Jason Yants</i>	Quote #:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
State where samples were collected: <i>Crawfordsville</i>	For Compliance: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
Sample Identification		Collected		Other:		Preservation Codes		
		Date	Time	Grab	Composite	Potable	Ground	
MW-9I	9-19-17	0905	X	GW		3	X	H=HCl T=Thiosulfate
MW-9D		1908	X	GW		3	X	N=NHO ₃ B=NaOH
MW-7I		1005	X	GW		3	X	S=S ₂ O ₈ ²⁻ P=H ₃ PO ₄
MW-8I		1049	X	GW		3	X	F=Field Filtered O=Other
MW-3I		1131	X	GW		3	X	
MW-6I		1323	X	GW		3	X	
MW-5I		1416	X	GW		3	X	
FB SW-2		1450	X	SW		3	X	
FB		1420	X	W		3	X	
TB		1450	X	W		1	X	
Turnaround Time (TAT) Requested (please circle)				Received by				
Standard	Rush	Relinquished by <i>Sean Lewis</i>		Date 9-19-17	Time 1510	Date _____ Time _____		
(Rush TAT is subject to laboratory approval and surcharge.)				Relinquished by		Received by		
Date results are needed: _____				Relinquished by		Received by		
E-mail address: <i>jyants@haleyaldrich.com</i>				Relinquished by		Received by		
Data Package Options (circle if required)				Relinquished by		Received by		
Type I (EPA Level 3 Equivalent/non-CLP)	Type VI (Raw Data Only)	EDD Required? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Relinquished by Commercial Carrier:				
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)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (If yes, indicate QC sample and submit triplicate sample volume.)		Temperature upon receipt <i>1.2</i> °C				

Eurofins Lancaster Laboratories Environmental, LLC • 2425 New Holland Pike, Lancaster, PA 17601 • 717-656-2300

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

Client: HALEY AND ALDRICH**Delivery and Receipt Information**

Delivery Method:	<u>Fed Ex</u>	Arrival Timestamp:	<u>09/20/2017 9:40</u>
Number of Packages:	<u>1</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:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	1
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 Ruth Shank (12390) at 13:19 on 09/20/2017

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	DT42-02	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.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

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

LOW FLOW SAMPLING FORM

Page _____ of _____

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

H&A FILE NO. 128752-008
PROJECT MGR. N. Alla
FIELD REP J. Yonts
DATE 6/29/17

Sampling Data:

Well ID:	MW-16D	Well Depth:	56.48	ft	Initial Depth To Water:	18.92	ft	Purging Device:	Peristaltic
Start time:	741	Depth To Top Of Screen:	46.48	ft	Depth Of Pump Intake:	~51.0	ft	Tubing Present In Well:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Finish Time:	834	Depth To Bottom Of Screen:	56.48	ft	Measuring Point:	Top of Casing		Tubing Type:	LDPE

well volume = π (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. 128752-008
PROJECT MGR. N. Alla
FIELD REP J. Vants
DATE 6/29/17

Sampling Data:

Well ID: MP-3 Well Depth: ~30.0 ft Initial Depth To Water: 15.59 ft Purging Device: *Blaedec Peristaltic*
Start time: 959 Depth To Top Of Screen: ~20.0 ft Depth Of Pump Intake: ~25.0 ft Tubing Present In Well: Yes No
Finish Time: 1048 Depth To Bottom Of Screen: ~30.0 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]	
1003	17.54	200		0	22.66	7.19	5.57	0.91	238	-164	Sample for:
1008	17.03	100		0.6	22.33	7.22	5.84	0.00	540	-175	VOCs* (Carpenter)
1013	17.12	150		1.1	22.13	7.24	5.65	0.00	409	-180	
1018	17.07	150		1.9	22.17	7.27	5.24	0.00	193	-181	Gray, cloudy, smelly water
1023	17.06	150		2.6	22.23	7.28	5.20	0.00	172	-182	
1028	17.09	150		3.3	22.24	7.28	5.15	0.00	123	-181	
1033	17.16	150		4.0	22.26	7.28	5.10	0.00	104	-181	
1038	17.20	150		4.7	22.21	7.29	5.09	0.00	92.3	-182	
1043	17.19	150		5.3	22.20	7.29	5.08	0.00	89.4	-182	

*Specific VOCs:

Parameters stable, sample time @ 1043

Tetrachloroethene (PCE)

Trichloroethene (TCE)

Cis-1,1-Dichloroethene (cis-1,2-DCE)

Vinyl Chloride (VC)

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. 128752-008
PROJECT MGR. N. Alla
FIELD REP J. Yonts
DATE 6/27/17

Sampling Data:

Well ID:	MP-7	Well Depth:	~30.0	ft	Initial Depth To Water:	15.71	ft	Purging Device:	Blaeder Peristaltic
Start time:	1059	Depth To Top Of Screen:	~20.0	ft	Depth Of Pump Intake:	~25.0	ft	Tubing Present In Well:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Finish Time:	1153	Depth To Bottom Of Screen:	~30.0	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]	

Air became disengaged. HAD to pull and reset											Sample for:
1109	16.58	100	0	24.11	7.56	1.00	4.70	552	-115		VOCs* (Carpenter)
1114	16.54	100	0.5	23.58	7.36	0.935	1.61	542	-125		
1119	16.59	100	1.0	22.77	7.15	0.801	0.00	210	-127	Gray, cloudy, smelly water	
1124	16.63	100	1.5	22.69	7.11	0.781	0.00	155	-127		
1129	16.62	100	2.0	22.65	7.07	0.767	0.00	109	-126		
1134	16.61	100	2.5	22.58	7.04	0.759	0.00	88.1	-125		
1139	16.63	100	3.0	22.49	6.99	0.745	0.00	65.3	-124		
1144	16.64	100	3.5	22.47	6.99	0.744	0.00	63.7	-124		
1149	16.64	100	4.0	22.47	6.98	0.742	0.00	60.5	-124		

*Specific VOCs:

Tetrachloroethene (PCE)

Trichloroethene (TCE)

Cis-1,1-Dichloroethene (cis-1,2-DCE)

Vinyl Chloride (VC)

Parameters stable, sample time @ 1149

LOW FLOW SAMPLING FORM

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

H&A FILE NO.	128752-008
PROJECT MGR.	N. Alla
FIELD REP	J. Vants
DATE	6/29/17

Sampling Data:

Well ID:	MP-8	Well Depth:	-30.0	ft	Initial Depth To Water:	15.49	ft	Purging Device:	Peristaltic
Start time:	1237	Depth To Top Of Screen:	-20.0	ft	Depth Of Pump Intake:	~25.0	ft	Tubing Present In Well:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Finish Time:	1333	Depth To Bottom Of Screen:	-30.0	ft	Measuring Point:	Top of Casing		Tubing Type:	LDPE

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

LOW FLOW SAMPLING FORM

Page _____ of _____

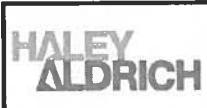
PROJECT	Former General Time Facility
LOCATION	Athens, Georgia
CLIENT	Carpenter Technology Corporation
CONTRACTOR	None

H&A FILE NO. 128752-008
PROJECT MGR. N. Alla
FIELD REP S. Vants
DATE 6/29/17

Sampling Data:

Well ID:	MW-161	Well Depth:	30.68	ft	Initial Depth To Water:	18.90	ft	Purging Device:	Peristaltic
Start time:	842	Depth To Top Of Screen:	20.68	ft	Depth Of Pump Intake:	~25.0	ft	Tubing Present In Well:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Finish Time:	956	Depth To Bottom Of Screen:	30.68	ft	Measuring Point:	Top of Casing		Tubing Type:	LDPE

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



GROUNDWATER MONITORING REPORT

Page 1 of 1

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

H&A FILE NO.	128752-003
PROJECT MGR.	N. Alla
FIELD REP.	S. Lewis
DATE	7/16/17

REFERENCE POINT: Ground Surface PVC Other



LOW FLOW SAMPLING FORM

Page 1 of 22

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

H&A FILE NO. 38111-013
PROJECT MGR. N. Alla
FIELD REP S. Lewis
DATE 7-6-17

Sampling Data:

Well ID: MW-1S Well Depth: 14.5 ft Initial Depth To Water: 7.13 ft Purging Device: *Pur*
Start time: 1339 Depth To Top Of Screen: 9.5 ft Depth Of Pump Intake: 9.5 ft Tubing Present In Well: Yes No
Finish Time: 1417 Depth To Bottom Of Screen: 14.5 ft Measuring Point: TSC Tubing Type: LOPR

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
						N/A	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	
1342	7.29	180	150	0	21.37	6.73	0.068	3.81	67.9	204	Sample for:
1347	7.30	180	150	0.75	21.57	5.31	0.037	2.72	110	216	VOCs* (Eurofins)
1352	7.30	180	150	1.50	21.62	5.20	0.036	2.48	37.6	205	- well screen stacked up
1357	7.30	180	150	2.25	22.61	5.17	0.034	2.40	29.1	204	
1402	7.30	180	150	3.0	22.61	5.14	0.033	2.32	28.3	202	
1407	7.30	180	150	3.75	22.62	5.14	0.032	2.27	26.0	204	
1412	7.30	180	150	4.5	22.61	5.14	0.032	2.24	26.3	203	
	start sample										
											*Site Specific VOCs:
											1,1-Dichloroethene 1,1, DCE
											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 2 of 22

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

H&A FILE NO. 38111-012
PROJECT MGR. N. Alla
FIELD REP. S. Lewis
DATE 9-6-17

Sampling Data:

Well ID: MW-II Well Depth: 25.27 ft Initial Depth To Water: 7.10 ft Purgung Device: *Perf*
 Start time: 1333 Depth To Top Of Screen: 15.27 ft Depth Of Pump Intake: 26.06 ft Tubing Present In Well: Yes No
 Finish Time: 1436 Depth To Bottom Of Screen: 25.27 ft Measuring Point: T6C Tubing Type: LOPP

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
1336	7.20	150	150	0	21.59	7.19	0.146	0.96	0.96	158	Sample for:
1341	7.21	150	150	0.75	21.04	7.03	0.108	9.78	0.0	173	VOCs* (Eurofins)
1346	7.20	150	150	1.50	20.81	6.37	0.043	6.33	0.0	201	
1351	7.20	150	150	2.25	20.88	6.12	0.033	5.43	0.0	205	
1356	7.20	150	150	3.6	20.62	5.92	0.030	5.34	0.0	212	
1401	7.20	150	150	3.75	20.55	5.83	0.027	5.23	0.0	218	
1406	7.20	150	150	4.50	20.56	5.71	0.026	5.01	0.0	222	
1411	7.20	150	150	5.25	20.49	5.63	0.024	4.77	0.0	225	
1416	7.20	150	150	6.0	20.51	5.61	0.023	4.72	0.0	228	
1421	7.20	150	150	6.75	20.54	5.62	0.022	4.69	0.0	230	
1426	7.20	150	150	7.50	20.53	5.60	0.022	4.65	0.0	230	*Site Specific VOCs:
<i>Start Sample</i>											
											1,1-Dichloroethane
											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 3 of 22

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

H&A FILE NO. 36111-012
PROJECT MGR. N. Alla
FIELD REP. S. Lewis
DATE 9-6-17

Sampling Data:

Well ID:	MW-2S	Well Depth:	20.2	ft	Initial Depth To Water:	17.26	ft	Purging Device:	Peri
Start time:	1456	Depth To Top Of Screen:	10.2	ft	Depth Of Pump Intake:	19.0	ft	Tubing Present In Well:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Finish Time:	1605	Depth To Bottom Of Screen:	20.2	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
					N/A	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
Stabilized within →		[100 mL/min] to [500 mL/min]		--							
1501	17.61	150	150	0	20.75	6.22	0.125	2.75	2.01	171	Sample for:
1506	17.71	150	150	0.75	20.74	6.13	0.120	2.54	0.73	185	VOCs* (Eurofins)
1511	17.75	150	150	1.50	21.32	6.18	0.121	2.32	0.0	187	- pump battery is dying
1516	17.80	150	150	2.25	21.75	6.20	0.124	2.19	0.0	185	
1521	17.85	150	150	3.0	21.06	6.21	0.126	2.16	0.0	186	
1526	17.76	150	150	3.50	21.84	6.21	0.128	2.00	0.0	191	
1531	17.84	150	150	4.25	21.20	6.25	0.127	1.93	0.0	193	
1536	17.90	150	150	5.0	21.21	6.25	0.126	2.12	0.0	196	
1541	17.95	150	150	5.75	21.19	6.25	0.126	2.04	0.0	197	
1546	17.97	150	150	6.50	21.44	6.24	0.128	1.96	0.0	197	
1551	17.99	150	150	7.25	21.60	6.25	0.129	1.88	0.0	197	*Site Specific VOCs:
1556	18.03	150	150	8.0	21.59	6.27	0.130	1.80	0.0	196	1,1-Dichloroethene
1601	18.03	150	150	8.75	21.33	6.27	0.130	1.78	0.0	199	cis-1,2-Dichloroethene
<i>Start Sample</i>											
											trans-1,2-Dichloroethene
											Methylene Chloride
											1,1,2-Trichloroethane
											Trichloroethene
											Vinyl Chloride

LOW FLOW SAMPLING FORM

Page 4 of 22

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

H&A FILE NO. 38111-012
PROJECT MGR. N. Alla
FIELD REP S. Lewis
DATE 9-6-17

Sampling Data:

Well ID: MW-2I Well Depth: 86.5 ft Initial Depth To Water: 19.60 ft Purging Device: (orunfos)
Start time: 1512 Depth To Top Of Screen: 76.5 ft Depth Of Pump Intake: 80.0 ft Tubing Present In Well: Yes No
Finish Time: 1600 Depth To Bottom Of Screen: 86.5 ft Measuring Point: TOC Tubing Type: LOPE

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
1514	19.75	200	200	0	21.44	6.10	0.033	3.81	7.22	187	Sample for:
1819	20.03	200	200	1.0	21.56	5.73	0.033	1.72	79.9	202	VOCs* (Eurofins)
1524	20.36	200	200	2.0	21.61	5.83	0.033	1.38	67.8	198	
1529	20.48	200	200	3.0	21.68	5.43	0.033	1.30	52.0	197	
1534	21.03	200	200	4.0	21.35	5.45	0.033	1.26	46.6	193	
1539	21.30	200	200	5.0	21.40	5.47	0.033	1.30	46.6	192	
1544	21.41	200	200	6.0	21.41	5.50	0.032	1.33	28.0	191	
1549	21.60	200	200	7.0	21.61	5.54	0.032	1.33	25.0	190	
1554	21.89	200	200	8.0	21.57	5.51	0.032	1.31	24.8	191	
<i>Start Sample</i>											
*Site Specific VOCs:											
1,1-Dichloroethane											
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, 1 L = 0.264 gal, 0.5L/min = 0.132 gal/min

LOW FLOW SAMPLING FORM

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

H&A FILE NO. 38111-012
PROJECT MGR. N. Alla
FIELD REP S. Lewis
DATE 9-8-17

Sampling Data:

Well ID: MW-2D Well Depth: 226.5 ft Initial Depth To Water: 17.30 ft Purgging Device: Grunfos
Start time: 1316 Depth To Top Of Screen: 216.5 ft Depth Of Pump Intake: 220 ft Tubing Present In Well: Yes No
Finish Time: 1400 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]	
1318	19.05	200	200	0	21.81	8.53	0.248	6.20	0.52	90	Sample for:
1323	22.21	200	200	1.0	20.46	10.42	0.240	5.07	1.18	49	VOCs* (Eurofins)
1328	23.32	200	200	2.0	20.21	10.18	0.241	4.42	2.912.9	64	
1332	28.90	200	200	3.0	20.01	10.40	0.245	3.19	42.0	17	
1337	26.22	200	200	4.0	19.98	10.22	0.245	2.39	29.5	-3	
1342	27.05	200	200	5.0	19.95	9.95	0.246	52.14	21.2	-1	
1347	28.19	200	200	6.0	19.82	10.05	0.244	1.94	13.1	-8	
1352	28.81	200	200	7.0	19.92	10.67	0.244	1.89	9.90	-7	
1357	29.76	200	200	8.0	19.95	10.04	0.244	1.87	8.10	-10	
Stn/4 Sample	-										
											*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

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

H&A FILE NO.	38111-012
PROJECT MGR.	N. Alla
FIELD REP	J. Yonts
DATE	9/19/17

Sampling Data:

Well ID:	MW-3I	Well Depth:	99.25	ft	Initial Depth To Water:	15.99	ft	Purging Device:	Grundfos
Start time:	1105	Depth To Top Of Screen:	89.25	ft	Depth Of Pump Intake:	~95	ft	Tubing Present In Well:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Finish Time:	1140	Depth To Bottom Of Screen:	99.25	ft	Measuring Point:	TOD		Tubing Type:	LDPE

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

LOW FLOW SAMPLING FORM

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

H&A FILE NO. 128752-003
PROJECT MGR. N. Alla
FIELD REP. J. Yonts
DATE 9/19/17

Sampling Data:

Well ID: MW-5I Well Depth: 41.5 ft Initial Depth To Water: 10.92 ft Purging Device: Peristaltic
 Start time: 1338 Depth To Top Of Screen: 31.5 ft Depth Of Pump Intake: ~36 ft Tubing Present In Well: Yes No
 Finish Time: 1420 Depth To Bottom Of Screen: 41.5 ft Measuring Point: TOC Tubing Type: LDPE

well volume = π (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

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

H&A FILE NO. 38111-012
PROJECT MGR. N. Alla
FIELD REP. J. Harts
DATE 9/19/17

Sampling Data:

Well ID: MW-6I Well Depth: 70.91 ft Initial Depth To Water: 9.06 ft Purgling Device: Ground
 Start time: 1250 Depth To Top Of Screen: 60.91 ft Depth Of Pump Intake: ~66 ft Tubing Present In Well: Yes No
 Finish Time: 1330 Depth To Bottom Of Screen: 70.91 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. (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]	
1253	9.55		250	-	26.11	5.82	0.066	5.91	69.5	186	Sample for:
1258	9.58	557	500	~1.0	23.21	5.18	0.069	0.00	498	213	VOCs* (Eurofins)
1303	9.54		200	~2.0	23.00	5.09	0.069	0.00	407	209	
1308	9.53		200	3.0	23.27	5.06	0.070	0.00	103	215	
1313	9.52		200	4.0	23.28	5.01	0.070	0.00	57.3	221	
1318	9.52		200	5.0	23.28	5.01	0.070	0.00	55.2	222	
1323	9.52		200	6.0	23.29	5.06	0.070	0.00	48.9	222	
Parameters stable, sample time @ 1323											
*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, 1 L = 0.264 gal, 0.5L/min = 0.132 gal/min

LOW FLOW SAMPLING FORM

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

H&A FILE NO. 38111-012
PROJECT MGR. N. Alla
FIELD REP. J. Yonts
DATE 9/19/17

Sampling Data:

Well ID:	MW-7I	Well Depth:	36.5	ft	Initial Depth To Water:	8.39	ft	Purging Device:	Peristaltic
Start time:	9:35	Depth To Top Of Screen:	26.5	ft	Depth Of Pump Intake:	~31.0	ft	Tubing Present In Well:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Finish Time:	10:10	Depth To Bottom Of Screen:	36.5	ft	Measuring Point:	TOC		Tubing Type:	LDPE

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



LOW FLOW SAMPLING FORM

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

H&A FILE NO. 38111-012
PROJECT MGR. N. Alla
FIELD REP J. Yants
DATE 9/19/17

Sampling Data:

Well ID: MW-8I Well Depth: 17.52 ft Initial Depth To Water: 9.36 ft Purgling Device: Peristaltic
 Start time: 1015 Depth To Top Of Screen: 7.52 ft Depth Of Pump Intake: ~12.5 ft Tubing Present In Well: Yes No
 Finish Time: 1055 Depth To Bottom Of Screen: 17.52 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
1019	9.465	150	0	25.64	5.29	0.235	0.00	57.0	199	Sample for:	
1024	9.83	150		25.50	5.27	0.235	0.00	37.9	210	VOCs* (Eurofins)	
1029	9.92	150	1.5	25.49	5.27	0.235	0.00	32.7	212		
1034	10.00	150		25.52	5.25	0.236	0.00	26.8	217		
1039	10.04	150	3.0	25.56	5.27	0.237	0.00	24.0	221		
1044	10.07	150		25.53	5.27	0.238	0.06	20.1	223		
1049	10.08	150	4.5	25.55	5.28	0.238	0.00	19.5	224		
Parameters stable, sample time @ 1049											
*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 = $3.14 (\pi) \times \text{radius}^2 \times \text{height of water column}$. 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

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PROJECT	Former General Time Facility	H&A FILE NO.	38111-012
LOCATION	Athens, Georgia	PROJECT MGR.	N. Alla
CLIENT	Carpenter Technology Corporation	FIELD REP	J. Yonts
CONTRACTOR	None	DATE	9/19/17

Sampling Data:

Well ID:	<u>MW-9I</u>	Well Depth:	<u>54.5</u>	ft	Initial Depth To Water:	<u>5.48</u>	ft	Purging Device:	<u>Peristaltic</u>
Start time:	<u>828</u>	Depth To Top Of Screen:	<u>44.5</u>	ft	Depth Of Pump Intake:	<u></u>	ft	Tubing Present In Well:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Finish Time:	<u>915</u>	Depth To Bottom Of Screen:	<u>54.5</u>	ft	Measuring Point:	<u>TOC</u>		Tubing Type:	<u>LDPE</u>

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

LOW FLOW SAMPLING FORM

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

H&A FILE NO. 38111-012
PROJECT MGR. N. Alla
FIELD REP 9-19-17 S
DATE 5. Lewis

Sampling Data:

Well ID: MW-9D Well Depth: 201.5 ft Initial Depth To Water: 90.0 ft Purging Device: Gravitas
 Start time: 0827 Depth To Top Of Screen: 181.5 ft Depth Of Pump Intake: 190 ft Tubing Present In Well: Yes No
 Finish Time: 0925 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]	
0828	4.50	200	200	0	21.99	7.99	0.052	5.90	1.10	108	Sample for:
0833	5.81	200	200	1.0	21.81	7.61	0.052	3.22	0.91	65	VOCs* (Eurofins)
0838	6.85	200	200	2.0	21.07	7.73	0.052	2.81	4.60	37	-unable to control drawdown
0843	9.15	200	200	3.0	21.99	8.34	0.052	2.30	4.01	-9	because grout needs a
0848	10.14	200	200	4.0	21.89	8.65	0.052	2.00	20.1	-36	steady flow or the pump
0853	13.70	200	200	5.0	21.80	8.72	0.052	1.80	20.1	-45	heats up until keep it at
0858	15.09	200	200	6.0	21.83	8.74	0.052	1.78	20.79	-49	200 mL/min
0903	17.01	200	200	7.0	21.82	8.75	0.052	1.76	6.87	-50	- clear water
0908	18.87	200	200	8.0	21.96	8.75	0.052	1.72	0.95	-54	
Start Sample											*Site Specific VOCs:
											1,1-Dichloroethane
											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

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

H&A FILE NO. 38111-012
PROJECT MGR. N. Alla
FIELD REP. S. Lewis
DATE 9-7-16

Sampling Data:

Well ID: MW-11S Well Depth: 14.5 ft Initial Depth To Water: 8.79 ft Purging Device: Rec
 Start time: 0926 Depth To Top Of Screen: 4.5 ft Depth Of Pump Intake: 1.5 ft Tubing Present In Well: Yes No
 Finish Time: 1025 Depth To Bottom Of Screen: 14.5 ft Measuring Point: TOC Tubing Type: LOPE

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
				--	N/A	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
0929	8.86	150	150	0	16.90	5.84	0.062	2.02	41.1	67	Sample for:
0934	8.88	150	150	0.75	17.28	4.95	0.034	1.49	16.8	128	VOCs* (Eurofins)
0939	8.88	150	150	1.50	17.42	4.60	0.024	1.55	10.2	159	
0943	8.89	150	150	2.25	17.56	4.44	0.020	1.60	9.23	178	
0949	8.89	150	150	3.0	17.72	4.39	0.019	1.51	7.40	196	
0954	8.89	150	150	3.75	17.88	4.37	0.019	1.38	5.36	197	
0959	8.89	150	150	4.50	17.96	4.37	0.018	1.30	4.42	199	
1004	8.89	150	150	5.25	18.05	4.39	0.018	1.19	4.11	197	
1009	8.89	150	150	6.0	18.15	4.39	0.018	1.12	3.26	196	
1014	8.89	150	150	6.75	18.22	4.39	0.018	1.07	3.02	193	
1019	8.89	150	150	7.50	18.27	4.32	0.018	1.04	3.00	192	*Site Specific VOCs:
<i>Start Sample</i>											
											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, 1 L = 0.264 gal, 0.5L/min = 0.132 gal/min

LOW FLOW SAMPLING FORM

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

H&A FILE NO. 38111-012
PROJECT MGR. N. Alla
FIELD REP. S. Lewis
DATE 9/7/17

Sampling Data:

Well ID: MW-111 Well Depth: 32 ft Initial Depth To Water: 8.68 ft Purgging Device: Per
 Start time: 0813 Depth To Top Of Screen: 22 ft Depth Of Pump Intake: 27 ft Tubing Present In Well: Yes No
 Finish Time: 0920 Depth To Bottom Of Screen: 32 ft Measuring Point: TBC 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
				--	N/A	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10]		
0816	8.72	150	150	0	17.32	6.14	0.042	8.12	4.04	185	Sample for:
0821	8.74	150	150	0.75	17.37	5.74	0.039	4.19	0.0	195	VOCs* (Eurofins)
0826	8.75	150	150	1.50	17.40	5.58	0.036	3.03	0.0	205	0848 battery died, moving atw to charge pump
0831	8.75	150	150	2.25	17.36	5.56	0.036	2.82	0.0	206	
0836	8.75	150	150	3.0	17.28	5.59	0.036	2.77	0.0	205	
0841	8.75	150	150	3.95	17.13	5.52	0.035	2.83	0.0	210	
0846	8.75	150	150	4.80	17.03	5.59	0.035	2.38	0.0	206	
0851	-	-	-	-	-	-	-	-	-	-	
0856	8.76	150	5.25	17.09	5.45	0.035	2.32	0.0	216		
0901	8.75	150	6.0	17.18	5.47	0.035	2.13	0.0	214		
0906	8.75	150	6.75	17.17	5.45	0.035	2.08	0.0	216	*Site Specific VOCs:	
0911	8.75	150	7.50	17.18	5.45	0.035	2.02	0.0	217	1,1-Dichloroethene	
0916	8.75	150	8.25	17.18	5.45	0.035	1.99	0.0	218	cis-1,2-Dichloroethene	
Start Sample											
											Methylene Chloride
											1,1,2-Trichloroethane
											Trichloroethene
											Vinyl Chloride

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

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

H&A FILE NO. 38111-012
PROJECT MGR. N. Alla
FIELD REP S. Lewis
DATE 9-7-17

Sampling Data:

Well ID: MW-11D Well Depth: 289.6 ft Initial Depth To Water: 9.45 ft Purging Device: Grunfos
Start time: 0803 Depth To Top Of Screen: - ft Depth Of Pump Intake: 285 ft Tubing Present In Well: Yes No
Finish Time: 0910 Depth To Bottom Of Screen: 289.6 ft Measuring Point: TOC (inner) Tubing Type: LDPE

Elapsed Time (24 hour)	Depth To Water From Casing (ft)	Pump Setting	Purge Rate	Cumulative Purge Vol.	Temp-erature (°F) or (°C)	pH	Conduct-ivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mV)	Comments
	From Casing (inL/min) or (gal/min)	(inL/min) or (gal/min)	(liters) or (gal)	N/A	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10%]	[+/- 10%]	
Stabilized within →	[100 mL/min] to [500 mL/min]			--							
0803	9.67	200	200	15.72	15.72	7.80	0.362	12.60	1.52	-91	Sample for:
0810	9.55	200	200	16.00	15.75	8.23	0.471	10.52	0.0	-165	VOCs* (Eurofins)
0815	9.58	200	200	2.0	15.86	8.29	0.664	9.74	0.0	-209	- Rotten egg smell
0820	9.55	200	200	3.0	15.85	8.33	0.699	8.12	0.0	-235	- water appears to be carbonated
0825	9.55	200	200	4.0	15.85	8.37	0.746	7.76	0.0	-266	It begins to fizz when added to VOA
0830	9.55	200	200	5.0	15.86	8.40	0.756	7.37	0.0	-271	
0835	9.55	200	200	6.0	16.05	8.31	0.760	6.90	0.0	-271	
0840	9.55	200	200	7.0	15.87	8.25	0.777	6.48	0.0	-273	
0845	9.55	200	200	8.0	15.95	8.26	0.788	5.87	0.0	-279	
0850	9.55	200	200	9.0	16.15	8.22	0.789	5.26	0.0	-281	
0855	9.55	200	200	10.0	16.04	8.32	0.791	4.79	0.0	-290	*Site Specific VOCs:
0900	9.55	200	200	11.0	16.04	8.34	0.792	4.53	0.0	-292	1,1-Dichloroethane
0905	9.55	200	200	12.0	15.96	8.34	0.792	4.44	0.0	-296	cis-1,2-Dichloroethene
Start Sample											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

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

H&A FILE NO. 38111-011
PROJECT MGR. N. Alla
FIELD REP S. Leniz
DATE 9/7/17

Sampling Data:

Well ID: MW-16I Well Depth: 30.68 ft Initial Depth To Water: 19.63 ft Purging Device: Peristaltic
Start time: 11:39 Depth To Top Of Screen: 20.68 ft Depth Of Pump Intake: ft Tubing Present In Well: Yes No
Finish Time: 12:58 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	Purge Rate	Cumulative Purge Vol. (mL/min) or (gal/min)	Temp-erature (°F) or (°C)	pH	Conduct-ivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP/eH (mV)	Comments
		(mL/min) or (gal/min)	(mL/min) or (gal/min)	(liters) or (gal)	N/A	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
12:06	20.10	150	150	0	31.00	7.09	1.89	1.32	21.0	-87	Sample for:
12:18	20.31	150	150	0.75	20.88	7.03	1.89	1.22	21.3	-96	VOCs* (Eurofins)
12:16	20.43	150	150	1.50	20.85	7.04	1.77	1.18	19.8	-102	Sulfate (Eurofins)
12:21	20.55	150	150	2.25	20.83	7.05	1.66	1.14	20.4	-107	Iron, Ferrous (Eurofins)
12:26	20.65	150	150	3.0	20.80	7.06	1.55	1.12	19.0	-110	Iron, Total (Eurofins)
12:31	20.72	150	150	3.75	20.80	7.09	1.29	1.07	16.7	-115	Total Organic Carbon (TOC) (Eurofins)
12:36	20.77	150	150	4.50	20.78	7.12	1.29	1.04	16.1	-118	Volatile Fatty Acids (VFA) (Pace Analytical)
12:41	20.80	150	150	5.25	20.77	7.13	1.29	1.03	16.0	-121	- coffee eggs smell
J-Tech	Sample										- blue streak on water
											- slight grey color
											*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

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

H&A FILE NO. 38445014
PROJECT MGR. N. Alla
FIELD REP S. Lewis
DATE 7-7-17

Sampling Data:

Well ID:	MW-16D	Well Depth:	56.48	ft	Initial Depth To Water:	17.70	ft	Purging Device:	Peristaltic
Start time:	1133	Depth To Top Of Screen:	46.48	ft	Depth Of Pump Intake:		ft	Tubing Present In Well:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Finish Time:	1238	Depth To Bottom Of Screen:	56.48	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	Dissolved Oxygen (mS/cm) (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%]		
1337	17.82	150	150	6	20.77	3.26	0.030	3.32	3.71	159	Sample for:
1342	19.85	150	150	0.75	21.74	5.42	0.032	2.44	3.44	159	VOCs* (Eurofins)
1347	19.85	150	150	1.50	21.45	5.51	0.034	1.96	0.6	161	Sulfate (Eurofins)
1352	19.95	150	150	2.25	21.76	5.39	0.035	2.08	0.0	173	Iron, Ferrous (Eurofins)
1357	20.00	150	150	3.0	21.62	5.49	0.036	1.81	0.0	174	Iron, Total (Eurofins)
—	Pump dead, replacing it										Total Organic Carbon (TOC) (Eurofins)
1207	19.75	150	150	3.50	21.74	5.30	0.037	1.73	0.0	188	
1212	20.02	150	150	4.25	21.88	5.38	0.037	1.61	0.0	189	
1217	20.09	150	150	5.00	21.75	5.36	0.037	1.56	0.0	192	
1222	20.11	150	150	5.75	21.83	5.40	0.037	1.51	0.0	193	
Start sample											*Site Specific VOCs:
											1,1-Dichloroethane
											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

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

H&A FILE NO. 38111-011
PROJECT MGR. N. Alla
FIELD REP S. Lewis
DATE 9/17/17

Sampling Data:

Well ID:	MP-3	Well Depth:	-30.0	ft	Initial Depth To Water:	16.18	ft	Purging Device:	Peristaltic
Start time:	13:55	Depth To Top Of Screen:	-20.0	ft	Depth Of Pump Intake:	25.0	ft	Tubing Present In Well:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Finish Time:		Depth To Bottom Of Screen:	-30.0	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-	Dissolved	Turbidity (NTU)	ORP/eH (mV)	Comments
							ivity (mS/cm)	Oxygen (mg/L)			
Stabilized within →	[100 mL/min] to [500 mL/min]			-	N/A	[+/- 0.1]	[+/- 3%]	[+/- 10%]	[+/- 10%]	[+/- 10]	
1400	19.45	300	300	0	21.39	7.71	3.86	2.13	906	-159	Sample for:
1405	18.70	150	150	1.6	21.31	7.98	3.81	2.15	717	-170	VOCs* (Eurofins)
1410	18.20	150	150	1.15	21.16	7.93	3.84	1.73	542	-162	Sulfate (Eurofins)
1415	18.22	150	150	3.0	21.13	8.05	3.82	1.55	461	-165	Iron, Ferrous (Eurofins)
1420	18.92	150	150	3.75	21.14	8.04	3.81	1.46	428	-167	Iron, Total (Eurofins)
1425	18.90	150	150	4.25	20.88	8.02	3.81	1.30	385	-173	Total Organic Carbon (TOC) (Eurofins)
1430	18.45	150	150	5.0	20.95	8.02	3.86	1.28	314	-168	Volatile Fatty Acids (VFA) (Pace Analytical)
1430	19.30	150	150	5.5	20.74	8.14	3.82	1.22	278	-175	- pump keeps stalling
1435	19.20	150	150	6.0	20.74	8.06	3.85	1.16	270	-174	- slight gray color
1440	19.17	150	150	6.75	20.75	8.18	3.83	1.16	259	-182	- rotten egg odor
1445	19.05	150	150	7.50	20.76	8.08	3.83	1.10	256	-182	*Site Specific VOCs: pump is having difficulty with
1450	19.10	150	150	8.25	20.77	8.18	3.82	1.08	251	-181	1,1-Dichloroethene
<i>5xnt Sample</i>											
											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

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

H&A FILE NO. 38111-011
PROJECT MGR. N. Alla
FIELD REP. S. Len'z
DATE 9/7/17

Sampling Data:

Well ID:	MP-7	Well Depth:	~30.0 ft	Initial Depth To Water:	16.58 ft	Purging Device:	Peristaltic
Start time:	1407	Depth To Top Of Screen:	~20.0 ft	Depth Of Pump Intake:	TOC ft	Tubing Present In Well:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Finish Time:		Depth To Bottom Of Screen:	~30.0 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. (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%]						
1407	18.85	150	150	0	22.78	6.84	0.268	4.07	1000	-39	Sample for:
1412	17.90	150	150	6.75	22.19	6.99	0.247	2.77	1000	-75	VOCs* (Eurofins)
1427	17.85	150	150	1.58	21.87	6.95	0.239	2.10	633	-84	Sulfate (Eurofins)
1432	17.03	150	150	2.25	21.74	6.91	0.234	1.85	436	-82	Iron, Ferrous (Eurofins)
1437	18.04	150	150	3.0	21.74	6.83	0.231	1.55	131	-78	Iron, Total (Eurofins)
1442	18.03	100	150	3.75	21.65	6.76	0.227	1.46	110	-74	Total Organic Carbon (TOC) (Eurofins)
1447	18.04	150	4.50	21.67	6.71	0.223	1.43	100	-71	Volatile Fatty Acids (VFA) (Pace Analytical)	
1451	18.05	150	5.25	21.69	6.72	0.222	1.42	108	-70	- slight gray color	
Start Sample											- rotten egg smell
											*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

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

H&A FILE NO. 38411-011
PROJECT MGR. N. Alla
FIELD REP S. Lewis
DATE 9-8-17

Sampling Data:

Well ID: MP-8 Well Depth: ~30.0 ft Initial Depth To Water: 16.16 ft Purging Device: Peristaltic
Start time: 0756 Depth To Top Of Screen: ~20.0 ft Depth Of Pump Intake: 25.0 ft Tubing Present In Well: Yes No
Finish Time: 0905 Depth To Bottom Of Screen: ~30.0 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%]	
0800	17.14	280	250	0	21.22	6.36	0.276	13.42	1000	-44	Sample for:
0805	16.92	180	150	1.0	20.91	6.37	0.287	5.73	1000	-45	VOCs* (Eurofins)
0810	16.95	150	150	1.75	20.73	6.40	0.292	4.10	938	-57	Sulfate (Eurofins)
0815	17.06	150	150	2.56	20.71	6.97	0.303	3.09	55.4	-43	Iron, Ferrous (Eurofins)
0820	17.24	180	150	3.25	20.48	6.45	0.306	2.35	48.4	-51	Iron, Total (Eurofins)
0825	17.40	150	150	4.0	20.32	6.43	0.310	2.14	42.3	-56	Total Organic Carbon (TOC) (Eurofins)
0830	17.35	150	150	4.75	20.22	6.41	0.312	1.95	40.4	-58	Volatile Fatty Acids (VFA) (Pace Analytical)
0835	17.42	150	150	5.50	20.16	6.42	0.326	1.81	40.2	-63	-initial water is black
0840	17.42	150	150	6.25	20.12	6.43	0.327	1.68	36.8	-65	-cleared flow through at 0810
0845	17.42	150	150	7.0	20.11	6.42	0.327	1.70	35.7	-65	
<i>Stirred Sample</i>											*Site Specific VOCs:
											1,1-Dichloroethane
											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

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PROJECT	Former General Tire Facility	H&A FILE NO.	38111-012
LOCATION	Athens, Georgia	PROJECT MGR.	N. Alla
CLIENT	Carpenter Technology Corporation	FIELD REP	S. Lewis
CONTRACTOR	None	DATE	9-8-17

Sampling Data:

Well ID:	RW-3	Well Depth:	89.6	ft	Initial Depth To Water:	14.70	ft	Purging Device:	Bronfur
Start time:	0919	Depth To Top Of Screen:	59.6	ft	Depth Of Pump Intake:	75.0	ft	Tubing Present In Well:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Finish Time:	1020	Depth To Bottom Of Screen:	89.6	ft	Measuring Point:	TBC		Tubing Type:	L0PE

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. (mL) 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]	
0922	14.75	200	200	0	20.80	8.18	0.226	5.40	1.84	114	Sample for:
0927	15.05	200	200	1.0	20.54	6.62	0.210	4.54	84.5	178	VOCs* (Eurofins)
0932	15.46	200	200	2.0	20.52	6.07	0.203	3.84	74.1	173	
0937	15.63	200	200	3.0	20.52	5.92	0.195	3.41	52.6	173	
0942	15.78	200	200	4.0	20.54	5.86	0.192	3.07	38.7	174	
0947	15.93	200	200	5.0	20.54	5.82	0.190	2.94	30.4	175	
0952	16.05	200	200	6.0	20.55	5.81	0.187	2.86	31.9	176	
0957	16.15	200	200	7.0	20.54	5.85	0.186	2.44	27.2	174	
1002	16.25	200	200	8.0	20.56	5.86	0.185	2.22	28.3	169	
1007	16.30	200	200	9.0	20.56	5.87	0.185	2.21	28.5	170	
1012	16.36	200	200	10.0	20.57	5.87	0.185	2.19	28.7	169	*Site Specific VOCs:
Start Sample											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

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

H&A FILE NO. 38NL-012
PROJECT MGR. N. Alla
FIELD REP S. Lewis
DATE 9-8-17

Sampling Data:

Well ID: RW-4 Well Depth: 89.61 ft Initial Depth To Water: 12.99 ft Purging Device: Gravitas
 Start time: 1100 Depth To Top Of Screen: 59.61 ft Depth Of Pump Intake: 75.0 ft Tubing Present In Well: Yes No
 Finish Time: 1145 Depth To Bottom Of Screen: 89.61 ft Measuring Point: TOC Tubing Type: LOPE

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%]	
1102	13.61	200	200	0	19.86	7.50	0.164	4.88	16.8	111	Sample for:
1107	13.85	200	200	1.0	19.93	7.35	0.103	4.52	5.41	129	VOCs* (Eurofins)
1112	14.05	200	200	2.0	20.08	7.27	0.101	4.81	3.88	141	
1117	14.14	200	200	2.0	20.04	7.15	0.097	4.30	2.14	152	
1122	14.65	200	200	4.0	19.99	7.05	0.095	4.38	3.85	142	
1127	14.85	200	200	8.0	20.07	7.04	0.095	3.99	3.44	145	
1132	14.75	200	200	6.0	20.08	7.04	0.095	3.95	3.56	145	
1137	14.86	200	200	7.0	20.04	7.04	0.095	3.90	3.47	145	
Start	Sample										
											*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

HALEY
ALDRICH

SURFACE WATER SAMPLE LOG

Page 1 of 2

PROJECT	Former General Tire Facility	H&A FILE NO.	128752-003
LOCATION	Athens, Georgia	PROJECT MGR.	N. Alla
CLIENT	Carpenter Technology Corporation	FIELD REP	S. Lewis
SUBCONTRACTOR	None	DATE	9-7-17

Sample ID SW-1
 Date 9-7-17
 Time 10:50
 Weather Sunny 60°

DESCRIPTION OF SAMPLE LOCATION:

Name of Water Body North Oconee River
 Depth of Water _____ Velocity _____
 Other Comments Sample taken approximately 50 ft downstream of small creek
 Substrate Description sand and gravel
 Location near MW-11 cluster
 Description of Nearby Vegetation trees and shrubs

FIELD PARAMETERS:

Sample Method Grab with poly cup
 Sample Description _____
 Temperature (°C/F) 18.65 pH 8.66
 Dissolved Oxygen (mg/L) 8.99 Conductivity (mS/cm) 0.699
 Turbidity (NTU) 17.5 ORP (mV) -129

CONTAINER DESCRIPTION:

Laboratory Eurofins

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

Notes:

*Site specific COC

SURFACE WATER SAMPLE LOG

Page 2 of 2

PROJECT	Former General Tire Facility	H&A FILE NO.	128752-003
LOCATION	Athens, Georgia	PROJECT MGR.	N. Alla
CLIENT	Carpenter Technology Corporation	FIELD REP	J. Yonk
SUBCONTRACTOR	None	DATE	9/19/17

Sample ID SW-2
 Date 9/19/17
 Time 14:50
 Weather Sunny, 80°F

DESCRIPTION OF SAMPLE LOCATION:

Name of Water Body North Oconee River
 Depth of Water _____ Velocity _____
 Other Comments _____
 Substrate Description Sand and gravel
 Location Bridge
 Description of Nearby Vegetation Trees and shrubs

FIELD PARAMETERS:

Sample Method Grab with bailer
 Sample Description _____
 Temperature (°C/F) 27.05 pH 6.72
 Dissolved Oxygen (mg/L) 7.00 Conductivity (mS/cm) 0.105
 Turbidity (NTU) 26.2 ORP (mV) 160

CONTAINER DESCRIPTION:

Laboratory Eurofins

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

Notes:

*Site specific COC

APPENDIX C

Historical Summary of VOC Concentrations

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

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

Location Name	Sample Date	MW-2D									MW-2I											
		6/29/2010	9/30/2010	11/18/2010	8/3/2011	12/22/2011	2/21/2012	9/17/2015	9/8/2016	Mar-00	Dec-07	Mar-07	5/27/2009	8/19/2009	11/9/2009	3/23/2010	6/28/2010	9/30/2010	11/18/2010	12/21/2011	2/20/2012	2/23/2015
Field Parameters																						
Conductivity, Field (mS/cm)	-	-	-	0.181	0.225	-	0.205	0.167	-	0.229	-	-	0.078	-	0.064	0.068	-	-	0.064	0.064	0.068	-
Dissolved Oxygen, Field (mg/L)	-	-	-	1.09	0.55	-	1.08	1.1	-	0.56	-	-	2.28	-	2.32	3.23	-	-	2.32	2.54	1.5	-
ORP, Field (mV)	-	-	-	77.4	-206.3	-	-30.1	3.8	-	-53	-	-	31.1	-	173.7	-147.9	-	-	173.7	151.9	61.4	-
pH, Field (NTU)	-	-	-	8.43	9.89	-	7.89	8.6	-	9.85	-	-	5.91	-	6.04	5.82	-	-	6.04	5.89	5.87	-
Temperature, Field (Deg C)	-	-	-	17.64	23.9	-	18.8	13.6	-	21.6	-	-	21.44	-	19.09	17.79	-	-	19.09	18.9	17	-
Turbidity, Field (NTU)	-	-	-	2.43	4.1	-	3.4	2.4	-	7.91	-	-	-	-	2.6	28.2	-	-	2.6	5.1	3	-
General Chemistry (mg/L)																						
Alkalinity, Total (as CaCO ₃)	60	74	80	-	75.6	77.7	78.4	-	-	-	28.2	26.1	30.5	31	23	29.1	29.4	29.2	28.6	-	-	-
Carbon Dioxide	55	66.5	71.7	-	-	-	-	-	-	-	127	157	105	119	87	67.8	84.7	-	-	-	-	-
Chloride	3.1	-	-	-	-	-	-	-	-	-	3.8	4.4	3.8	4.2	3.6	-	-	-	-	-	-	-
Nitrate	< 0.1	< 0.1	0.11	< 0.1	< 0.2	< 0.2	< 0.2	< 0.2	-	-	1.5	1.6	1.4	1.4	1.4	1.4	1.4	1.4	1.5	0.44	1.5	-
Nitrite (as N)	< 0.1	< 0.1	< 0.10	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	-	-	< 0.10	< 0.10	< 0.10	0.14	< 0.10	< 0.10	< 0.20	< 0.1	< 0.1	< 0.050	-	-
Nitrite/Nitrate Nitrogen	< 0.2	< 0.2	< 0.20	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	-	-	1.5	1.6	1.4	1.5	1.4	1.4	1.4	1.4	1.5	0.44	-	-
Sulfate	17.6	13.8	22.3	21.9	23.8	24.9	22.1	-	-	-	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 2	< 5	< 5	< 5.0	-
Sulfide	< 1	< 1	< 1	-	< 0.1	< 0.1	< 0.1	< 0.1	-	-	< 1	< 1	1	< 1	< 1	< 1	< 1	< 1	< 1	< 0.1	< 0.1	-
Total Organic Carbon (TOC)	< 1	< 1	< 1	11.9	1.6	1.7	1.4	-	-	-	-	-	-	-	-	< 1	2.1	< 1	1.8	2.2	< 1.0	-
Dissolved Gases(ug/L)																						
Ethane	< 1	< 1	< 1	< 10	< 10	< 10	< 12.4	-	-	-	< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 10	< 12.4	-	-
Ethene	0.53 J	< 0.50	< 1	< 10	< 10	< 10	< 12.4	-	-	-	< 10	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 10	< 12.4	-	-
Methane	1.66	0.18 J	0.60 J	< 10	< 10	< 10	< 6.6	-	-	-	0.58	1.95	0.55	1.75	0.57	1	0.57	< 10	< 6.6	-	-	-
Volatile Fatty Acids(mg/L)																						
Acetic Acid	-	-	-	-	< 0.070	< 0.070	0.021 J	-	-	-	-	-	-	-	-	-	-	-	0.36	0.0096 J	-	
Butyric Acid	-	-	-	-	< 0.050	< 0.050	< 0.050	-	-	-	-	-	-	-	-	-	-	-	0.12	< 0.050	-	
Lactic Acid	-	-	-	-	0.22	0.16	0.090 J	-	-	-	-	-	-	-	-	-	-	-	0.10	0.063 J	-	
Propionic Acid	-	-	-	-	< 0.050	< 0.050	< 0.050	-	-	-	-	-	-	-	-	-	-	-	0.092	< 0.050	-	
Pyruvic Acid	-	-	-	-	-	< 0.15	< 0.15	< 0.15	-	-	-	-	-	-	-	-	-	-	< 0.15	< 0.15	-	
Dissolved Hydrogen (nM)																						
Hydrogen	-	-	-	-	3.7	4.9	1.8	-	-	-	-	-	-	-	-	-	-	-	1.2	1.3	-	
Inorganic Compounds(ug/L)																						
Iron, Dissolved	-	-	-	-	< 50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Iron, Total	-	-	-	-	57.4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 200	
Iron, Ferrous	0.16	< 0.10	0.11	-	-	-	-	-	-	-	< 0.10	0.22	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	
Manganese, Dissolved	-	-	-	-	< 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Manganese, Total	-	-	-	-	5.3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Volatile Organic Compounds (ug/L)																						
Acetone	< 25	< 25	< 25	-	< 25	-	< 25	-	-	-	< 2500	-	< 2500	< 1300	< 2500	< 5000	< 2500	< 25	-	< 100	-	
Benzene	< 1	< 1	< 1	-	< 1	-</td																

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

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

Location Name Sample Date	Dec-07	MW-4I			MW-5I												MW-6I									
		11/12/2009	11/18/2010	12/22/2011	Mar-00	Aug-02	Dec-07	Mar-10	8/21/2009	3/24/2010	6/60/2010	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	8/21/2009				
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 CaCO ₃)	-	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	-	-	-	-	-	-	6	< 2	< 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	-	-	-																							

Location Name Sample Date	11/17/2010	12/19/2011	9/17/2015	9/9/2016	Mar-00	Aug-02	Dec-07	May-09	8/20/2009	MW-7I	3/24/2010	6/30/2010	9/30/2010	12/27/2011	2/21/2012	9/17/2015	9/12/2016	Mar-00	Aug-02	Dec-07	May-09	8/21/2009	MW-8I 11/12/2009
Field Parameters																							
Conductivity, Field (mS/cm)	0.007	0.74	0.082	0.094	-	-	-	-	-	0.135	-	-	0.122	0.124	0.126	0.118	-	-	-	-	-	-	0.336
Dissolved Oxygen, Field (mg/L)	8.64	1.33	3.85	0.76	-	-	-	-	-	0.35	-	-	0.35	0.12	0.58	0.57	-	-	-	-	-	-	9.29
ORP, Field (mV)	120.4	209.1	114	200	-	-	-	-	-	-150.6	-	-	45.9	21	129	67	-	-	-	-	-	-	153.1
pH, Field (NTU)	5.99	5.64	6.82	5.59	-	-	-	-	-	5.8	-	-	6.2	6.19	6.46	6.15	-	-	-	-	-	-	5.4
Temperature, Field (Deg C)	20.83	19.3	23.84	24.21	-	-	-	-	-	20.66	-	-	18.8	19.3	23.43	26.54	-	-	-	-	-	-	21.59
Turbidity, Field (NTU)	4.2	7.9	0.0	9.8	-	-	-	-	-	122.0	-	-	5	0.9	0.0	0.0	-	-	-	-	-	-	3.7
General Chemistry (mg/L)																							
Alkalinity, Total (as CaCO ₃)	-	-	-	-	-	-	-	-	-	71.4	74	54	51.7	57.8	46.4	-	-	-	-	-	-	17.2	-
Carbon Dioxide	-	-	-	-	-	-	-	-	-	64.1	154	125	77.4	-	-	-	-	-	-	-	-	200	-
Chloride	-	-	-	-	-	-	-	-	-	6	5.7	5.2	-	-	-	-	-	-	-	-	-	5.4	-
Nitrate	-	-	-	-	-	-	-	-	-	< 0.10	< 0.10	0.13	< 0.10	< 0.2	< 0.2	-	-	-	-	-	-	1.1	-
Nitrite (as N)	-	-	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	-	-	-	-	-	-	< 0.10	-
Nitrite/Nitrate Nitrogen	-	-	-	-	-	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.2	< 0.2	-	-	-	-	-	-	1.1	-
Sulfate	-	-	-	-	-	-	-	-	-	< 2	< 2	< 2	< 2	< 5	< 5	-	-	-	-	-	-	79.2	-
Sulfide	-	-	-	-	-	-	-	-	-	< 1	< 1	1.3	< 1	< 0.1	< 0.1	-	-	-	-	-	-	< 1	-
Total Organic Carbon (TOC)	-	-	-	-	-	-	-	-	-	1	< 1	< 1	< 1	2.4	18.8	-	-	-	-	-	-	-	-
Dissolved Gases(ug/L)																							
Ethane	-	-	-	-	-	-	-	-	-	< 1	< 1	< 1	< 1	< 10	< 12.4	-	-	-	-	-	-	< 1	-
Ethene	-	-	-	-	-	-	-	-	-	< 1	< 1	< 1	< 1	< 10	< 12.4	-	-	-	-	-	-	< 1	-
Methane	-	-	-	-	-	-	-	-	-	83.3	65.3	69.4	63.9	206	135	-	-	-	-	-	-	< 0.5	-
Volatile Fatty Acids(mg/L)																							
Acetic Acid	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.070	0.013 J	-	-	-	-	-	-	-	-
Butyric Acid	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	-	-	-	-	-	-	-	-
Lactic Acid	-	-	-	-	-	-	-	-	-	-	-	-	-	0.19	0.5	-	-	-	-	-	-	-	-
Propionic Acid	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	-	-	-	-	-	-	-	-
Pyruvic Acid	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.15	< 0.15	-	-	-	-	-	-	-	-
Dissolved Hydrogen (nM)																							
Hydrogen	-	-	-	-	-	-	-	-	-	-	-	-	-	1.3	1.4	-	-	-	-	-	-	-	-
Inorganic Compounds(ug/L)																							
Iron, Dissolved	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron, Total	-	-	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-	-	-	-	-	-	-
Iron, Ferrous	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.10
Manganese, Dissolved	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese, Total	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds (ug/L)																							
Acetone	< 130	< 25	-	-	-	-	-	-	-	-	-	-	-	< 25	< 25	< 25	< 25	-	-	-	-	-	< 25
Benzene	< 5	< 1	-	-	-	-	-	-	-	-	-	-	-	< 1	< 1	< 1	< 1	-</					

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

Location Name	Sample Date	11/17/2010	12/27/2011	10/13/2014	9/17/2015	9/12/2016	Mar-00	Dec-07	May-09	8/20/2009	3/24/2010	MW-9D 6/30/2010	9/30/2010	12/21/2011	2/21/2012	9/17/2015	9/9/2016	Mar-00	Aug-02	Dec-07	May-09	8/20/2009		
Field Parameters																								
Conductivity, Field (mS/cm)		0.336	0.312	-	0.32	0.246	-	-	-	-	0.156	-	-	0.166	0.167	0.203	0.184	-	-	-	-	-	-	
Dissolved Oxygen, Field (mg/L)		9.29	7.85	-	2.1	1.32	-	-	-	-	0.62	-	-	0.51	0.27	1.72	0.57	-	-	-	-	-	-	
ORP, Field (mV)		153.1	149	-	193	155	-	-	-	-	-187.1	-	-	-171	-115	51	-151	-	-	-	-	-	-	
pH, Field (NTU)		5.4	5.46	-	5.85	5.47	-	-	-	-	8.76	-	-	8.62	8.8	7.85	8.19	-	-	-	-	-	-	
Temperature, Field (Deg C)		21.59	16.2	-	25.8	28.83	-	-	-	-	17.04	-	-	19.9	18.4	27.4	24.49	-	-	-	-	-	-	
Turbidity, Field (NTU)		3.7	4.2	-	2.5	0	-	-	-	-	23.3	-	-	1.5	4	0.5	0	-	-	-	-	-	-	
General Chemistry (mg/L)																								
Alkalinity, Total (as CaCO ₃)		-	-	-	-	-	-	-	-	-	69.6	90.1	71	85.1	84.4	84.8	-	-	-	-	-	-	-	50
Carbon Dioxide		-	-	-	-	-	-	-	-	-	72.3	78.9	62	74.8	-	-	-	-	-	-	-	-	-	146
Chloride		-	-	-	-	-	-	-	-	-	4	3.5	3.2	-	-	-	-	-	-	-	-	-	-	6.1
Nitrate		-	-	-	-	-	-	-	-	-	< 0.10	0.12	< 0.10	< 0.10	< 0.2	< 0.2	-	-	-	-	-	-	-	0.58
Nitrite (as N)		-	-	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.1	< 0.1	-	-	-	-	-	-	-	< 0.10
Nitrite/Nitrate Nitrogen		-	-	-	-	-	-	-	-	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.2	< 0.2	-	-	-	-	-	-	-	0.68
Sulfate		-	-	-	-	-	-	-	-	-	6.4	1.2	7.6	6.9	9.1	9.2	-	-	-	-	-	-	-	< 2
Sulfide		-	-	-	-	-	-	-	-	-	< 1	1.2	1.1	3.3	< 0.1	< 0.1	-	-	-	-	-	-	-	< 1
Total Organic Carbon (TOC)		-	-	-	-	-	-	-	-	-	-	1.2	< 1	1	2.2	2.7	-	-	-	-	-	-	-	-
Dissolved Gases(ug/L)																								
Ethane		-	-	-	-	-	-	-	-	-	< 1	< 1	< 1	< 1	< 10	< 12.4	-	-	-	-	-	-	-	< 1
Ethene		-	-	-	-	-	-	-	-	-	< 1	1.2	0.97	1.1	< 10	< 12.4	-	-	-	-	-	-	-	< 1
Methane		-	-	-	-	-	-	-	-	-	0.24	1.29	0.91	1.56	< 10	< 6.6	-	-	-	-	-	-	-	5.66
Volatile Fatty Acids(mg/L)																								
Acetic Acid		-	-	-	-	-	-	-	-	-	-	-	-	-	0.32	0.019 J	-	-	-	-	-	-	-	-
Butyric Acid		-	-	-	-	-	-	-	-	-	-	-	-	-	0.15	< 0.050	-	-	-	-	-	-	-	-
Lactic Acid		-	-	-	-	-	-	-	-	-	-	-	-	-	0.13	0.027	-	-	-	-	-	-	-	-
Propionic Acid		-	-	-	-	-	-	-	-	-	-	-	-	-	0.10	< 0.050	-	-	-	-	-	-	-	-
Pyruvic Acid		-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.15	< 0.15	-	-	-	-	-	-	-	-
Dissolved Hydrogen (nM)																								
Hydrogen		-	-	-	-	-	-	-	-	-	-	-	-	-	1.9	1.1	-	-	-	-	-	-	-	-
Inorganic Compounds(ug/L)																								
Iron, Dissolved		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron, Total		-	-	-	-	-	-	-	-	-	< 0.10	< 0.10	0.31	4	-	-	-	-	-	-	-	-	-	-
Iron, Ferrous		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.10
Manganese, Dissolved		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manganese, Total		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Volatile Organic Compounds (ug/L)																								
Acetone		< 25	< 25	-	-	-	-	-	-	-	< 25	< 25	< 25	< 25	-	-	-	-	-	-	-	-	-	-
Benzene		< 1	< 1	-	-	-	-	-	-	-	< 1	< 1	< 1	< 1	-	-	-	-	-	-	-	-	-	-
Bromobenzene		-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromochloromethane		-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane		-	< 1	-	-	-	-	-	-	-	< 1	< 1	< 1	< 1	-	-	-	-	-	-	-	-	-	-
Bromoform		-	< 1	-	-	-	-	-	-	-	< 1	< 1	< 1	< 1	-	-	-	-	-	-	-	-	-	-
Bromomethane		-	< 2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Butanone (MEK)		-	< 5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbon disulfide		< 2	-	-	-	-	-	-	-	-	< 2	< 2	< 2	< 2	-	-	-	-	-	-	-	-	-	-
Carbon tetrachloride		< 1	< 1	-	-	-	-	-	-	-	< 1	< 1	< 1	< 1	-	-	-	-	-	-	-	-	-	-
Chlorobenzene		< 1	< 1	-	-	-	-	-	-	-	< 1	< 1	< 1	< 1	-	-	-	-	-	-	-	-	-	-
Chloroethane		< 2	< 1	-	-	-	-	-	-	-	< 2	< 2	< 2	< 2	-	-	-	-	-	-	-	-	-	-
Chloroform		< 1	< 1	-	-	-	-	-	-	-	< 1	< 1	< 1	< 1	-	-	-	-	-	-	-	-	-	-
Chloromethane		-	< 1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorotoluene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorotoluene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromo-3-chloropropane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane		< 1	< 1	-	-	-	-	-	-	-	< 1	< 1	< 1	< 1	-	-	-	-	-	-	-	-	-	-
1,2-Dibromoethane (EDB)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane		< 1	< 1	-	< 5	< 1	< 1	< 5	< 1	< 1	< 5	< 5	< 5	< 5	< 1	< 1	< 1	< 1						

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

Location Name	MW-9I						MW-10IR						MW-10D						MW-11D								
Sample Date	3/24/2010	6/29/2010	9/30/2010	12/21/2011	2/21/2012	9/17/2015	9/9/2016		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				
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	19.12	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	< 0.20	< 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	< 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	42.6	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	< 25	-	-	-	-	-	-	-	-	-	-
Benzene	< 1	< 1	< 20	< 1	-	-	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
Bromobenzene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bromochloromethane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bromodichloromethane	< 1	< 1	< 20	< 1	-	-	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
Bromoform	< 1	< 1	< 20	< 1	-	-	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	
Bromomethane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
2-Butanone (MEK)	-	-	-	-	-	-	-	-	-	-	5.3	-	< 2	0.67 J	1.0 J	1.8 J	-	-									

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 D
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	2	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	-	-	-	-	-	-	-	-	< 0.070	0.012 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.070	0.025 J	
Butyric Acid	-	-	-	-	-	-	-	-	< 0.050	< 0.050	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	
Lactic Acid	-	-	-	-	-	-	-	-	< 0.10	0.061 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.10	0.039 J	
Propionic Acid	-	-	-	-	-	-	-	-	< 0.050	0.0089 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.050	< 0.050	
Pyruvic Acid	-	-	-	-	-	-	-	-	< 0.15	< 0.15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	< 0.15	< 0.15	
Dissolved Hydrogen (nM)																													
Hydrogen	-	-	-	-	-	-	-	-	0.84	1.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2.1	2.2
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	< 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	< 1	-	-	-	-	-	-	-	< 1	< 1	< 5	< 1	< 1	< 5	< 1	-	-	-	-	-	-	
Bromobenzene	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bromochloromethane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Bromodichloromethane	-	< 10	-	< 5	< 10	< 10	< 10	< 1	-	-	-	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 5	< 1	< 1	< 1	< 1	< 1	< 1		
Bromoform	-	< 10	-	< 5	< 10	< 10	< 10	< 1	-	-	-	-	-	-	-	< 1	< 1												

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

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

Location Name	Sample Date	RW-2										RW-3						RW-4						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	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	-	-	< 50	-	-	-	-	-	980	-	-	-	-	-	-	-	-	-	-	-	-	
Iron, Ferrous	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Manganese, Dissolved	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Manganese, Total	-	-	-	-	-	-	-	< 5	-	-	< 5	-	-	-	-	-	99.6	-	-	-	-	-	-	-	-	-	-	-	-	
Volatile Organic Compounds (ug/L)																														
Acetone	-	< 25	< 25	< 25	< 25	< 25	< 25	< 25	-	-	< 25	-	-	-	-	-	< 25	-	-	-	-	-	-	-	-	-	-	-	-	
Benzene	-	< 1	< 1</																											

Location Name	Sample Date	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	< 25	< 25	< 25
Benzene	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromobenzene	-	-	-	-	< 1	< 1	-	< 1	-	< 1
Bromochloromethane	-	-	-	-	< 1	< 1	-	< 1	-	< 1
Bromodichloromethane	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromoform	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Bromomethane	-	-	-	-	< 2	-	-	< 2	-	< 2
2-Butanone (MEK)	-	-	-	-	< 5	-	-	< 5	-	< 5
Carbon disulfide	-	-	-	< 2	-	< 2	-	-	-	-
Carbon tetrachloride	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chlorobenzene	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloroethane	-	-	-	< 2	< 1	< 2	< 1	< 1	< 1	< 1
Chloroform	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1
Chloromethane	-	-	-	-	< 1	-	-	< 1	-	< 1
2-Chlorotoluene	-	-	-	-	< 1	-	-	< 1	-	< 1
4-Chlorotoluene	-	-	-	-	< 1	-	-	< 1	-	< 1
1,2-Dibromo-3-chloropropane	-	-	-	-	< 5	-	-	< 5	-	< 5
Dibromochloromethane	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dibromoethane (EDB)	-	-	-	-	< 1	-	-	< 1	-	< 1
Dibromomethane	-	-	-	-	< 1	-	-	< 1	-	< 1
1,2-Dichlorobenzene	-	-	-	-	< 1	-	-	< 1	-	< 1
1,3-Dichlorobenzene	-	-	-	-	< 1	-	-	< 1	-	< 1
1,4-Dichlorobenzene	-	-	-	-	< 1	-	-	< 1	-	< 1
Dichlorodifluoromethane	-	-	-	-	< 1	-	-	< 1	-	< 1
1,1-Dichloroethane	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloroethane	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1
1,1-Dichloroethene	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,2-Dichloroethene	< 5	< 1	< 1	6.2	1.7	< 1	< 1	< 1	< 1	< 1
trans-1,2-Dichloroethene	< 5	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1
1,2-Dichloropropane	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1
1,3-Dichloropropane	-	-	-	-	< 1	-	-	< 1	-	< 1
2,2-Dichloropropane	-	-	-	-	< 1	-	-	< 1	-	< 1
1,1-Dichloropropene	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1
cis-1,3-Dichloropropene	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1
trans-1,3-Dichloropropene	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1
Diisopropyl ether	-	-	-	-	< 1	-	-	< 1	-	< 1
Ethylbenzene	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1
Hexachloro-1,3-butadiene	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1
2-Xanthon	-	-	-	-	< 10	< 5	< 10	< 5	< 5	< 5
p-Isopropyltoluene	-	-	-	-	< 1	< 1	< 2	< 1	< 1	< 1
Methyl bromide	-	-	-	-	< 2	-	< 2	-	-	-
Methyl chloride	-	-	-	-	< 2	-	< 2	-	-	-
Methylene Chloride	< 5	< 4	< 4	< 2	< 2	< 2	< 2	< 2	< 2	< 2
Methyl ethyl ketone	-	-	-	-	< 5	-	< 5	< 5	< 5	< 5
4-Methyl-2-pentanone (MIBK)	-	-	-	-	< 5	-	< 5	-	-	-
Methyl-tert-butyl ether	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1
Naphthalene	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1
Styrene	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2-Tetrachloroethane	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1
1,1,2,2-Tetrachloroethane	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1
Tetrachloroethene	-	-	-	-	< 1	< 1	< 1	< 1	< 1	< 1
Toluene	-	-	-	-	< 1	< 1	< 1	&		

APPENDIX D

Labor Summary

APPENDIX E**LABOR SUMMARY**

GENERAL TIME CORPORATION - ATHENS, GA

VOLUNTARY REMEDIATION PROGRAM (HIS# 10355)

Month-Year	Type Service	Hours	Description
April-17	PE/PM	5	Project Management
	Support	65.75	Report Preparation
	Senior Geologist	6.5	Project Coordination
May-17	PE/PM	2.5	Project Management
	Support	10	Technical
June-17	Support	22.5	Technical
	Senior Geologist	3	Project Coordination
July-17	PE/PM	4	Project Management
August-17	PE/PM	1	Project Management
	Support	1.5	Project Coordination
	Senior Geologist	2	Project Coordination
September-17	PE/PM	24.5	Project Management
	Senior Geologist	2	Project Coordination
	Support	82.25	Sample Collection/Report Preparation