May 22, 2017

Mr. David Brownlee Unit Coordinator Response and Remediation Program Georgia Department of Natural Resources 2 Martin Luther King Jr. Drive, SE, Suite 1462 East Atlanta, Georgia 30334

Subject: VRP 4th Semiannual Progress Report

**Atlanta Gas Light Company** 

Former Manufactured Gas Plant Site Macon, Georgia

HSI #10511

Dear Mr. Brownlee:

Attached please find one hard copy and two cd copies of the *VRP* 4<sup>th</sup> *Semiannual Progress Report* for the Atlanta Gas Light Company Former Manufactured Gas Plant Site located in Macon Georgia.

Should you have any questions, please do not hesitate to contact me.

Sincerely,

Adria Reimer, P.G. Project Manager

**Attachments** 

cc: Greg Corbett, AGL Resources

Lea Millet, Georgia Power

Carol Geiger, Kazmarek Mowrey Cloud Laseter LLP

Hollister Hill, Troutman Sanders

2 lein

Herbert Ernst, Environmental Cost Management

David Fortson, City of Macon

Alex Morrison, MUDA

Environmental Resources Management

Towers at Wildwood Plaza 3200 Windy Hill Road Suite 1500W Atlanta, GA 30339 (678) 486-2700





Name (printed): Adria Reimer

Organization: ERM

Date: 5/22/2017

Phone: 678-486-2700

Email: Adria.reimer@erm.com

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

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

# **Document Submittal Form**

Name of Desument: Ath Semiannual Progress Report

**Instructions:** This form should be completed and included with any document submitted to the Response and Remediation Program, Response Development Units 1-3, that is greater than 25 pages in length or that contains paper sizes larger than 11"x17". This includes Release Notifications and documents related to Hazardous Site Inventory and Voluntary Remediation Program sites. Contact Brownfield Unit staff for Brownfield submittal guidelines. Your cooperation helps to ensure that documents are filed correctly, completely, and efficiently.

INAI	ne c	of Document. 4 Schmannual Frogress Repor	L			
Da	ite c	of Document: May 22, 2017				
		Site Name: Former Manufactured Gas Plant Site, Macon,	GA			
	Site	te ID Number: HSI #10511				
che	Document Submittal Checklist. Please certify that the submittal includes the following by checking each box as appropriate. Items 1 – 3 should be checked / included / certified for each submittal:					
$\boxtimes$	1.	One paper copy of the document (double-sided is preferred)				
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$\boxtimes$	3.	The electronic copies are complete, virus free, and identical to the paper copy except as described in Item 4 below.				
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		☐ laboratory data sheets ☐ manifests				
I certify that the information I am submitting is, to the best of my knowledge and belief, true, accurate, and complete.  Receipt Date (for EPD use only)						
	Signature:					

Revised 7/22/16 Page 1 of 1

May 22, 2017

Mr. David Brownlee Unit Coordinator Response and Remediation Program Georgia Department of Natural Resources 2 Martin Luther King Jr. Drive, SE, Suite 1462 East Atlanta, Georgia 30334

**Subject:** 4<sup>th</sup> Semiannual Progress Report

**Atlanta Gas Light Company** 

**Former Manufactured Gas Plant Site** 

Macon, Georgia HSI #10511

Environmental Resources Management

The Towers at Wildwood 3200 Windy Hill Road SE, Suite 1500W Atlanta, Georgia 30339 Phone (678) 486-2700 Fax (678) 745-0103



I have enclosed 2 electronic versions of Transmittal of Electronic version 4<sup>th</sup> Semiannual Progress Report Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia HSI #10511pdf files on Compact Disc to accompany the hard copy report. This certification states that the electronic copy is complete, identical to the paper copy and virus free.

I, Holly H. McDonald, on May 22, 2017 made a complete electronic copy of the following document:

Transmittal of Electronic Version of the Submittal of the

4<sup>th</sup> Semiannual Progress Report Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia HSI #10511

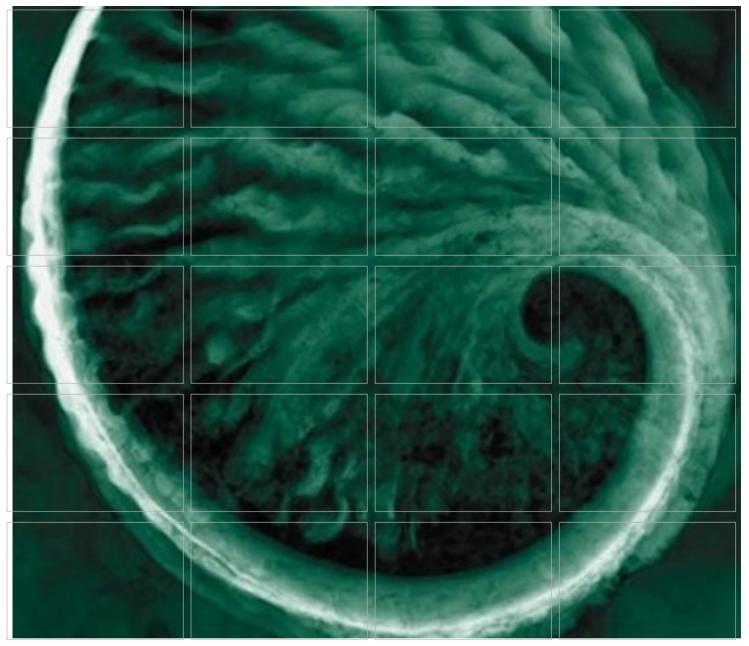
then confirmed that the electronic copies did not contain a virus utilizing Symantec antivirus software.

You can contact me at 678.486.2700 with any questions or comments.

Best regards,

Holly H. McDonald

Holy H. McDonald



# 4<sup>th</sup> Semiannual Progress Report

Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia HSI #10511

May 22, 2017

www.erm.com



# 4th Annual Progress Report

# Former Manufactured Gas Plant Site Macon, Georgia HSI #10511

May 22, 2017

ERM Project No. 0366660

Natuch

Jorge Salcedo, PG *Partner-In-Charge* 

Adria Reimer, PG Project Manager

**Environmental Resources Management** 

2 Leir

3200 Windy Hill Road, SE Suite 1500W Atlanta, Georgia 30339 (678) 486-2700 www.erm.com

#### PROFESSIONAL CERTIFICATION PAGE

# 4<sup>TH</sup> ANNUAL PROGRESS REPORT ATLANTA GAS LIGHT COMPANY FORMER MANUFACTURED GAS PLANT SITE MACON, GEORGIA HSI NO. 10511

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

Adria L. Reimer, P.G. #002004

May 22, 2017

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#### **ACRONYMS AND ABBREVIATIONS**

AGLC Atlanta Gas Light Company

AGMWP Alluvial Groundwater Monitoring Work Plan BGMP Bedrock Groundwater Monitoring Plan

BTEX Benzene, Toluene, Ethylbenzene and Xylenes

BPLM By-Product Like Material CAP Corrective Action Plan

CAP A Corrective Action Plan Addendum

COI Constituent of Interest
CSM Conceptual Site Model
CSR Compliance Status Report

DNAPL Dense Non-Aqueous Phase Liquid
EPD Environmental Protection Division
ERM Environmental Resources Management

ft Feet or Foot

ft/bgs Feet Below Ground Surface ft btoc Feet Below Top of Casing

ft/day Feet per Day

GMWP Groundwater Monitoring Work Plan

HSI Hazardous Site Inventory HSRA Hazardous Site Response Act ISCO In-situ Chemical Oxidation

ISS In-Situ Solidification
K Hydraulic Conductivity
MGP Manufactured Gas Plant

MUDA Macon Urban Development Authority

NAPL Non-Aqueous Phase Liquid NTU Nephelometric Turbidity Units

POD Point of Demonstration PWR Partially Weathered Rock RRS Risk Reduction Standards

ROW Right-of-Way

SVOCs Semivolatile Organic Compounds UEC Uniform Environmental Covenant

USEPA United States Environmental Protection Agency

VI Vapor Intrusion

VIRP Voluntary Investigation and Remediation Plan

VEFR Vacuum Enhanced Fluid Recovery
VOCs Volatile Organic Compounds
VRP Voluntary Remediation Program
VRPA Voluntary Remediation Program Act

ug/L Micrograms per Liter

#### 1.0 INTRODUCTION

This 4th Annual Progress Report is being submitted on behalf of Atlanta Gas Light Company (AGLC) for the Macon former Manufactured Gas Plant (MGP) site located in Macon, Bibb County, Georgia (Figure 1). Two MGP facilities formerly operated in the area of Mulberry Street and 6th Street in Macon. The former MGP located at 137 Mulberry Street (southeast of 6th Street) has been the subject of numerous investigation and corrective actions since the 1980s. This portion of the Macon MGP site is referred to as the Mulberry Street former MGP (also referred to as the Eastern Portion MGP in previous correspondence) and also includes those parcels affected by a release from the former operations. The property where the Mulberry Street former MGP facility operations were conducted is bounded by Walnut Street, 7th Street, Mulberry Street, and 6th Street, and is currently owned by Macon Urban Development Authority (MUDA). Investigation on this portion of the former MGP began in 1986 and soil remediation was completed in 2004.

The second MGP was located northwest of 6th Street and is bounded by Terminal Avenue on the north side. Investigation of this property began in 2005. Soil and groundwater impacts requiring additional investigation were identified during the installation of injection wells for the in-situ chemical oxidation (ISCO) remedy and demolition of structures on the property. The results of investigations and additional historical research established that this location was a separate former MGP site that used different MGP production processes than the Mulberry MGP. This former MGP is referred to as the Western Portion MGP (Figure 2).

AGLC and the Georgia Environmental Protection Division (EPD) entered into Consent Order EPD-HSR-227 on July 11, 2000. The Consent Order was administered under the Hazardous Site Response Act (HSRA) and the Site was listed on the EPD Hazardous Site Inventory (HSI) as number 10511. AGLC completed a series of investigations and implemented numerous EPD-approved corrective actions while under the HSRA program to address residual MGP impacts in the unsaturated and saturated materials at the Site and on neighboring parcels.

AGLC submitted an application to enter the Georgia Voluntary Remediation Program (VRP) and a *Voluntary Investigation and Remediation Plan* (VIRP) to EPD in October 2014. On January 14, 2015, AGLC and EPD signed and executed Consent Order EPD-VRP-12, providing for transition of the Site from regulation under HSRA to the VRP. EPD acknowledged acceptance to the VRP in correspondence dated May 21, 2015 and provided comments on the VIRP in correspondence dated May 26, 2015. For the purposes of this document, the term "Site" is defined as the portion of AGLC's contiguous property and any other owner's property potentially impacted by the former MGP operations. The Site, additional VRP-qualifying properties, and adjoining properties are shown on Figure 3.

Under the VRP, the schedule for submittal of progress reports is May 21<sup>st</sup> and November 21<sup>st</sup> annually. The purpose of this report is to provide EPD with an update of activities completed since submittal of the 3<sup>rd</sup> *Semiannual Progress Report* on November 21, 2016. In addition, the progress report describes upcoming planned activities. In correspondence dated May 26, 2015, EPD provided comments to the October 2014 VIRP; the comments were addressed in the 1<sup>st</sup> *Semiannual Progress Report* (ERM, 2015).

In correspondence dated February 21, 2017, EPD provided comments to the 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> Semiannual Progress Reports and the 2016 Corrective Action Completion Report. The comments were addressed in correspondence dated March 22, 2017. Details of the correspondence are provided in Section 2.1.

# 2.0 ACTIVITIES COMPLETED SINCE 3<sup>RD</sup> SEMIANNUAL PROGRESS REPORT SUBMITTAL

This section describes activities that have been completed since the 3<sup>rd</sup> Semiannual Progress Report (ERM, 2016) was submitted in November 2016. These activities include:

- Review and provide responses to EPD comments received on February 21, 2017, regarding the following submittals:
  - o 1<sup>st</sup> Semiannual Progress Report (November 2015);
  - o 2nd Semiannual Progress Report (May 2016); and
  - o *3<sup>rd</sup> Semiannual Progress Report* (November 2016), which included the *Corrective Action Completion Report for Remediation of the Former Manufactured Gas Plan Site Western Parcel* (CACR).
- Completion of the February 2017 semiannual groundwater monitoring event.

## 2.1 REGULATORY CORRESPONDENCE

In correspondence dated February 21, 2017, EPD provided comments to the above referenced reports. EPD comments #1 and #2 required a response, while comments #3 through #6 indicated EPD's approval of recommendations included in the previously submitted progress reports. The EPD comment letter and AGLC response letter are provided in Appendix A.

#### 2.2 SEMIANNUAL GROUNDWATER MONITORING

Groundwater sampling at the Site is typically conducted in February (annual event) and August (semiannual event). As discussed in the 3<sup>rd</sup> Semiannual Progress Report, in situ solidification (ISS) remediation of MGP-derived byproduct-like material (BPLM) and/or source materials below the groundwater table at the former Western Portion Macon MGP site was completed in late 2015, excavation of unsaturated soil to remove BPLM and/or source material was completed in mid-April 2016, and restoration activities were completed in late April 2016.

The February 2017 (annual) groundwater monitoring event represents the fourth monitoring event since ISS activities were completed, the third since excavation activities were completed, and the second since completion of Site restoration. Sections 3 and 4 of this report discuss the groundwater monitoring objectives and February 2017 results.

#### 2.3 REGISTERED PROFESSIONAL SUPPORTING DOCUMENTATION

To document the direct oversight of implementation of corrective action and long-term monitoring, a monthly summary of hours invoiced and description of

services provided by Adria Reimer, P.G. (Georgia No. 002004) to the VRP participant since the previous submittal to EPD is shown in the following table:  $\frac{1}{2}$ 

Adria Reimer, P.G. (Georgia No. 002004)				
Month	Hours Invoiced	Work Completed		
November 2016	17			
December 2016	3.5			
January 2017	11	Oversight of the work summarized		
February 2017	16	in this report		
March 2017	22			
April 2017	36.5			

#### 3.0 GROUNDWATER MONITORING METHODS

This section summarizes groundwater level measurement and groundwater sample collection methods utilized during the February 2017 annual groundwater monitoring event at the Site. Site features, property boundaries, the extent of ISS activities, and locations of groundwater monitoring wells are shown on Figure 2. Property ownership information is shown on Figure 3.

The volatile organic compounds (VOCs) and semivolatile organic compounds (SVOCs) on the COI list (Table 1) were updated based on correspondence received from the EPD dated January 17, 2012 to include constituents listed in Table 2-1 of the January 2004 Compliance Status Report (CSR). The January 17, 2012 correspondence also requested that the COI list remain in use until COI delineation to background and certification of the Western Portion to the applicable risk-reduction standard (RRS) is completed and documented by submittal of an updated CSR. Per comments #5 and #6 of the February 21, 2017 EPD comment letter, laboratory analysis of groundwater samples for inorganic constituents is no longer required at the Site.

The February 2017 annual monitoring event for alluvial groundwater represents the second Site-wide alluvial sampling event since the completion of Site remedial activities in April 2016. Sampling was conducted in accordance with *Alluvial Groundwater Monitoring Work Plan* (AGMWP) [Appendix H of the *Western Portion and MW-101 Area Groundwater Corrective Action Plan Addendum*] submitted to EPD on October 14, 2014 as Appendix C of the VIRP. The network of alluvial groundwater monitoring wells sampled in February 2017 is presented as Table 2, and is consistent with the list provided as Table B1-2 in the 3<sup>rd</sup> *Semiannual Progress Report*.

Groundwater samples collected from bedrock wells during the February 2017 monitoring event were obtained using methods described in the *Bedrock Groundwater Monitoring Plan* (BGMP) [Appendix I of the *Voluntary Investigation Remediation Plan* (VIRP)] submitted to the EPD on October 14, 2014. The bedrock groundwater monitoring schedule is presented in Table 3, and is consistent with the schedule proposed in Table B1-3 of the 3<sup>rd</sup> Semiannual Progress Report.

#### 3.1 SCOPE OF WORK

The February 2017 groundwater monitoring event, which represents the annual monitoring event, included the following tasks:

#### 3.1.1 Field Tasks

- Groundwater level gauging;
- Monitoring for the presence of dense non-aqueous phase liquid (DNAPL);
- Groundwater sampling; and

Waste management.

# 3.1.2 Reporting Tasks

- Tabulation of groundwater elevations;
- Tabulation of laboratory analytical results for COI;
- Preparation of alluvial groundwater elevation maps and bedrock groundwater flow potential maps;
- Evaluation of groundwater flow in the alluvial and bedrock aquifers;
- Evaluation of analytical results relative to Type 2 and Type 4 RRS;
   and
- Preparation of isoconcentration maps for benzene and naphthalene.

#### 3.2 GROUNDWATER MONITORING NETWORK

The network of monitoring wells was developed over a series of investigations to determine on-site and off-site groundwater impacts. The annual event (February) represents the event with the greater number of wells to be sampled and the semiannual event (August) includes a subset of these wells. The alluvium groundwater monitoring well network is included as Table 2, the bedrock groundwater-monitoring network is included as Table 3, and locations of existing monitoring wells are shown on Figure 2.

#### 3.3 GROUNDWATER LEVEL GAUGING AND WELL INSPECTION

During the initial groundwater gauging task the condition of each well was noted, including the concrete surface seal, outer casing, inner expandable well cap, and lock. Any well caps, manhole cover bolts, or locks that were damaged or missing were noted and replaced during this reporting period. Groundwater levels were measured from the pre-existing surveyed reference point on the top of casing of each well. All wells were gauged with an oil-water interface meter to obtain depth to water data and to assess whether DNAPL was present. The interface meter was decontaminated between wells by wiping the line with a cloth containing isopropanol followed by a cloth containing deionized water. The probe was decontaminated using a wash of deionized water and a phosphate-free detergent followed by a deionized water rinse.

# 3.4 WELL PURGING AND GROUNDWATER SAMPLE COLLECTION METHODS

Before collection of groundwater samples, each well was purged using low-flow/ low-volume techniques conducted in accordance with ERM's standard operating procedures, which are based on technical guidelines from U.S. Environmental Protection Agency (USEPA) Region 4 Science and Ecosystem Support Division Operating Procedures March 2013 (SESD Operating Procedures), Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures

(Puls and Barcelona, 1995), and *Ground-Water Sampling Guidelines for Superfund and RCRA Project Managers* (Yeskis and Zavala, 2002). The purpose of purging the well is to draw fresh formation water into the well so that the samples are representative of the portion of the aquifer surrounding the well. Low-flow methods are used for purging and sampling to avoid unnecessary disturbance to the well and formation surrounding the well, to reduce mixing within the well screen and well itself which may potentially lead to sample dilution, and to reduce the potential for sample aeration.

In wells where excessive drawdown occurred (> 0.3 feet), the method of purging the well was switched to a minimum of three (3) well volumes at which point the well was sampled upon stabilization, or following removal of a maximum of five well volumes, unless well volume was over 10 gallons. Wells with greater than 10 gallons of purge volume, which also exhibit drawdown of greater than 0.3 feet were still purged using low-flow/low-volume techniques due to the excessive amount of volume needed to purge by switching methods.

Field groundwater quality measurements included pH, conductivity, temperature, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity. Field parameter values and corresponding purge volumes were recorded on groundwater sampling forms. Copies of these forms for the February 2017 sampling event are included in Appendix B.

Groundwater samples from the February 2017 event were analyzed for all COI (Table 1). Analytical Environmental Services, Inc. (AES; Georgia Certification ID 800) performed the analyses.

# 3.5 QUALITY CONTROL/QUALITY ASSURANCE SAMPLES

Field quality control (QC) samples were collected and analyzed to document the accuracy and precision of the laboratory. QC samples included:

- Trip Blanks: One trip blank accompanied each cooler containing VOC samples sent to the laboratory. Trip blanks were analyzed to determine if any contaminants were introduced while samples were stored or while in transit to the laboratory. Trip blanks were analyzed for VOCs on the COI list only.
- Field Duplicates: Three (3) alluvial well blind field duplicates (AMW-15, MW-101, and MW-400) and two (2) bedrock well field duplicates (MW-110D and MW-205D) were collected during the February 2017 sampling event. Duplicates were collected to determine the precision of groundwater sample analysis and the variability of collection procedures.
- Matrix Spikes and Matrix Spike Duplicates: Matrix Spike and Matrix Spike
  Duplicate (MS/MSD) sample sets were collected from MW-102 (alluvial)
  and MW-22D (bedrock) during the February 2017 sampling event, as part
  of the laboratory analytical batch QC.

## 3.6 MANAGEMENT OF INVESTIGATION DERIVED WASTE

All liquid wastes generated from sampling activities (i.e., purge water and decontamination water) were placed in on-site, labeled, stainless steel 55-gallon drums or labeled plastic totes for storage on the AGLC property between Terminal Avenue and 6<sup>th</sup> Street prior to proper disposal. Personal protective equipment and other trash was placed in bags, and deposited in solid waste containers.

#### 4.0 SITE HYDROGEOLOGY

#### 4.1 GROUNDWATER ELEVATIONS

During the February 2017 sampling event, all alluvial and bedrock groundwater wells were inspected and the groundwater levels and total depths were gauged and recorded, with the exception of two (2) wells that could not be located during the event. MW-23 is located in an unpaved area and could not be located during the event due to extensive gravel cover in the area. An attempt will be made to locate MW-23 during the August 2017 semiannual event. MW-07 was paved over during exterior building renovations at the northeast corner of Mulberry Street and 7th Street and is considered destroyed. Groundwater elevation data derived from water level measurements collected on February 20, 2017, for the alluvial and bedrock wells are presented in Tables 4 and 5, respectively. DNAPL was detected at MW-111D and MW-309D in February 2017. Observed DNAPL thickness at the wells is noted in Table 5. The alluvial groundwater elevation map for February 20, 2017 is presented on Figure 4. Figure 5 shows the hydraulic potential in shallow bedrock wells for February 20, 2017.

# 4.2 GROUNDWATER GRADIENTS, HYDRAULIC CONDUCTIVITY AND SEEPAGE VELOCITY

Prior to soil remediation and ISS, groundwater flow in the alluvial aquifer was generally in an easterly direction. Based on the February 2017 data, alluvial groundwater continues to flow in an easterly direction, but around the ISS mass (Figure 4). Seepage velocity in the alluvial aquifer was estimated from the product of hydraulic conductivity and horizontal hydraulic gradient (Table 6 and Appendix C) divided by effective porosity. The hydraulic conductivity and effective porosity from the GW CAP-A were used to estimate the seepage velocity. Based on these parameters, the February 2017 alluvial seepage velocity is approximately 1.1 ft/day in the Western Portion and approximately 0.25 ft/day in the Eastern Portion (see Table 6 for calculations).

Rock formations have primary and secondary porosity. Primary porosity is the ability of the rock matrix to accept and transport fluids. Secondary porosity accounts for fluid movement in the formation by way of features other than the matrix. Fractures represent an example of secondary porosity. Groundwater flow in crystalline rock formations, such as the granitic gneiss underlying the Macon MGP Site, principally occurs in fractures as the matrix does not readily transport fluids. Groundwater flow and dissolved constituent transport typically dominated by the orientation of the primary fracture system. Geophysical investigations conducted in 1999 (RETEC, 2004) and 2005 (RETEC, 2005) demonstrated primary fractures in bedrock at the Site are oriented to the east and southeast. The inferred (or apparent) bedrock groundwater flow directions for data collected in February 2017 are presented on Figure 5. The hydraulic potential measured in shallow bedrock wells decreases toward the east

and southeast, as shown on Figure 5. Groundwater gradients calculated based on the hydraulic potential indicate groundwater movement in bedrock is generally parallel to the fracture orientations.

Since fractured bedrock aquifers are inherently anisotropic and heterogeneous, calculation of seepage velocity may not be representative using bulk porosity estimates. However, a range of porosity estimates may provide bounds on the expected seepage velocity of the bedrock aquifer. Multiple seepage velocities were calculated using porosity estimates from the literature and by solving three-point problems for different areas of the Site. The seepage velocities are presented in Table 6. The calculated range of seepage velocities in the bedrock aquifer at the Western Portion of the Site was between 0.04 and 3.52 ft/day, and between 0.0431 and 3.43 ft/day in February 2017 in the Eastern Portion of the Site (see Table 6 for seepage velocity calculations and Appendix C for gradient calculations).

#### 5.0 GROUNDWATER ANALYTICAL RESULTS

Analytical results for alluvial and bedrock monitoring wells sampled in February 2017 are summarized in Tables 7 and 8, respectively. These results were compared to Type 4 RRS (i.e., non-residential standard) for monitoring wells in the City ROW, on-site, or in an industrial use area and Type 2 RRS (i.e., residential standard) for wells located off-site and/or in a residential use area. Groundwater monitoring well locations, parcel property boundaries and the cleanup goal type (i.e., non-residential or residential) are shown on Figure 6. Detected concentrations of benzene and naphthalene exceeding the Type 2 or Type 4 RRS (as applicable) are shaded in Tables 7 and 8.

The spatial distribution of benzene and naphthalene are shown in Figures 7 and 8 respectively, for alluvium wells sampled in February 2017. For alluvial wells not sampled in February 2017, the most recent benzene and naphthalene data, and month and year the data were collected, are shown in Figures 6 and 7. Groundwater analytical results for alluvial monitoring wells are presented in Table 7. The spatial distribution of benzene and naphthalene in bedrock in February 2017 is depicted on Figures 9 and 10, respectively. For bedrock wells not sampled in February 2017, the most recent benzene and naphthalene data, and month and year the data were collected, are shown on Figures 9 and 10.

Groundwater purge logs are included herein as Appendix B, alluvial groundwater gradient calculation and bedrock hydraulic potential calculation figures as Appendix C, laboratory analytical reports in Appendix D, and data validation reports are attached as Appendix E. A complete summary of historical analytical data collected for the groundwater-monitoring program (since 2001) is provided as Appendix F. Benzene and naphthalene concentration and groundwater elevation trend graphs for bedrock monitoring wells are provided in Appendix G.

#### 5.1 ALLUVIAL GROUNDWATER ANALYTICAL RESULTS

Analytical results for groundwater samples collected in February 2017 from alluvial monitoring wells were compared to the Type 2 or 4 RRS, and are presented in Table 7.

Volatile Organic Compound Results

Laboratory analysis of groundwater samples collected from alluvial groundwater wells in February 2017 indicates that all VOCs were either not detected at laboratory reporting limits or were detected at a concentration below the applicable RRS, with the exception of benzene in a small area adjacent to the ISS mass along Terminal Avenue (Figure 7). Non-residential cleanup goals apply to this area. Benzene was detected at concentrations above the applicable cleanup goal (Type 4 RRS of 9  $\mu$ g/L) in groundwater samples collected from alluvial monitoring wells AMW-15 (80  $\mu$ g/L) and MW-205 (35  $\mu$ g/L), both located within the City ROW, east of the Norfolk Southern rail line and west of

the ISS. Ethylbenzene, toluene and xylenes were detected in MW-205, and ethylbenzene and xylenes were detected in AMW-14 (also located west of the ISS, approximately 70 feet south of AMW-15) and AMW-15 at concentrations below the Type 4 RRS.

No VOCs were detected above the laboratory detection limit (5  $\mu$ g/L) in any other alluvial monitoring well sampled in February 2017.

#### Semivolatile Organic Compound Results

Naphthalene was the only SVOC detected above 20  $\mu$ g/L (Type 2 and Type 4 RRS for naphthalene) in alluvial wells in February 2017. As shown on Figure 8, the exceedances for naphthalene were in samples collected from MW-101 (43  $\mu$ g/L) and MW-205 (46  $\mu$ g/L). MW-101 is located south of the ISS and MW-205 is located west of the ISS.

#### 5.2 BEDROCK GROUNDWATER ANALYTICAL RESULTS

Analytical results for groundwater samples collected from bedrock monitoring wells were compared to Type 2 or 4 RRS, as appropriate, and are presented in Table 8.

Twenty-six (26) bedrock monitoring wells were sampled during the annual February 2017 sampling event to meet the objectives outlined in the BGMP. MW-111D and MW-309D were not sampled due to the presence of DNAPL in the wells. Section 6.2.2 of this report presents details on the presence of DNAPL at these wells in February 2017 and an evaluation of these observations in the context of previous observations.

#### Volatile Organic Compound Results

No VOCs were detected in groundwater samples collected in February 2017 from bedrock wells where residential cleanup standards apply (i.e., MW-24D and MW-26D). Benzene was detected in groundwater above the non-residential, Type 4 RRS of 9  $\mu$ g/L in samples collected from ten (10) bedrock monitoring wells:

- MW-12DRR MW-12DD MW-110D MW-200DR
- MW-204D MW-205D MW-206D MW-301D
- MW-305D
   MW-308D

Benzene concentrations for the wells listed above ranged from  $9.3~\mu g/L$  (MW-301D) to  $9,600~\mu g/L$  (MW-305D) in February 2017. The distribution of benzene in bedrock wells sampled in February 2017 is shown on Figure 9. Benzene was the only BTEX analyte detected above its respective RRS in bedrock groundwater samples collected during the February 2017 sampling event, with the exception

of toluene, which was detected at MW-305D (5,000  $\mu$ g/L) above the Type 4 RRS (1,100  $\mu$ g/L).

Semivolatile Organic Compound Results

The non-residential and residential cleanup goal for naphthalene is  $20~\mu g/L$ . Naphthalene was not detected in either bedrock well where residential goals apply (i.e., MW-24D and MW-26D) in February 2017. Naphthalene was detected above  $20~\mu g/L$  in samples collected from eight (8) bedrock monitoring wells where non-residential cleanup goals apply:

- MW-12DRR MW-110D MW-200DR MW-204D
- MW-205D MW-206D MW-301D MW-305D

Naphthalene concentrations reported above the target cleanup goal ranged from  $430~\mu g/L$  (MW-301D) to 3,700  $\mu g/L$  (MW-205D) in February 2017. The distribution of naphthalene in bedrock wells sampled in February 2017 is shown on Figure 10. No other SVOCs were detected above their respective cleanup goals in bedrock groundwater samples collected during the February 2017 sampling event.

# 5.3 QUALITY ASSURANCE, QUALITY CONTROL, AND DATA VALIDATION

All field QA/QC data, and at least 10 percent of the VOC and SVOC data presented in the analytical reports were reviewed by ERM's data validation expert. Laboratory analytical reports for all samples are provided in Appendix D, and the data validation reports for VOC and SVOC data are included in Appendix E. These data were reviewed in accordance with the USEPA Contract Laboratory Program National Functional Guidelines for Organic/Inorganic Data Review, Level 2 Evaluation [2008, 2011].

ERM performed a data validation review of sample order numbers 1702K47, 1702M96 and 1702O89 for the February 2017 alluvial sampling event, which included the following parent and duplicate samples:

Allluvial Wells					
DUP-01-20170223-01	MW-101-20170223-01				
DUP-02-20170223-01	AMW-15-20170223-01				
DUP-03-20170223-01	MW-400-20170223-01				
Bedrock Wells					
DUP-04-20170223-01	MW-110D-20170223-01				
DUP-05-20170224-01	MW-205D-20170224-01				

The following items were included in the data validation review:

- Surrogate recoveries
- Relative percentage difference of primary/field duplicate samples
- Field and laboratory blank contamination
- Holding times, sample receipt conditions, dilution factors, chains of custody
- Trip blanks
- Sample duplicates

Three (3) alluvial and two (2) bedrock field duplicate samples were collected during the February 2017 sampling event (see above) to determine the precision of the groundwater sample analysis and collection. As shown in Appendix E, the relative percent difference (RPD) calculations showed differences of less than 30 percent (%) between parent and duplicate sample results, indicating good correlation, with the following exceptions:

- MW-101: naphthalene (RPD = 69%;  $43 \mu g/L$  compared to  $21 \mu g/L$ )
- MW-110D: naphthalene (RPD = 37%; 760  $\mu$ g/L compared to 1,100  $\mu$ g/L)
- MW-205D: xylenes (RPD = 32%;  $580 \mu g/L$  compared to  $420 \mu g/L$ )

MS/MSD sample sets were collected in February 2017 as part of the laboratory analytical batch QC. MS/MSD samples are used to assess matrix interference and reliability of the analytical processes and equipment. The samples were collected from MW-102 and MW-22D. All results for the MS/MSD QC samples were within the laboratory-established limits.

The parent and duplicate sample results with >30% RPD do not impede the usability of the data collected during the February 2017 event. All data results were within the QA/QC parameters utilized by the laboratory and no data was qualified. Naphthalene detections in the parent and duplicate samples collected at MW-101 and MW-110D, and xylene detections in parent and duplicate samples collected at MW-205D were within the limits of historical detections (Appendix F). In addition, at each of the individual well locations an RPD >30% was only determined for one (1) compound, indicating the disparities represent slight variations in groundwater quality rather than arising from field or laboratory procedures.

#### 6.0 DISCUSSION OF GROUNDWATER SAMPLING OBJECTIVES

This section provides an evaluation of the results of the groundwater sampling events conducted in the context of variability and concentration trends over the past four years as they relate to the monitoring objectives defined in the BGMP and interim alluvial objectives prior to and during active remedy implementation. Historical groundwater monitoring results are summarized in Appendix F.

#### 6.1 ALLUVIAL GROUNDWATER

# 6.1.1 Document that the Plume is not Migrating off MUDA Type 5 Property

Results from monitoring wells MW-15, MW-101, and MW-102 were used to assess whether the alluvial groundwater plume may be migrating off the MUDA Type 5 property located at 137 Mulberry Street. Type 4 RRS apply to these wells.

- MW-101 is located adjacent to the earliest ISS mass on the MUDA property and historically has had impacts. Naphthalene was detected above the Type 4 RRS of 20  $\mu$ g/L at a concentration of 43  $\mu$ g/L in the parent sample and just slightly above the RRS at a concentration of 21  $\mu$ g/L in the duplicate sample during the February event. All other COI were significantly below Type 4 RRS. Naphthalene is the first reported COI to exceed the Type 4 RRS in MW-101 since August 2015.
- MW-15 and MW-102 are located hydraulically downgradient of MW-101 along the property boundary. Both wells have historically had concentrations below detection limits for organic COI, and no COI were detected above the reporting limit in either well during the February 2017 sampling event with the exception of anthracene at MW-15 (0.074  $\mu$ g/L) at a concentration slightly above the detection limit (0.050  $\mu$ g/L) and significantly below the Type 4 RRS (31,000  $\mu$ g/L). No COI have been detected above the Type 4 RRS in MW-15 since sampling of the well began in 2001. No COI have been detected above the Type 4 RRS at MW-102 since 2002.

Results from the February 2017 sampling event suggest isolated, localized dissolved COI in the vicinity of MW-101 but do not indicate that the alluvial groundwater plume on the MUDA property is currently unstable or migrating off the Type 5 property. Specifically, no VOCs or SVOC have been detected at MW-15 or MW-102 for more than 15 years, providing evidence of long-term groundwater stability downgradient of the ISS. The long history of absence of VOC and SVOC impacts at these locations prior to, during and after implementation of corrective actions at the MUDA property shows supports that the impacts are isolated in a small area adjacent to the ISS and that those impacts are not migrating downgradient to these locations, and therefore are not migrating to downgradient properties.

# 6.1.2 Collect Data Downgradient of the Footprint of Corrective Actions at the Western Portion MGP to Monitor Changes

Results from monitoring wells MW-08, MW-101, and MW-400 sampled in February 2017 were used to assess groundwater concentrations in wells downgradient of the ISS footprint. Type 4 RRS apply to these wells. No VOCs were detected in these wells in February 2017. No SVOCs were detected above Type 4 RRS in any of the three (3) wells in February 2017, except for naphthalene in MW-101 as noted above.

# 6.1.3 Monitor Alluvial Groundwater Data Hydraulically Downgradient of the Eastern Portion ISS Mass to Assess Whether Concentrations Remain Below RRS

MW-12R, MW-14I, MW-21, and MW-104 were sampled during the February 2017 sampling event to assess whether alluvial groundwater downgradient of the Eastern Portion ISS mass remains below Type 2 RRS (for MW-21) or Type 4 RRS (MW-12R, MW-14I, and MW-104). No COI were detected at concentrations exceeding their respective RRS during the February 2017 sampling event at these wells. Furthermore, no organic COI have exceeded Type 2 or 4 RRS (as applicable based on well location) in any of the above alluvium monitoring wells for more than seven years, since naphthalene was detected at MW-12R at a concentration above the Type 4 RRS in February 2010, during the first sampling event following well installation.

The sustained lack of VOC and SVOC detections at these four (4) downgradient locations shows that there are no alluvial groundwater impacts in this area. The absence of impacts during the nearly ten years of monitoring this area supports this conclusion.

# 6.1.4 Detect Changes in Environmental Conditions

The groundwater flow directions and seepage velocities for the February 2017 monitoring event were compared with previous results to identify any changes. The flow direction in the alluvium aquifer has historically been to the east. Alluvium groundwater flow during the February 2017 event was predominantly towards the east. The calculated horizontal hydraulic gradient for the alluvium was 0.0600 ft/ft at the Western Portion of the Site and 0.0134 ft/ft at the Eastern Portion of the Site during the February 2017 gauging event (Appendix C).

During the August 2016 sampling event, the calculated horizontal hydraulic gradient for the alluvium was 0.0570 ft/ft at the Western Portion of the Site and 0.0124 ft/ft at the Eastern Portion of the Site. The alluvium groundwater gradients in the Eastern and Western portion of the site in February 2017 were consistent with those in August 2016. Compared to previous events, no significant variations in groundwater flow direction or calculated gradient are noted.

No changes in environmental conditions were detected at the Site based on the evaluation of groundwater flow direction and seepage velocity.

#### 6.2 BEDROCK GROUNDWATER

# 6.2.1 Perimeter Well Monitoring

Data from perimeters wells (including MW-22D, MW-23D, MW-24D, MW-26D, and MW-27D) were evaluated to assess any changes in the nature and extent of the bedrock groundwater quality. Results from these wells do not indicate any changes to the bedrock aquifer, with the exception of MW-24D. As discussed in Section 2.3 of the 3<sup>rd</sup> Semiannual Progress Report, during this reporting period COI concentrations at MW-24D were monitored to evaluate whether COI concentration detections and fluctuations occurring since 2014 may be the result of bedrock aquifer disturbances (i.e., drilling and/or DNAPL recovery activities). Groundwater monitoring results for samples collected from MW-24D between the most recent disturbance (VEFR event in June 2016) and August 2016 were reported in the 3<sup>rd</sup> Semiannual Progress Report. Data evaluation indicated the potential for drilling- and/or VEFR-induced bedrock aquifer disturbances near the intersection of Walnut Street and 7<sup>th</sup> Street to destabilize the groundwater plume, and for those disturbances to last at least three months after the disturbance.

No bedrock aquifer disturbances (drilling and/or DNAPL recovery events) have occurred since June 2016, and no VOCs or SVOCs were detected at MW-24D above the Type 2 RRS in February 2017 with the exception of benzo(a)pyrene at a concentration slightly above the applicable standard (0.98  $\mu g/L$  compared to 0.2  $\mu g/L$ ). Plume stability in the vicinity of the Walnut Street and  $7^{th}$  Street intersection will continue to be evaluated using data collected at MW-24D during future groundwater monitoring events.

## 6.2.2 Monitor for DNAPL accumulation and DNAPL Recovery

The first VEFR event was performed in February 2011 to remove DNAPL in MW-111D. Subsequent events were performed in September 2013 (MW-111D and MW-302D), May 2015 (MW-111D), August 2015 (MW-111D, MW-309D and SW-1), and June 2016 (MW-111D, MW-309D and SW-1). Per the EPD comment letter dated February 21, 2017, VEFR is currently not required at the Site. DNAPL monitoring will continue during semiannual monitoring events. Results of monitoring activities at MW-111D, MW-302D and MW-309D, wells in which DNAPL has primarily been observed from November 22, 2015 through February 21, 2017, are summarized below.

#### MW-302D

No DNAPL was observed during the April 2016 monitoring event; therefore, the well was not included in the June 2016 VEFR event. Trace DNAPL blebs were detected in sediments adhering to the tip of the interface probe after collecting

the well total depth measurement in August 2016. Observations of minor blebs have been reported previously. No DNAPL was observed and no blebs were detected at MW-302D during the February 2017 monitoring event.

#### <u>MW-111D</u>

During the April 2016 event DNAPL was measured at a thickness of approximately 1.4 ft. The day of the June 2016 VEFR event DNAPL thickness was measured at 0.20 ft immediately prior to the event. DNAPL was not measured in the well immediately following the event. Approximately 1.25 ft of DNAPL was measured in MW-111D in August 2016 and in February 2017. The variability in the reported thicknesses between the April 2016 and June 2016 events is due to the inherent difficulty in obtaining a precise measurement of the DNAPL. The stickiness and high viscosity of the DNAPL can interfere with interface probe operation. Reported thicknesses are based on several lines of evidence, including changes in the sound emitted by the interface probe, observations of DNAPL on the probe and tape, and observations of changes in speed and resistance to lowering of the probe to the bottom of the well during water level and total well depth gauging.

#### MW-309D

During the April 2016 event, DNAPL was detected at MW-309D. Due to the density, conductivity and tarry nature of the DNAPL, the thickness is difficult to measure. Immediately prior to the June 2016 VEFR event DNAPL was detected at a depth of approximately 38 feet below the top of casing (ft btoc), similar to the April 2016 measurement. Upon completion of the VEFR event, DNAPL was still detected at MW-309D at a depth of approximately 40 ft btoc, indicating a potential thickness of up to 5 ft. Although the well was completed to a total depth of 45 ft below ground surface (ft bgs), the accumulation of DNAPL makes it difficult to reach the true bottom of the well. It is possible that repeated VEFR events conducted at MW-309D have caused the material surrounding the open corehole to collapse into the corehole, and that the material has become bridged or solidified by the tar-like DNAPL. In this manner, an accurate reading of the actual accumulation of DNAPL detected in February 2017 is unachievable. In addition, it appears the DNAPL/sediment has solidified, making recovery difficult. Approximate depth to DNAPL reported in August 2016 and in February 2017 was 38 ft below the top of well casing, consistent with the April 2016 measurement, indicating stable conditions at the well.

#### 6.2.3 Detect Changes in Environmental Conditions

The groundwater flow directions and seepage velocities for the February 2017 gauging event were compared with previous results to identify any changes. The flow direction in the bedrock aquifer has historically been to the east. Bedrock groundwater flow during the February 2017 event was also predominantly towards the east. The calculated horizontal hydraulic gradient for the bedrock

was 0.0194 ft/ft at the Western Portion of the Site and 0.0189 ft/ft at the Eastern Portion of the Site during the February 2017 gauging event (Appendix C).

During the August 2016 event, the calculated hydraulic gradient in the bedrock aquifer at the Western and Eastern Portions of the Site was 0.0209 ft/ft and 0.0220 ft/ft, respectively. The bedrock groundwater gradients in the Western and Eastern portions of the Site in February 2017 were slightly lower than the during the August 2016 event. Compared to previous events, no significant variations in groundwater flow direction or calculated gradient are noted in the Eastern Portion or Western Portion.

COI concentrations in bedrock groundwater for the February 2017 event were compared with historical concentrations for consistency. No changes in environmental conditions were detected at the Site based on the evaluation of groundwater flow direction, seepage velocity, and the extents and concentrations of detected constituents.

# 6.2.4 Detect New Releases (or other sources) of Contaminants to the Environment

Background monitoring well MW-26D continues to have no detections of organic COI. Background monitoring well MW-22D had no detections of organic COI except for indeno(1,2,3-cd)pyrene (0.056  $\mu g/L$ , just slightly above the detection limit of 0.050  $\mu g/L$ , but below the Type 2 RRS of 1.17  $\mu g/L$ ). Perimeter monitoring well MW-27D had no detections of organic COI. The low-level detection of indeno(1,2,3-cd)pyrene at MW-22D is not considered to be indicative of a new release or other source of contaminants to the environment as it is more likely due to increased precision in laboratory testing methods rather than representing a change in groundwater conditions.

## 6.2.5 Demonstrate the Effectiveness of Institutional Controls

The qualifying properties associated with the former Macon MGP Site consist of: an AGLC-owned parcel located at 306 Terminal Avenue; parcels owned by MUDA located at 137 Mulberry Street and 122 Walnut Street (and an unnumbered utility parcel on 6th Street); parcels owned by the City of Macon; and parcels owned by Norfolk Southern Railroad (undefined addresses or parcel identifiers). Agreements have been reached with MUDA, City of Macon and Norfolk Southern and institutional controls will be implemented as needed to conform to VRP rules. Evaluation of several additional parcels for inclusion as qualifying properties is ongoing, and AGLC will notify EPD and revise the VIRP accordingly via semiannual progress reports.

Institutional controls that will be placed on qualifying properties will likely include the restriction of groundwater use. Although controls are not yet in place for all potential qualifying properties, a visual inspection was performed during the February 2017 sampling event for the existence of private wells on qualifying properties, and on neighboring properties. No evidence of private wells or shallow groundwater use was observed on any of the neighboring properties.

#### 6.2.6 Document Attainment of Remediation Objectives

COI data trends were evaluated to assess whether concentrations were decreasing, increasing or stable, and to verify the plume is not expanding. COI impacts detected in monitoring wells are summarized below. Historical groundwater monitoring results are summarized in Appendix F and concentration trend graphs for the alluvial and bedrock wells with COI impacts are included in Appendix G.

There are no detections of benzene in the alluvium aquifer in areas where Type 2 (residential) cleanup standards are applicable. Alluvial groundwater benzene detections are limited to AMW-15 and MW-205 (Figure 7 and 8), which are located in an area where Type 4 (non-residential) standards apply. Naphthalene was also detected in these wells during the February 2017 event, below Type 4 RRS at AMW-15 and above Type 4 RRS at MW-205. These wells are located west of the area addressed as part of the 2015-2016 ISS and soil excavation activities, in an area where corrective actions could not be performed due to proximity to existing Norfolk Southern railroad tracks. Historical groundwater monitoring results are summarized in Appendix F and concentration trend graphs for AMW-15 and MW-205 are included in Appendix G. Additional data are needed to assess whether benzene and naphthalene concentrations at AMW-15 are increasing, stable, or decreasing. Both benzene and naphthalene concentrations at MW-205 appear to be decreasing.

During February 2017, naphthalene was detected on the MUDA property at MW-101 above the Type 4 RRS. The parent sample was reported with a concentration of 43  $\mu$ g/L naphthalene (duplicate sample concentration of 21  $\mu$ g/L) compared to the Type 4 RRS of 20  $\mu$ g/L. This is the first time since February 2015 that naphthalene has been detected above the Type 4 RRS. Benzene was not detected in February 2017. Overall, concentrations of benzene and naphthalene at MW-101 indicate a decreasing trend (Appendix G).

No VOCs or SVOCs were detected above applicable RRS in any alluvial wells, with the exception of the three (3) wells noted above. The limited occurrences and low levels of COI at these locations indicate that corrective actions have been effective at reducing COI concentrations in the alluvial aquifer.

Groundwater COI concentration trends for bedrock wells are evaluated in Table 9 and all bedrock groundwater analytical results are tabulated in Appendix F. Concentration trend graphs for the bedrock wells with COI impacts are included in Appendix G.

#### 6.3 SUMMARY OF GROUNDWATER CONDITIONS

Results of all alluvial groundwater monitoring downgradient and cross-gradient to the ISS mass are below laboratory detection limits with the exception of naphthalene at MW-101. The well is located adjacent to the ISS mass, and naphthalene was not detected in any surrounding alluvial wells. This limited detection represents an isolated condition. The lack of VOC and SVOC detections are downgradient and cross-gradient locations supports that the

extent is limited and COI are not migrating beyond a small area adjacent to the ISS.

Overall, the February 2017 monitoring results do not indicate plume migration in the bedrock aquifer. Results of bedrock groundwater monitoring wells indicate some fluctuations in benzene and/or naphthalene concentrations near the Walnut Street and 7th Street intersection; however, downgradient and crossgradient perimeter wells (i.e., MW-22D, MW-23, MW-24D, MW-26D, MW-112D, MW-113D, MW-304D and MW-306D are all non-detect for COI, with the exception of minor detections of one or more SVOCs at MW-22D, MW-24D, MW-113D and MW-306D (Table 8). In addition, COI in deep bedrock wells MW-27DD, MW-205DD and MW-302DD are all either non-detect or below the applicable non-residential, Type 4 RRS. The Type 4 RRS also applies to MW-12DD, where only benzene in detected above the cleanup goal. Benzene at this well shows a decreasing trend in concentrations (Appendix G).

Monitoring of alluvial and bedrock groundwater monitoring wells at the Site will continue during the next reporting period. The August 2017 monitoring event will be completed in accordance with the schedule shown in Table 2 and Table 3. Based on the August 2017 results, revisions to the groundwater monitoring schedule will be proposed in the 5<sup>th</sup> Semiannual Progress Report.

## 7.0 PLANNED CORRECTIVE ACTIONS AND INVESTIGATIONS

The following sections describe corrective actions and investigations that are planned to be initiated and/or completed during the next monitoring period. A projected milestone schedule is included as Figure 11.

#### 7.1 GROUNDWATER INVESTIGATIONS AND MONITORING

# 7.1.1 Semiannual Groundwater Monitoring

During the next reporting period, groundwater monitoring will be conducted in accordance with the proposed Alluvial Groundwater Monitoring Schedule shown in Table 2. The proposed schedule is intended to provide data regarding COIs in wells to monitor overall effectiveness of the remedy at the Site and assess plume stability. Bedrock groundwater monitoring will continue in accordance with the proposed Bedrock Groundwater Monitoring Schedule shown in Table 3.

The objective of the groundwater monitoring program is to collect data necessary to evaluate corrective action effectiveness, monitor stability of the dissolved phase plume and presence of DNAPL, and provide information to update the CSM as necessary. The next groundwater monitoring event is scheduled for August 2017.

# 7.1.2 Bedrock Investigations

As discussed in previous sections of this report, in comment #4 of the February 21, 2017 comment letter EPD agreed to suspend requirements for installation of any additional bedrock wells or sumps. No bedrock investigations are warranted at this time.

## 7.1.3 NAPL Recovery

The evidence of high viscosity and low mobility of the DNAPL at the Site, in combination with the geologic setting and limited spatial extent of DNAPL indicates that DNAPL is not migrating under steady-state conditions. As reported in the 3<sup>rd</sup> Semiannual Progress Report, the application of vacuum to bedrock monitoring wells for the recovery of DNAPL from a single borehole appears to destabilize the COI plume, causing dissolved phase concentrations to fluctuate in areas where the plume would otherwise be stable.

Per the EPD comment letter dated February 21, 2017, VEFR is currently not required at the Site. DNAPL monitoring will continue during the semiannual event completed during the upcoming reporting period.

#### 7.2 VAPOR INTRUSION EVALUATIONS

The vapor intrusion (VI) pathway may be complete where a building is located or is planned and where reported COI concentrations may pose an unacceptable risk for existing buildings or future construction. Control methods (e.g., Uniform Environmental Covenants [UEC], barriers or specific construction design) may be utilized to mitigate the potential for vapors to enter indoor air in existing buildings or future construction.

As anticipated and noted in the 3<sup>rd</sup> Semiannual Progress Report, the small unused building located on the corner of 6<sup>th</sup> Street and Mulberry Street (Prodigy Woodworks parcel) was demolished in 2016. A UEC will be placed on the parcel requiring control measures, (e.g., installation of a vapor barrier) as part of the construction of any future enclosed structures on the property. The UEC will be used to enforce the control measures, which will reduce the potential for a complete VI pathway at the Prodigy Woodworks parcel.

COI are detected in areas where non-residential cleanup goals (Type 4 RRS) apply above those standards in only three (3) alluvial groundwater wells. Two (2) of the wells (AMW-15 and MW-205) are located along Terminal Avenue, on Norfolk Southern property adjacent to existing railroad tracks. The third well (MW-101) is located on MUDA property which is currently undeveloped. As discussed in Section 2.1, the VI pathway for the buildings located at 230 and 280 7th Street is considered incomplete due to the lack of detections of COI in alluvial and intermediate wells in the area.

As such, there are currently no known VI risks and no evaluations are planned for the next reporting period. If warranted, based upon COI concentrations, Site conditions, and potential future property construction activities, current and applicable VI guidance may be used to evaluate the VI pathway at the Macon MGP site in areas with alluvial COI concentrations above non-residential or residential cleanup goals, as applicable based on current and/or future use of the particular property. It is anticipated that UECs will be utilized to impose control measures to reduce the potential for VI into existing or future construction.

#### 7.3 SURFACE WATER EVALUATION

No surface water evaluations are planned, as discussed in Section 2.1.

#### 7.4 MODELING AND POINT OF DEMONSTRATION WELLS

As discussed in Section 1.0 of this report, corrective actions for alluvial groundwater were completed in April 2016. Plume stability monitoring of dissolved phase impacts will continue with semiannual groundwater monitoring events. Alluvial and bedrock groundwater monitoring well locations and downgradient potential exposure points will be evaluated and point of demonstration (POD) wells will be identified. COI concentrations at POD wells will be used to assess whether an unacceptable risk to potential receptors exists. The evaluation will include an analysis of overall COI plume stability and

assessment of the implications of the presence of DNAPL in bedrock fractures on long-term dissolved phase plume stability and potentially complete exposure pathways.

# 7.5 RISK ASSESSMENT AND REPRESENTATIVE EXPOSURE CONCENTRATIONS

Evaluation of post-corrective action groundwater COI concentrations will continue during the next reporting period. If warranted based upon the results of these evaluations, additional properties may be entered into the VRP. Upon completion of the corrective action monitoring of and inclusion of any additional properties into the VRP, the human health exposure pathway assessment and risk evaluation outlined conceptually in the VIRP for COIs will be completed.

### 7.6 UNIFORM ENVIRONMENTAL COVENANTS

Continued monitoring and maintenance activities, and/or restrictions on disturbance of soil, and/or restrictions to groundwater use at VRP-qualifying properties will be implemented as needed in the form of UECs. Existing UECs (e.g., current restriction on groundwater use at the MUDA property) will be revised if appropriate and new UECs will be enacted, if necessary, based on post-remedy conditions and the results of the risk evaluation.

#### 8.0 REFERENCES

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Project No. 0366660 Atlanta Gas Light Company

# Table 1 Site-Specific Groundwater Constituents of Interest Atlanta Gas Light Company Former Manufactured Gas Plant Site

Macon, Georgia

Volatile Organic Compounds	Semivolatile Organic Compounds
EPA-8260B	EPA-8270C
Benzene	Acenaphthene
Ethylbenzene	Acenaphthylene
Toluene	Anthracene
Total Xylenes	Benzo[a]anthracene
Carbon Disulfide	Benzo[a]pyrene
	Benzo[b]fluoranthene
	Benzo[g,h,i]perylene
	Benzo[k]fluoranthene
	Chrysene
	Dibenz(a,h)anthracene
	2,4-Dimehylphenol
	Fluoranthene
	Fluorene
	Indeno[1,2,3-cd]pyrene
	2-Methylphenol
	3 & 4 Methylphenol
	Naphthalene
	Phenanthrene
	Phenol
	Pyrene

# Alluvial Well Groundwater Monitoring Network Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

Monitoring Well I.D.	Hydrogeologic Unit	Screened Interval	Previously Proposed Sampling Schedule	Wells Sampled During Expanded August 2016 Semiannual Event	Proposed 2017 Sampling Schedule	Rationale for Change
AMW-2	Alluvium	4.6 - 14.6	Annual	X	Annual	
AMW-6	Alluvium	11 - 21	Semiannual	X	Semiannual	
AMW-11	Alluvium	5 - 15	Annual	X	Annual	
AMW-12	Alluvium	10 - 20	Annual	X	Annual	
AMW-13	Alluvium	10 - 20	Annual	Х	Annual	
AMW-14	Alluvium	5 - 20	Annual	Х	Annual	
AMW-15	Alluvium	6 - 21	Annual	X	Annual	
MW-07	Alluvium	5 - 15.5	Gauge Only	Gauged Only	Gauge Only	
MW-08	Alluvium	9 - 19	Annual	X	Annual	
MW-10	Alluvium	7.5 - 17.5	Gauge Only	X	Gauge Only	
MW-11	Alluvium	5 - 12	Gauge Only	Gauged Only	Gauge Only	
MW-12R	Alluvium	4.5 - 14.5	Annual	X	Annual	
MW-12IR	Intermediate	11 - 21	Annual	X	Annual	
MW-14	Alluvium	3 - 15	Annual	X	Annual	
MW-14I	Intermediate	19 - 24	Annual	X	Annual	
MW-15	Alluvium	3 - 14.5	Semiannual	х	Annual	No indication of migration off MUDA property
MW-21	Alluvium	3 -10	Annual	X	Annual	
MW-23	Alluvium	5 - 20	Gauge Only	Gauged Only	Gauge Only	
MW-26	Alluvium	5 - 20	Gauge Only	X	Gauge Only	
MW-28	Alluvium	2 - 17	Gauge Only	X	Gauge Only	
MW-101	Alluvium	5 - 15	Semiannual	х	Semiannual	
MW-102	Alluvium	5 - 10	Semiannual	Х	Annual	No indication of migration off MUDA property
MW-103	Alluvium	10 - 20	Annual	X	Annual	
MW-104	Alluvium	5 - 20	Annual	X	Annual	
MW-104I	Intermediate	15 - 20	Gauge Only	Gauged Only	Gauge Only	
MW-105	Alluvium	15 - 25	Gauge Only	Gauged Only	Gauge Only	
MW-106	Alluvium	9 - 19	Gauge Only	X	Gauge Only	
MW-107	Alluvium	8 - 18	Gauge Only	Gauged Only	Gauge Only	
MW-108	Alluvium	10 - 20	Semiannual	X	Semiannual	
MW-109	Alluvium	13.5 - 23.5	Annual	X	Annual	
MW-205	Alluvium	14 - 29	Semiannual	X	Semiannual	
MW-400	Alluvium	6 - 16	Semiannual	X	Semiannual	
MW-401	Alluvium	6 - 16	Annual	X	Annual	

Groundwater sampling is completed in February (Annual and Semiannual Wells) and August (Semiannual Wells Only)

Note: Installation of additional alluvium monitoring wells is not proposed at this time. The need for additional wells will be evaluated and modifications to the monitoring well network and/or schedule will be provided in semiannual progress reports

#### Bedrock Groundwater Monitoring Network Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

Monitoring Well I.D.	Hydrogeologic Unit	Screened Interval	Previously Proposed Sampling Schedule	Wells Sampled During Expanded August 2016 Semiannual Event	Proposed 2017 Sampling Schedule	Rationale for Change
MW-08D	Shallow Bedrock	38 - 53.5	Gauge only	Gauged only	Gauge only	
MW-12DRR	Shallow Bedrock	37 - 52	Semiannual	X	Semiannual	
MW-12DD	Deep Bedrock	87 - 97	Annual	Gauged only	Annual	
MW-22D	Shallow Bedrock	44 - 66	Annual	X	Annual	
MW-23D	Shallow Bedrock	23 - 36	Semiannual	X	Annual	
MW-24D	Shallow Bedrock	30.5 - 40.5	Semiannual	X	Semiannual	
MW-26D	Shallow Bedrock	31 - 42	Annual	X	Annual	
MW-27D	Shallow Bedrock	43.5 - 48.5	Annual	X	Annual	
MW-27DD	Deep Bedrock	105 - 115	Gauge only	Gauged only	Gauge only	
MW-108D	Shallow Bedrock	48.5 - 58.5	Annual	Gauged only	Annual	
MW-110D	Shallow Bedrock	28 - 43	Semiannual	x	Annual	COI Trends Appear to be Stable or Decreasing
MW-111D	Shallow Bedrock	33 - 46.5	Semiannual	Gauged only (DNAPL)	Semiannual	
MW-112D	Shallow Bedrock	26 - 36	Annual	Gauged only	Annual	
MW-113D	Shallow Bedrock	29.5 - 39.5	Annual	Gauged only	Annual	
MW-114D	Shallow Bedrock	45 - 55	Gauge only	Gauged only	Gauge only	
MW-200DR	Shallow Bedrock	29.5 - 39.5	Semiannual	X	Semiannual	
MW-204D	Shallow Bedrock	30.5 - 45.5	Semiannual	X	Semiannual	
MW-205D	Shallow Bedrock	28 - 43	Semiannual	X	Semiannual	
MW-205DD	Deep Bedrock	90 - 100	Semiannual	x	Annual	No COI detected since 2013
MW-206D	Shallow Bedrock	31 - 46	Annual	Gauged only	Annual	
MW-207D	Shallow Bedrock	34 - 46.5	Annual	Gauged only	Annual	
MW-300D	Shallow Bedrock	33 - 43	Annual	Gauged only	Annual	
MW-301D	Shallow Bedrock	36 - 46	Semiannual	X	Annual	COI Trends Appear to be Stable or Decreasing
MW-302D	Shallow Bedrock	35 - 45	Semiannual	Gauged only*	Semiannual	
MW-302DD	Deep Bedrock	70 - 100	Semiannual	X	Semiannual	
MW-304D	Shallow Bedrock	41 - 61	Annual	Gauged only	Annual	
MW-305D	Shallow Bedrock	34.5 - 41.5	Semiannual	X	Semiannual	
MW-306D	Shallow Bedrock	32.5 - 51	Semiannual	х	Semiannual	
MW-307D	Shallow Bedrock	34 - 58	Semiannual	х	Annual	COI Trends Appear to be Stable or Decreasing
MW-308D	Shallow Bedrock	72 - 110	Semiannual	X	Semiannual	
MW-309D	Shallow Bedrock	35 - 45	Semiannual	Gauged only (DNAPL)	Semiannual	

Groundwater sampling is completed in February (Annual and Semiannual Wells) and August (Semiannual Wells Only)

<sup>\*</sup> DNAPL blebs on tip of interface probe after total depth measurement

# Depths to Groundwater and Groundwater Elevations Alluvial Monitoring Wells February 20, 2017

Atlanta Gas Light Company
Former Manufactured Gas Plant Site
Macon, Georgia

Monitoring Well	Top of Casing Elevation	Depth to Groundwater February 20, 2017	Groundwater Elevation February 20, 2017
	(ft AMSL)	(ft BTOC)	(ft AMSL)
AMW-2	320.80	6.46	314.34
AMW-6	326.42	11.20	315.22
AMW-11	324.10	8.25	315.85
AMW-12	322.56	9.72	312.84
AMW-13	328.65	12.60	316.05
AMW-14	326.28	9.50	316.78
AMW-15	325.42	9.58	315.84
MW-07*	303.22	CNL	
MW-08	307.43	12.86	294.57
MW-10	306.57	8.74	297.83
MW-11	299.45	3.66	295.79
MW-12R	297.11	3.73	293.38
MW-12IR	297.08	7.85	289.23
MW-14	295.28	6.38	288.90
MW-14I	295.04	6.73	288.31
MW-15	300.31	6.51	293.80
MW-21	293.79	3.24	290.55
MW-23**	292.54	CNL	
MW-26	287.53	0.80	286.73
MW-28	288.07	1.83	286.24
MW-101	307.10	9.88	297.22
MW-102	301.52	8.55	292.97
MW-103	312.91	15.77	297.14
MW-104	295.78	6.05	289.73
MW-104I	295.72	6.70	289.02
MW-105	302.73	5.48	297.25
MW-106	310.95	13.05	297.90
MW-107	307.16	9.50	297.66
MW-108	318.25	5.95	312.30
MW-109	314.07	6.16	307.91
MW-205	321.32	6.1	315.22
MW-400	307.99	13.49	294.50
MW-401	306.48	12.45	294.03

#### Notes:

ft AMSL - feet Above Mean Sea Level

ft BTOC - feet Below Top of Casing

All depths to water are listed in feet below top of casing (ft BTOC).

All casing and groundwater elevations are listed in feet above mean sea level (ft AMSL).

CNL - Could Not Locate

NM - Not Measured

\*MW-07 has been paved over

Dense Non-Aqueous Phase Liquid (DNAPL) was not detected in any alluvial groundwater monitoring wells.

<sup>\*\*</sup>MW-23 was covered by gravel and could not be located

# Depths to Groundwater and Groundwater Elevations - Bedrock Monitoring Wells

## February 20, 2017

# Atlanta Gas Light Company Former Manufactured Gas Plant Site

Monitoring Well	Top of Casing Elevation	Depth to Groundwater February 20, 2017	Groundwater Elevation February 20, 2017	DNAPL Thickness
	(ft AMSL)	(ft BTOC)	(ft AMSL)	(ft)
MW-08D	307.52	11.42	296.10	
MW-12DRR	299.71	9.51	290.20	
MW-12DD	297.02	15.93	281.09	
MW-22D	296.74	12.14	284.60	
MW-23D	292.13	10.55	281.58	
MW-24D	292.30	5.05	287.25	
MW-26D	287.57	1.21	286.36	
MW-27D	288.48	8.51	279.97	
MW-27DD	288.65	8.65	280.00	
MW-108D	318.30	11.11	307.19	
MW-110D	295.97	7.20	288.77	
MW-111D	295.78	6.98	288.80	1.25
MW-112D	289.70	4.49	285.21	
MW-113D	293.80	7.78	286.02	
MW-114D	298.10	8.21	289.89	
MW-200DR	295.27	5.53	289.74	
MW-204D	296.30	7.38	288.92	
MW-205D	295.40	6.65	288.75	
MW-205DD	294.58	14.74	279.84	
MW-206D	295.70	6.75	288.95	
MW-207D	296.10	6.79	289.31	
MW-300D	301.02	4.51	296.51	
MW-301D	305.76	11.75	294.01	
MW-302D	301.93	13.63	288.30	
MW-302DD	301.79	22.17	279.62	
MW-304D	303.55	16.09	287.46	
MW-305D	297.22	17.73	279.49	
MW-306D	293.93	5.73	288.20	
MW-307D	295.15	8.94	286.21	
MW-308D	324.70	17.48	307.22	
MW-309D	298.04	9.83	288.21	~ 1.1 - 7

#### Notes:

ft AMSL - feet Above Mean Sea Level

ft BTOC - feet Below Top of Casing

All depths to water are listed in feet below top of casing (ft BTOC).

All casing and groundwater elevations are listed in feet above mean sea level (ft AMSL).

DNAPL - Dense Non-Aqueous Phase Liquid

Table 6
Seepage Velocity Calculations
Atlanta Gas Light Company
Former Manufactured Gas Plant Site
Macon, Georgia

Hydrogeologic	Portion of Site	Hydraulic Conductivity	Porosity	Febr	uary 20, 2017	Monitoring wells used for gradient
Unit	Tortion of Site	(ft/day)	(unitless)	ess) Gradient Velocity (ft/day)		calculation
Alluvial	Western	4.75	2.50E-01	6.00E-02	1.14E+00	MW-109 and MW-08
Alluvial	Eastern	4.75	2.50E-01	1.34E-02	2.55E-01	MW-102 and MW-28
Bedrock*	Western	1.37	1.42E-02	1.94E-02	1.88E+00	MW-08D; MW-300D; and MW-308D
Bedrock*	Western	1.37	6.00E-01	1.94E-02	4.44E-02	MW-08D; MW-300D; and MW-308D
Bedrock*	Western	2.58	1.42E-02	1.94E-02	3.52E+00	MW-08D; MW-300D; and MW-308D
Bedrock*	Western	2.58	6.00E-01	1.94E-02	8.33E-02	MW-08D; MW-300D; and MW-308D
Bedrock*	Eastern	1.37	1.42E-02	1.89E-02	1.83E+00	MW-08D; MW-306D; MW-300D
Bedrock*	Eastern	1.37	6.00E-01	1.89E-02	4.33E-02	MW-08D; MW-306D; MW-300D
Bedrock*	Eastern	2.58	1.42E-02	1.89E-02	3.43E+00	MW-08D; MW-306D; MW-300D
Bedrock*	Eastern	2.58	6.00E-01	1.89E-02	8.11E-02	MW-08D; MW-306D; MW-300D

<sup>\*</sup>Bedrock porosity range taken from <u>Applied Hydrogeology 4th Ed.</u> Multiple bedrock gradients are presented from different areas of the site. Alluvial porosity used in velocity calcuation is from the FFS, 2008.

Vs=Ki/n

where: Vs=seepage velocity (Velocity)

K=hydraulic conductivity

i=horizontal hydraulic gradient (Gradient)

n=porosity

### Table 7 Alluvial Groundwater Analytical Results February 2017 Atlanta Gas Light Company Former Manufactured Gas Plant Macon, Georgia

		Type 2	Type 4	AMW-2	AMW-6	AMW-11	AMW-12	AMW-13	AMW-14	AMW-15	MW-08	MW-12R	MW-12IR	MW-14	MW-14I	MW-15	MW-21	MW-	101	MW-102	MW-103	MW-104	MW-108	MW-109	MW-205	MW-400	0	MW-401
Parameter	Units (	(Residential) RRS	(Non-residential) RRS	02/21/17	02/21/17	02/22/17	02/21/17	02/22/17	02/21/17	02/23/17 DUP	-2 02/22/17	02/24/17	02/24/17	02/24/17	02/23/17	02/23/17	02/27/17	02/23/17	DUP-1	02/27/17	02/24/17	02/24/17	02/22/17	02/22/17	02/22/17	02/23/17	DUP-3	02/24/17
		Appli	cable RRS	Type 4	Type 2	Type 4	Type 4	Type 4	Type 4	Type 2	Type 2	Type 4	Type 2	Тур	e 4	Type 2	Type 4	Type 4		Type 4								
Groundwater Elevation	ft. AMSL	N/A	N/A	314.34	315.22	315.85	312.84	316.05	316.78	315.84	294.57	293,38	289.23	288.90	288.31	293.80	290.55	297.	.22	292.97	297.14	289.73	312.30	307.91	315.22	294.50		294.03
Field Groundwater Quality Paramet	ers									ı.																		
рН	SU	N/A	N/A	6.48	6.45	6.12	5.65	5.71	6.38	5.71	6.44	3.88	5.58	6.21	5.93	5.11	5.37	6.0	)5	5.56	5.25	75.73	6.37	4.90	6.37	5.41	1	6.05
Specific Conductance	μS/cm	N/A	N/A	202.4	599.4	655.0	356.8	117.30	258.3	175.7	214.11	684.0	625.7	158.90	298.50	979.90	263.6	366	.20	760.7	84.7	179.2	465.90	170.20	289.0	806.5		339.9
Temperature	°Celsius	N/A	N/A	18.85	21.49	21.24	21.05	23.77	23.21	22.21	20.51	20.48	21.62	22.09	21.24	18.47	17.37	20.0	08	17.27	22.02	22.49	21.79	20.92	22.40	21.88		21.43
Dissolved Oxygen	mg/L	N/A	N/A	2.81	4.68	0.32	3.27	1.64	5.88	1.08	6.44	0.17	0.22	5.24	0.11	0.23	1.78	0.0	)8	0.97	5.69	2.47	0.09	1.70	0.91	0.24		0.88
Oxidation-Reduction Potential	mV	N/A	N/A	111.7	106.8	67.60	137.5	191.20	113.8	128.7	106.6	220.9	83.4	131.10	56.60	180.00	80.4	98.	.3	109.0	500.7	149.6	-59.60	151.2	-69.80	148.1		61.3
Turbidity	NTU	N/A	N/A	2.33	9.2	3.11	1.00	1.75	7.88	6.85	5.15	1.79	9.20	15.7	2.32	1.23	2.65	3.6	65	0.71	3.75	7.60	1.76	0.27	5.50	3.12		9.1
Organic Constituents					•							•																
Volatile Organic Compounds																												
Benzene	μq/L	5*	9	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	78 80	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	35	<5.0	<5.0	<5.0
Carbon Disulfide	μg/L	4,000*	4,000*	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0 <5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
Ethylbenzene	μg/L	700*	2,300	<5.0	<5.0	<5.0	<5.0	<5.0	14	14 17	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	50	<5.0	<5.0	<5.0
Toluene	μg/L	1,000*	1,100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0 <5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.5	<5.0	<5.0	<5.0
Total Xylenes	μg/L	31,000	200,000	<5.0	<5.0	<5.0	<5.0	<5.0	16	10 12	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	36	<5.0	<5.0	<5.0
Semivolatile Organic Compounds					•							•																
Acenaphthene	μg/L	2,000*	6,100	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	0.71	11 10	< 0.50	< 0.50	1.6	< 0.50	1.9	< 0.50	< 0.50	1.4	<50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	25	< 0.50	< 0.50	0.83
Acenaphthylene	μg/L	470	3,100	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.9 <10	0 <1.0	<1.0	<1.0	<1.0	1.8	<1.0	<1.0	<1.0	<100	<1.0	<1.0	<1.0	<1.0	<1.0	3.0	<1.0	<1.0	<1.0
Anthracene	μg/L	4,700	31,000	< 0.050	< 0.050	0.066	0.053	< 0.050	< 0.050	0.49 <5.0	< 0.050	0.072	0.24	< 0.050	< 0.050	0.074	< 0.050	0.22	<5.0	< 0.050	< 0.050	< 0.050	0.29	0.099	1.3	0.11	0.12	0.060
Benzo[a]anthracene	μg/L	1.17	3.92	0.019	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050 <5.0	< 0.050	< 0.050	0.26	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<5.0	0.069	< 0.050	< 0.050	< 0.050	< 0.050	0.11	< 0.050	< 0.050	< 0.050
Benzo[a]pyrene	μg/L	0.2*	0.39	0.12	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050 <5.0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<5.0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Benzo[b]fluoranthene	μg/L	1.17	3.92	0.12	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	<0.10 <10	< 0.10	<0.10	<0.10	<0.10	< 0.10	<0.10	< 0.10	<0.10	<10	<0.10	< 0.10	<0.10	< 0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo[g,h,i]perylene	μg/L	10	10	0.15	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10 <10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<10	<0.10	< 0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo[k]fluoranthene	μg/L	11.7	39.2	0.14	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050 <5.0		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<5.0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050		< 0.050	< 0.050
Chrysene	μg/L	117	392	0.20	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050 <5.0		< 0.050	0.17	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<5.0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.12		<0.050	< 0.050
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	0.11	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10 <10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
2,4-Dimethylphenol	μg/L	700*	700*	<10	<10	<10	<10	<10	<10	<10 <10		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Fluoranthene	μg/L	1,000*	4,100	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	0.29 <10		<0.10	3.1	<0.10	0.11	<0.10	<0.10	0.12	<10	<0.10	<0.10	<0.10	<0.10	<0.10	1.7		<0.10	<0.10
Fluorene	μg/L	1,000*	4,100	<0.10	<0.10	<0.10	<0.10	<0.10	0.28	4.0 4.0		<0.10	3.6	<0.10	0.77	<0.10	<0.10	1.7	<10	<0.10	<0.10	<0.10	<0.10	0.17	10		<0.10	<0.10
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	0.13	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<0.050 <5.0		< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	<5.0	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050		<0.050	< 0.050
2-Methylphenol	μg/L	780	5,100	<10	<10	<10	<10	<10	<10	<10 <10		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
3 & 4 Methylphenol	μg/L	78	510	<10	<10	<10	<10	<10	<10	<10 <10		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Naphthalene	μg/L	20*	20*	<0.50	<0.50	< 0.50	<0.50	< 0.50	18	12 11		< 0.050	7.9	<0.50	<0.50	< 0.50	< 0.50	43	21	< 0.50	<0.50	<0.50	<0.50	<0.50	46	0.56	0.55	<0.50
Phenanthrene	μg/L	470	3,100	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.30	3.2 <5.0		< 0.050	0.25	< 0.050	< 0.050	< 0.050	<0.050	1.0	1.0	<0.050	< 0.050	< 0.050	<0.050	0.10	5.9		< 0.050	< 0.050
Phenol	μg/L	9,390	61,000	<10	<10	<10	<10	<10	<10	<10 <10		<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Pyrene	μg/L	1,000*	3,100	0.052	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.20 <5.0	0.16	0.18	4.2	< 0.050	0.29	< 0.050	< 0.050	0.084	0.084	< 0.050	< 0.050	< 0.050	0.27	< 0.050	1.8	0.14	0.14	1.0

Notes:

Analyte was detected above laboratory detection limit

No exceedances of residential (Type 2) RRS at locations where residential cleanup standards apply.

Analyte concentration exceeds the non-residential (Type 4) RRS

\* Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Stamdard Units

µ/cm - microsiemens per centimeter

µg/L - micrograms per liter

mg/L - milligrams per liter

my - millivotts

NTU - nephelometric turbidity units

NTU - nephelometric turbidity units

NTA - RRS are not applicable to this parameter

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

# Table 8 Bedrock Groundwater Analytical Results February 2017 Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

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Parameter	Units	Type 2	Type 4	MW-12DRR	MW-12DD	MW-22D	MW-23D	MW-24D	MW-26D	MW-27D	MW-108D	MW-	110D	MW-112D	MW-113D	MW-200DR	MW-204D	MW-205	5D	MW-205DD	MW-206D	MW-207D	MW-300D	MW-301D	MW-302D	MW-302DD	MW-304D	MW-305D	MW-306D	MW-307D	MW-308D
i di diliotoi	O.I.I.S	(Residential) RRS (N	Ion-residential) RRS	02/22/17	02/23/17	02/21/17	02/22/17	02/28/17	02/22/17	02/21/17	02/22/17	02/23/17	DUP-4	02/22/17	02/22/17	02/24/17	02/24/17	02/24/17	DUP-5	02/24/17	02/27/17	02/23/17	02/22/17	02/21/17	02/21/17	02/23/17	02/23/17	02/27/17	02/24/17	02/22/17	02/22/17
		Applicab	le RRS	Type 4	Type 4	Type 4	Type 4	Type 2	Type 2	Type 4	Type 4	Тур	e 4	Type 4	Type 4	Type 4	Type 4	Type 2	2	Type 2	Type 4										
Groundwater Elevation	ft. AMSL	N/A	N/A	290.20	281.09	284.60	281.58	287.25	286.36	279.97	307.19	288	.77	285.21	286.02	289.74	288.92	288.75	5	279.84	288.95	289.31	296.51	294.01	288.30	279.62	287.46	279.49	288.20	286.21	307.22
Field Groundwater Quality Paramete	ters					•	•														•			•		•	•	•		•	
pH	SU	N/A	N/A	6.42	7.63	6.91	6.04	5.70	10.22	6.46	7.70	6.3	30	9.22	5.80	6.53	6.22	6.54		8.50	6.23	6.80	6.11	6.06	5.69	7.46	6.55	12.36	11.42	12.32	12.24
Specific Conductance	μS/cm	N/A	N/A	493.6	225.20	418.20	385.10	49.20	234.20	215.9	151.60	518	.60	287.40	355.70	454.2	487.30	673.0		383.60	518.9	543.10	539.00	774.00	1028.2	557.3	688.9	5070.3	1574.6	8534.90	4220.50
Temperature	°Celsius	N/A	N/A	21.91	22.45	21.21	22.56	17.36	21.46	19.5	22.45	23.	35	22.10	22.17	21.06	23.43	22.92		22.85	21.61	22.93	20.70	20.53	22.62	22.27	20.24	21.05	22.85	21.33	23.21
Dissolved Oxygen (YSI)	ma/L	N/A	N/A	0.18	0.34	0.26	0.22	0.38	0.26	0.11	0.30	0.1	19	5.23	0.20	0.21	0.21	0.12		0.49	0.11	0.11	0.11	0.29	6.21	0.21	0.07	3.56	5.42	1.54	2.59
Oxidation-Reduction Potential (ORP)	mV	N/A	N/A	1.00	-117.00	-97.30	43.20	90.3	35.90	-13.1	-149.30	-48	.50	71.10	68.60	-58.8	-16.80	-55.1		26.40	-4.60	-85.10	5.30	-17.00	25.1	-167.7	-10.2	-47.4	-28.8	-40.90	-4.00
Turbidity	NTU	N/A	N/A	0.74	1.74	0.66	7.8	1.39	8.01	5.26	0.90	5.9	95	1.43	1.10	1.51	1.81	0.90		1.29	11.48	8.45	3.69	0.50	12.65	2.64	114	1.46	0.66	3.83	5.62
Organic Constituents																											·				
Volatile Organic Compounds																															-
Benzene	μg/L	5*	9	470	35	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	70	63	<5.0	<5.0	110	490	4,300	4,300	<5.0	19	<5.0	<5.0	9.3	5.4	6.4	<5.0	9,600	<5.0	<5.0	11
Carbon Disulfide	μg/L	4,000*	4,000*	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<250	<5.0	<5.0	<5.0
Ethylbenzene	μg/L	700*	2,300	150	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	150	160	<5.0	<5.0	58	340	860	950	<5.0	89	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	250	5.9	<5.0	<5.0
Toluene	μg/L	1,000*	1,100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	12	14	<5.0	6.3	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5,000	<5.0	<5.0	<5.0
Total Xylenes	μg/L	31,000	200,000	140	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	5.7	6.0	<5.0	<5.0	5.2	19	580	420	<5.0	11.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	960	<5.0	<5.0	<5.0
Semivolatile Organic Compounds																															-
Acenaphthene	μg/L	2,000*	6,100	36	0.65	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	46	55	< 0.50	< 0.50	28	50	120	140	2.3	30	1.4	< 0.50	0.75	2.5	< 0.50	< 0.50	3.3	1.3	1.3	< 0.50
Acenaphthylene	μg/L	470	3,100	6.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	1.9	1.8	<1.0	<1.0	2.2	2.3	1.4	<1.0	<1.0	1.5	<1.0	<1.0	<1.0	7.2	<1.0	<1.0	51	<1.0	<1.0	<1.0
Anthracene	μg/L	4,700	31,000	4.5	< 0.050	< 0.050	< 0.050	0.17	< 0.050	< 0.050	< 0.050	6.2	5.5	< 0.050	0.060	1.9	4.1	5.3	4.9	0.051	0.55	< 0.050	< 0.050	0.25	1.9	< 0.050	< 0.050	1.5	0.053	0.29	0.078
Benzo[a]anthracene	μg/L	1.17	3.92	0.15	< 0.050	< 0.050	< 0.050	0.56	< 0.050	< 0.050	0.085	0.20	0.17	< 0.050	< 0.050	0.065	0.12	< 0.050	< 0.050	< 0.050	0.081	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.099	< 0.050	< 0.050	< 0.050
Benzo[a]pyrene	μg/L	0.2*	0.39	< 0.050	< 0.050	< 0.050	< 0.050	0.98	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Benzo[b]fluoranthene	μg/L	1.17	3.92	<0.10	<0.10	<0.10	<0.10	1.1	<0.10	< 0.10	<0.10	<0.10	<0.10	<0.10	< 0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	< 0.10	< 0.10	<0.10	< 0.10	0.12	<0.10	<0.10	< 0.10
Benzo[g,h,i]perylene	μg/L	10	10	<0.10	<0.10	<0.10	<0.10	1.1	<0.10	< 0.10	<0.10	<0.10	<0.10	<0.10	< 0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	< 0.10	< 0.10	<0.10	< 0.10	< 0.10	<0.10	< 0.10	<0.10
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 0.050	< 0.050	< 0.050	< 0.050	1.0	< 0.050	< 0.050	0.052	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Chrysene	μg/L	117	392	0.12	< 0.050	< 0.050	< 0.050	0.53	< 0.050	< 0.050	0.081	0.16	0.14	< 0.050	< 0.050	< 0.050	0.081	< 0.050	< 0.050	< 0.050	0.057	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.076	< 0.050	< 0.050	< 0.050
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	<0.10	<0.10	<0.10	1.0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	< 0.10	< 0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	< 0.10	<0.10	<0.10	< 0.10	< 0.10	<0.10	< 0.10	<0.10
2,4-Dimehylphenol	μg/L	700*	700*	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Fluoranthene	μg/L	1,000*	4,100	5.0	<0.10	< 0.10	<0.10	<0.10	<0.10	<0.10	<0.10	4.5	4.1	<0.10	<0.10	3.0	4.0	1.6	1.6	<0.10	1.3	1.1	<0.10	0.16	0.96	<0.10	< 0.10	1.1	0.11	0.27	<0.10
Fluorene	μg/L	1,000*	4,100	32	0.33	< 0.10	<0.10	<0.10	<0.10	<0.10	<0.10	15	19	<0.10	<0.10	20	17	29	34	0.40	9.50	0.54	<0.10	3.8	6.8	0.24	< 0.10	9.0	0.57	0.42	<0.10
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.050	< 0.050	0.056	< 0.050	1.0	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
2-Methylphenol	μg/L	780	5,100	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
3 & 4 Methylphenol	μg/L	78	510	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Naphthalene	μg/L	20*	20*	1600	4.3	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	760	1,100	< 0.50	< 0.50	680	2,000	3,400	3,700	< 0.50	530	< 0.50	< 0.50	430	5.5	< 0.50	< 0.50	3,500	< 0.50	1.7	< 0.50
Phenanthrene	μg/L	470	3,100	17.00	0.16	< 0.50	< 0.050	< 0.50	< 0.050	< 0.050	< 0.050	26	32	< 0.050	< 0.050	5.4	20	31	37	0.068	3.5	< 0.050	< 0.050	1.3	11	< 0.050	< 0.050	9.3	0.46	2.6	0.060
Phenol	μg/L	9,390	61,000	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10	<10
Pyrene	μg/L	1,000*	3,100	5.3	< 0.050	< 0.050	< 0.050	0.055	< 0.050	< 0.050	< 0.050	5.6	5.1	< 0.050	< 0.050	3.1	4.5	1.7	1.5	< 0.050	3.3	2.0	< 0.050	0.11	1.2	< 0.050	< 0.050	1.1	0.12	0.30	< 0.050

Notes:
Analyte was detected above laboratory detection limit
Analyte concentration exceeds the residential (Type 2) RRS
Analyte concentration exceeds the nesidential (Type 4) RRS
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All ANEL 1 etc. Above Mean East Level
RRS - Risk Reduction Standard
SU - Standard Units
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PScient - Risk Reduction Standard
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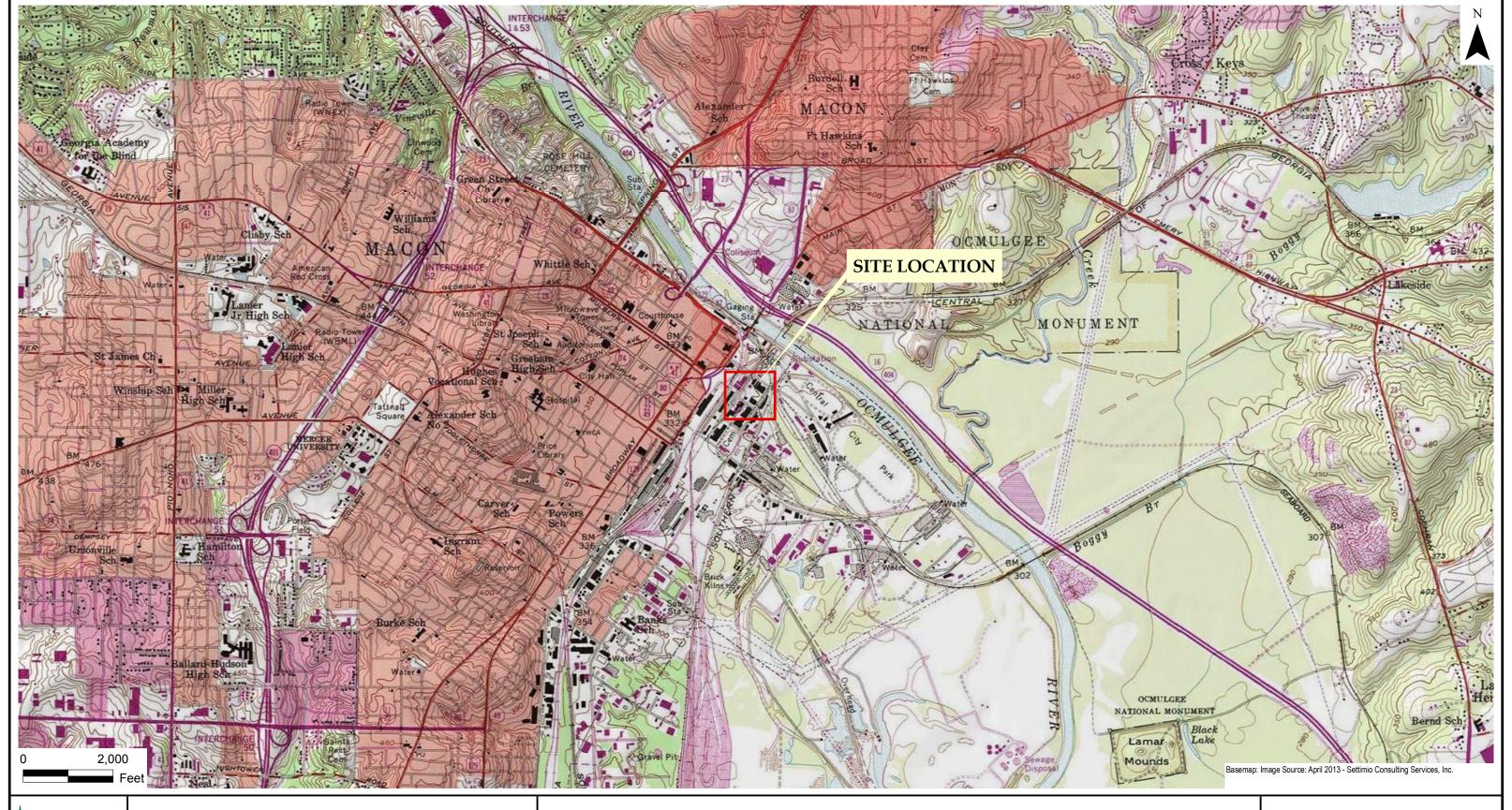
### Bedrock Groundwater Summary of COI Trends

#### Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

Well	COI	Evaluation of Concentrations and Trends
MW-12DRR	Benzene, naphthalene	Benzene concentrations showed a decreasing trend from August 2013 through August 2016. The February 2017 concentrations were higher than those reported for the last four years and remain consistent with historical concentrations.
MW-12DD	Benzene, naphthalene	Benzene from the February 2017 event (35 µg/L) increased from the April 2016 sampling event (15 µg/L) and decreased from the February 2015 sampling event (44 µg/L). Benzene concentrations remain well below the historic high (1,800 µg/L, September 2002). The naphthalene concentration during the February 2017 sampling event was 4.3 µg/L which is below the RRS of 20 µg/L. Naphthalene has not been detected above the RRS since August 2014. Overall concentration trends for benzene and naphthalene appear to be decreasing.
MW-22D	Indeno(1,2,3-cd)pyrene	Indeno(1,2,3-cd)pyrene was detected in MW-22D at 0.056 µg/L, slightly above the laboratory detection limit of 0.050 µg/L in February 2017. The low concentration detected during the February 2017 event is an anomaly and likely a reflection of the precision of the laboratory analysis rather than a change in the plume extent, as the detection is very low, and no other COIs have been detected in the well. The well is located in a Type 4 area, where the indeno(1,2,3-cd)pyrene RRS is 3.92 µg/L. No other VOCs or SVOCs have ever been detected at MW-22D.
MW-24D		Prior to August 2014, benzene and naphthalene concentrations at MW-24D were predominantly non-detect, with occasional detections below the Type 2 RRS. Detections observed between August 2013 and August 2016 appear to be related to bedrock disturbances (i.e., drilling and/or DNAPL recovery events) rather than resulting from groundwater flow under steady-state conditions. Benzene and naphthalene were below detection limits in February 2017, supporting that the 2013 and 2016 detections were likely due to the drilling and/or VEFR activities rather than indicative of plume migration given the February 2017 sample results.
MW-23D, MW-26D, MW-27D		No VOCs or SVOCs have ever been detected in MW-23D or in MW-26D. No VOCs or SVOCs have ever been detected in MW-27D, with the exception of pyrene in September 2003 at 12 µg/L, significantly below non-residential, Type 4 the RRS of 3,100 µg/L.
MW-110D	Benzene, naphthalene	Benzene concentrations in February 2017 (70 µg/L) show a decrease since August 2016 (88 µg/L) and April 2016 (96 µg/L) and are the lowest reported since well installation. Naphthalene concentrations have generally been decreasing. The February 2017 concentration (1,100 µg/L) is well below the August 2016 naphthalene concentration of 3,400 µg/L (duplicate sample) and below the April 2016 concentration (1,600 µg/L), representing an 83% reduction from the highest concentration of 6,800 µg/L (August 2010).
MW-200DR	Benzene, naphthalene	Benzene and naphthalene concentrations in February 2017 (110 μg/L and 680 μg/L, respectively) increased compared to results obtained since August 2015. Groundwater monitoring will to continue to evaluate COI trends.
MW-205D	Benzene, naphthalene	No observable trends, although benzene concentrations since August 2014 appear to be decreasing. February 2017 COI detections are consistent with historical detections.
MW-206D	Benzene, naphthalene	Benzene was detected in MW-206D (19 µg/L) in February 2017 for the first time since 2013. Naphthalene was detected in MW-206D (530 µg/L) in February 2017 for the first time since 2012. Benzene and naphthalene concentrations in MW-206D remain below their historic highs in February 2012. Monitoring will continue in order to evaluate a trend in MW-206D.
MW-207D		Neither benzene nor naphthalene has been detected at MW-207D since February 2013. All other VOC and SVOC detections have been significantly below non-residential Type 4 RRS.
MW-301D	Benzene, naphthalene	Benzene was detected in the sample collected in February 2017 (9.3 µg/L) slightly above the Type 4 RRS of 9 µg/L. Naphthalene was detected in the sample collected in February 2017 (430 µg/L). Although benzene and naphthalene concentrations increased in February 2017 compared to previous events, overall COI concentrations are decreasing. Monitoring will continue in order to determine if the February 2017 results are anomalous or indicative of a trend.
MW-302D		Benzene and naphthalene were detected in February 2017 (5.4 µg/L and 5.5 µg/L, respectively). These concentrations are below the Type 4 RRS and significantly below the benzene and naphthalene concentration highs of 550 µg/L and 300 µg/L, respectively, in February 2014.
MW-305D	Benzene, naphthalene	Benzene concentrations at MW-305D have fluctuated since installation in 2014, ranging from 3,700 µg/L (August 2015) to 22,000 µg/L (August 2016). The February 2017 results (9,600 µg/L) show a decrease since August 2016. Naphthalene concentrations in MW-305D have also fluctuated from a low of 220 µg/L in August 2015 to a high of 9,600 µg/L in August 2016. The February concentration (3,500 µg/L) shows a decrease compared with August 2016. The effects of bedrock groundwater disturbances in the vicinity of MW-305D are not known at this time.
MW-306D		Benzene and naphthalene concentrations at MW-306D have decreased since well installation and neither was detected during the February 2017 sampling event.
MW-307D		Benzene has not been detected at MW-307D since February 2014. Several COI are routinely detected (including naphthalene), however all detections are significantly less than the Type 4 RRS and none show an increasing trend.
MW-308D	Benzene	MW-308D is located in the western portion of the Site adjacent to the new ISS footprint. Benzene concentrations have been above the Type 4 RRS since February 2015; however, the August 2016 and February 2017 concentrations show a decreasing trend from the August 2015 and April 2016 results. Additional data is needed to determine a trend for benzene. Naphthalene has only been detected at the well once (April 2016), at a concentration of 0.87 μg/L that is significantly below the Type 4 RRS of 20 μg/L.

# **Figures**

Project No. 0366660 Atlanta Gas Light Company





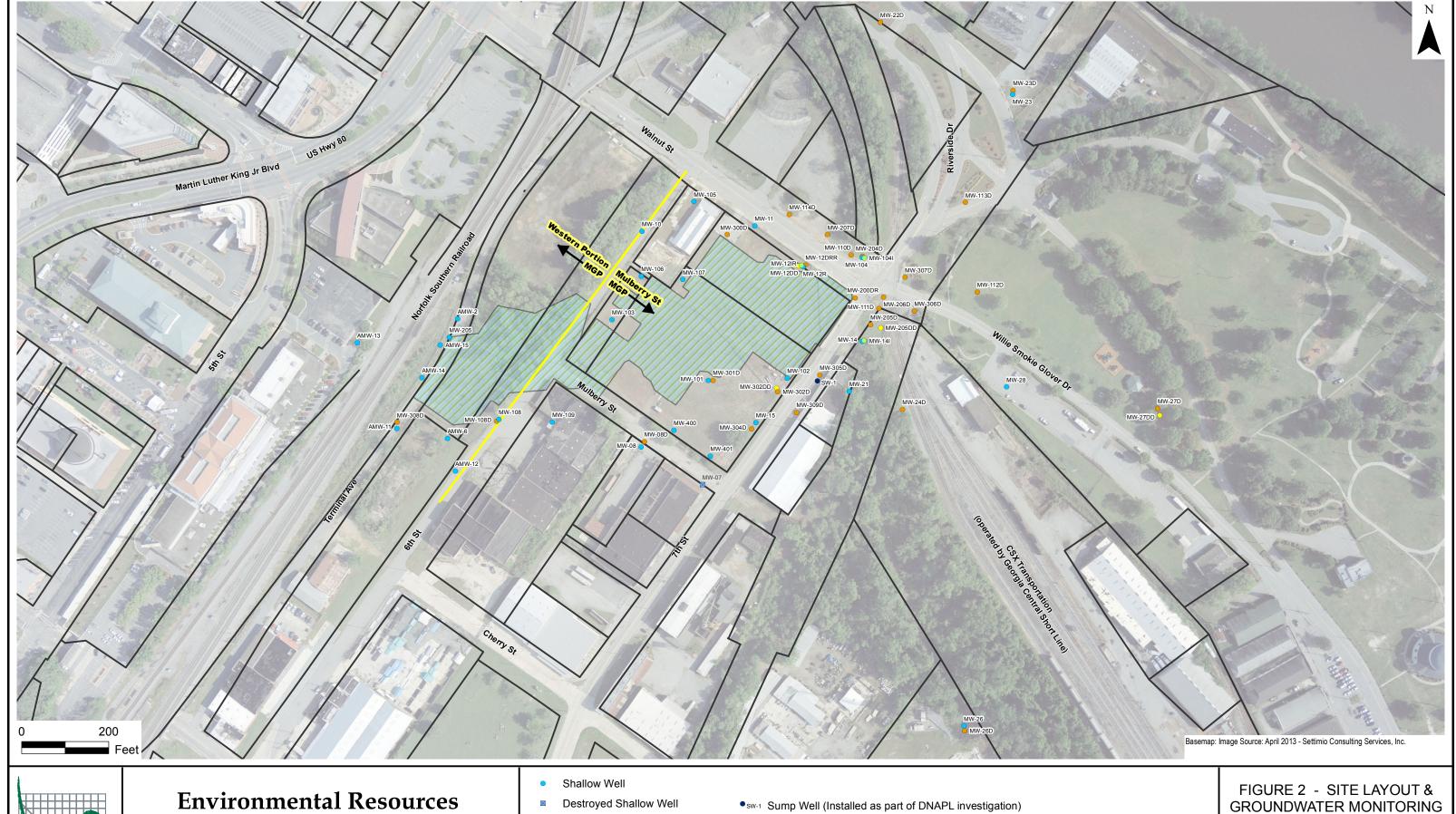
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DATE:	4/5/2017	SCALE:	AS SHOWN	REVISION:	0						
FILE: 0366660 AGL Resources Macon GW Pathforward.AR\05 - ERM Outputs\Figures\AGL_Macon\MXD\2017 04 4thVRPPrgRpt\Fig2.mxd											

CONTOUR INTERVAL 10 FEET DOTTED LINES REPRESENT 5-FOOT CONTOURS NATIONAL GEODETIC VERTICAL DATUM OF 1929



# FIGURE 1 - TOPOGRAPHIC SITE LOCATION MAP

Atlanta Gas Light Company
Former Manufactured Gas Plant
Macon, Bibb County, Georgia





# Management

DESIGN:	H Sartain	DRAWN:	S Vizuete	CHKD.:	A Reimer
DATE:	5/19/2017	SCALE:	AS SHOWN	REVISION:	0

- Intermediate Well
- Shallow Bedrock Well
- Deep Bedrock Well
- Property Line

ISS Mass

# **GROUNDWATER MONITORING** WELL NETWORK

Atlanta Gas Light Company

Former Manufactured Gas Plant

Macon, Bibb County, Georgia

## **APPLICANT & QUALIFYING PROPERTIES**

(306)

Owner: AGLC (Applicant)

Tax Parcel ID: R073-0384

(137)(122)

Owner: Macon-Bibb Tax Parcel ID: R074-UTIL, R074-Co Urban Dev Auth 0223, R074-0205

(A)

Owner: City of

Tax Parcel ID: N/A

(B)

Owner: Norfolk Southern

Tax Parcel ID: N/A

E

**Owner: Prodigy** Holdings LLC

Tax Parcel ID: Sub Parcel of R081-0135

# **ADJOINING PROPERTIES**

**Owner: Norfolk** Southern

Tax Parcel ID: N/A

(125)(151

Owner: Bobby C.

Tax Parcel ID: R074-0218, R074-

(230)

Owner: Bernard B. Smith et al

Tax Parcel ID: R074-0204

(150)

Owner: Bibb County Tax Parcel ID: ST89-0027

(280)

**Owner: Seventh** Street Invest LLC

Tax Parcel ID: R074-0209

D

Owner: CSXT

Tax Parcel ID: N/A

(311)(148)

(310)(454)

Owner: ECI Contracting Group

**Owner: Prodigy** Holdings LLC

Owner: Marillac (174) **Properties LLC** 

(250)

(380)

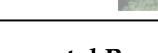
**Mercer University** 

**Macon-Bibb County Transit Authority** 

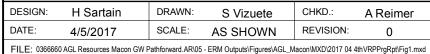
Tax Parcel ID: R073-0399











// Macon-Bibb County Urban Development Authority Propoerty (Agreement Pending)

(c)

250

(306)

 $(\mathsf{A})$ 

(137)

(230)

D

7th St

(280)

(174)

122

Unnumbered Parcel (per Macon-Bibb County Tax Assessors GIS)

Address Number (per Macon-Bibb County Tax Assessors GIS)

Property Line

VRP Applicant & Qualifying Properties Boundary



C

 $\begin{bmatrix} \mathbf{C} \end{bmatrix}$ 

(151)

(125)

(A)

(150)

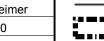
D

C

Riverside Dr

Atlanta Gas Light Company Former Manufactured Gas Plant Macon, Bibb County, Georgia

Basemap: Image Source: April 2013 - Settimio Consulting Services, Inc.



5th St

**Terminal Ave** 

6th St

(380)

(454)

Sub Parcel

Norfolk Southern Railroad

(E)

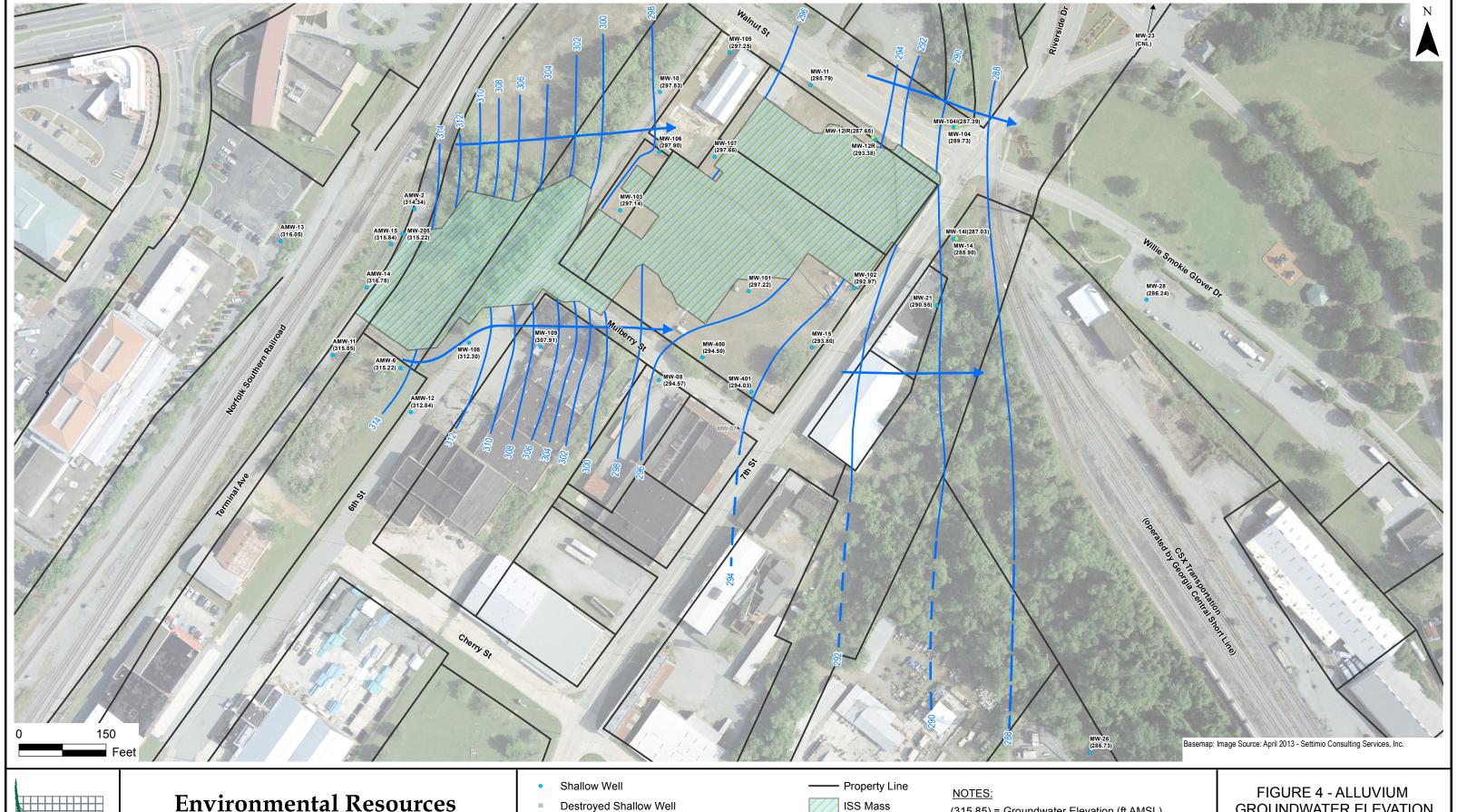
(310)

(148)

(311)

Mulberry St

В





I	DESIGN:	H Sartain	DRAWN:	S Vizuete	CHKD.:	A Reimer						
ı	DATE:	5/10/2017	SCALE:	AS SHOWN	REVISION:	1						
ı	FILE: 020000 ACL Decourse Massa CW Delbfr ward ADIOS. FDM Outside Figure at ACL Massa MVD 2047 04 4th /DDD Particles											

Destroyed Shallow Well

Intermediate Well

Deep Bedrock Well

Groundwater Elevation Contour (ft AMSL)

Inferred Groundwater Elevation Contour (ft AMSL)

→ Groundwater Flow Direction

(315.85) = Groundwater Elevation (ft AMSL)

(NM) = Not Measured

(CNL) = Could Not Locate

FT AMSL = Feet Above Mean Sea Level

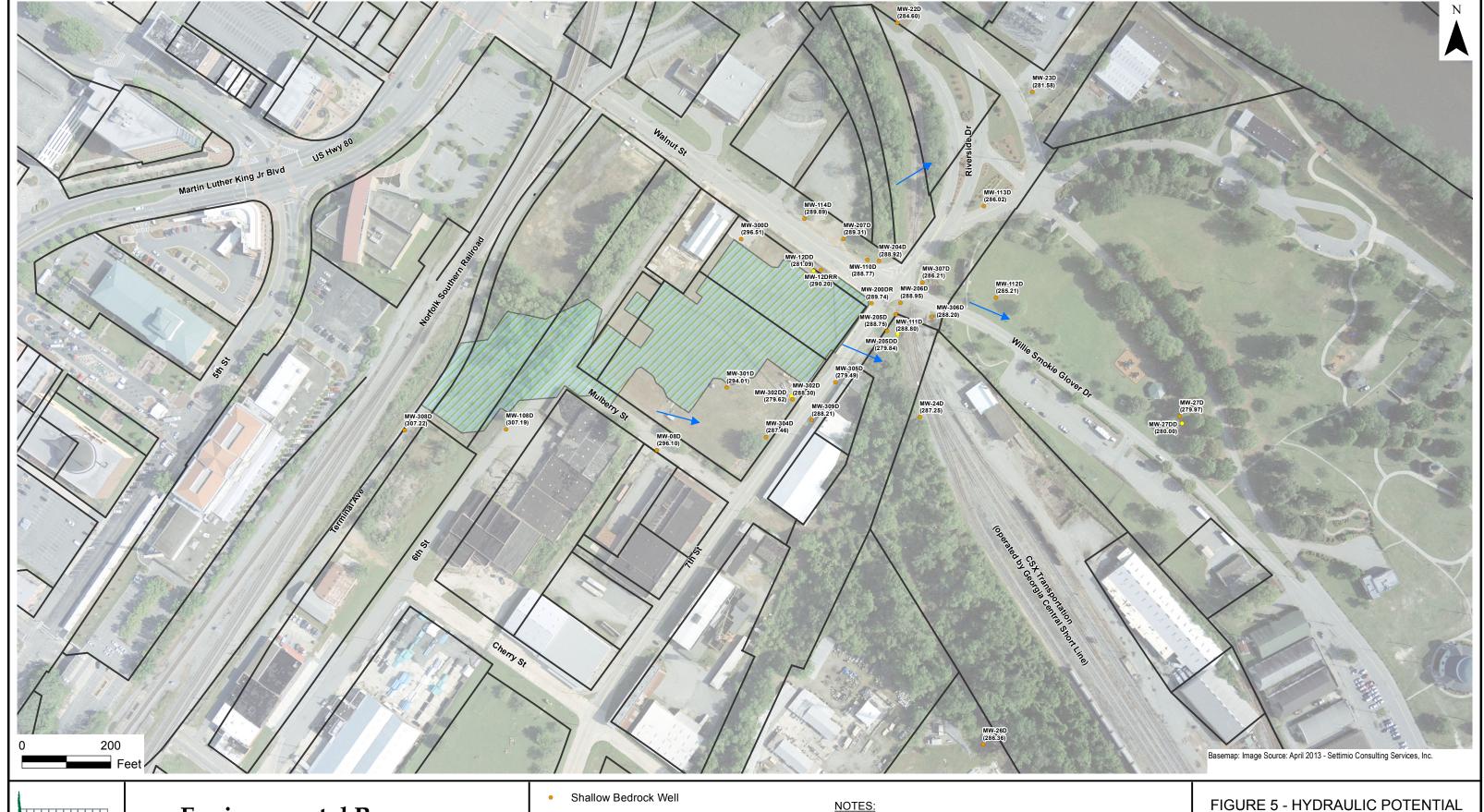
Intermediate wells MW-14I and MW-12IR not used in contouring.

**GROUNDWATER ELEVATION** MAP - FEBRUARY 20, 2017

Atlanta Gas Light Company

Former Manufactured Gas Plant

Macon, Bibb County, Georgia





DESIGN:	H Sartain	DRAWN:	S Vizuete	CHKD.:	A Reimer	
DATE:	5/19/2017	SCALE:	AS SHOWN	REVISION:	0	
ru c.						

- Deep Bedrock Well
- Apparent Groundwater Flow Direction
- Property Line
- ISS Mass

(307.19) = Groundwater Elevation (Ft AMSL)

(NM) = Not Measured

Deep bedrock wells MW-12DD, MW-27DD,

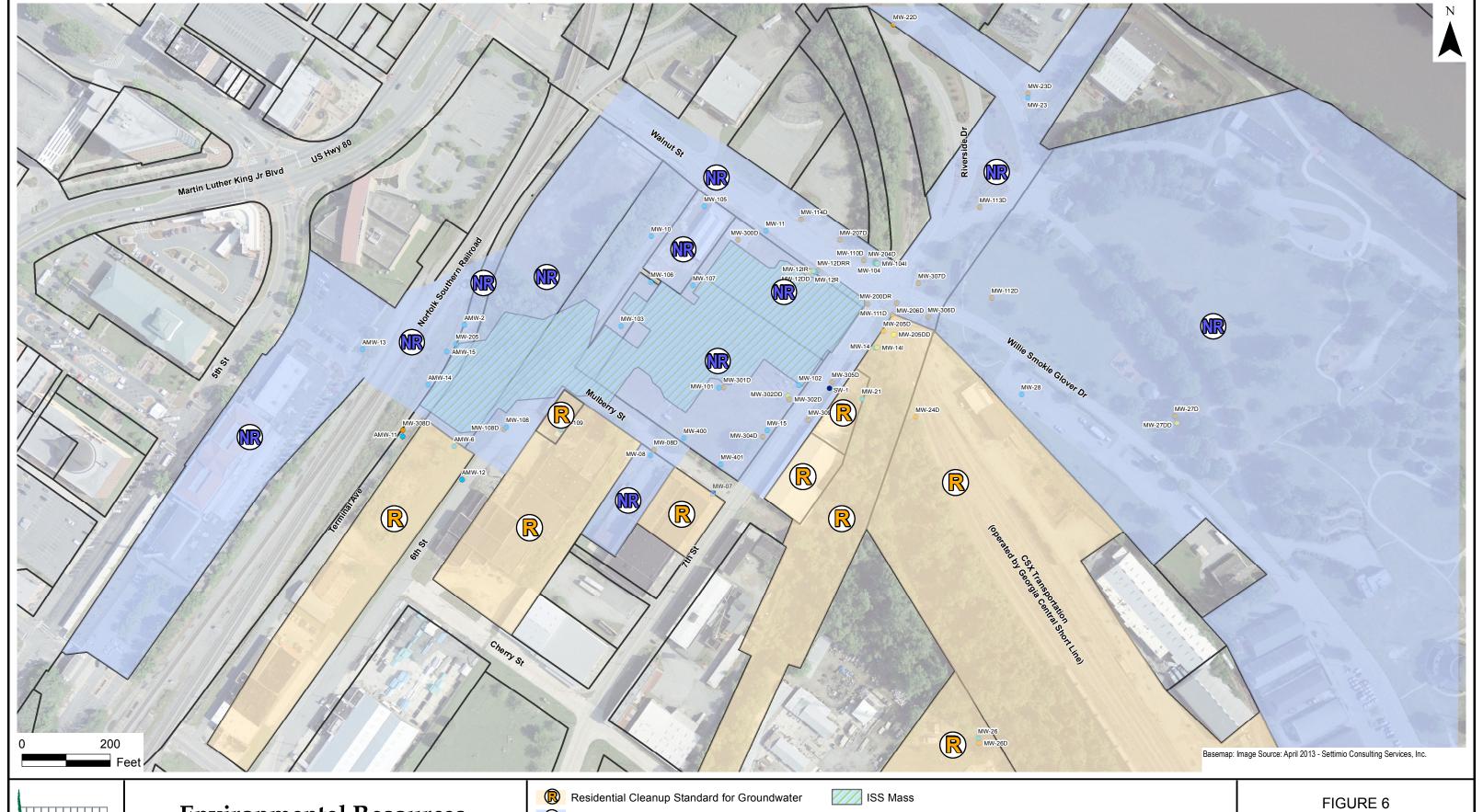
FT AMSL = Feet Above Mean Sea Level

MW-205DD and MW-302DD not used in flow direction calculations.

WELLS - FEBRUARY 20, 2017 Atlanta Gas Light Company

IN SHALLOW BEDROCK

Former Manufactured Gas Plant Macon, Bibb County, Georgia





DESIGN:	H Sartain	DRAWN:	S Vizuete	CHKD.:	A Reimer	
DATE:	5/19/2017	SCALE:	AS SHOWN	REVISION:	0	
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- Non-Residential Cleanup Standard for Groundwater —— Property Line
- Shallow Well
- Destroyed Shallow Well
- Intermediate Well
- Shallow Bedrock Well
- Deep Bedrock Well

# FIGURE 6 PARCEL-SPECIFIC CLEANUP STANDARDS

Atlanta Gas Light Company

Former Manufactured Gas Plant

Macon, Bibb County, Georgia





DESIGN:	H Sartain	DRAWN:	S Vizuete	CHKD.:	A Reimer
DATE:	5/10/2017	SCALE:	AS SHOWN	REVISION:	1
FILE COCCCO A CL. Dannara Manage ON Dalle Council A DIOS. FDM Outstal Firm and A DIA Management of the Annual Management of the Council Annual Management of the Coun					

- Destroyed Shallow Well
- Intermediate Well
- Property Line ISS Mass

## **Benzene Concentration Contour**

>9  $\mu$ g/L (Type 4 RRS), <100  $\mu$ g/L

Sample collected February 2017 unless otherwise indicated.

- (35) Benzene Concentration
- (78/80) Benzene Concentration (Normal sample/ Duplicate sample)

Sample result ND or < Applicable Cleanup Goal

# ALLUVIAL GROUNDWATER FEBRUARY 2017

Atlanta Gas Light Company Former Manufactured Gas Plant Macon, Bibb County, Georgia





DESIGN:	H Sartain	DRAWN:	S Vizuete	CHKD.:	A Reimer	
DATE:	5/12/2017	SCALE:	AS SHOWN	REVISION:	2	
						_

- Intermediate Well
- Property Line
- ISS Mass

## **Naphthalene Concentration Contour**

>20  $\mu$ g/L (Type 4 RRS), <100  $\mu$ g/L

Sample collected February 2017 unless otherwise indicated.

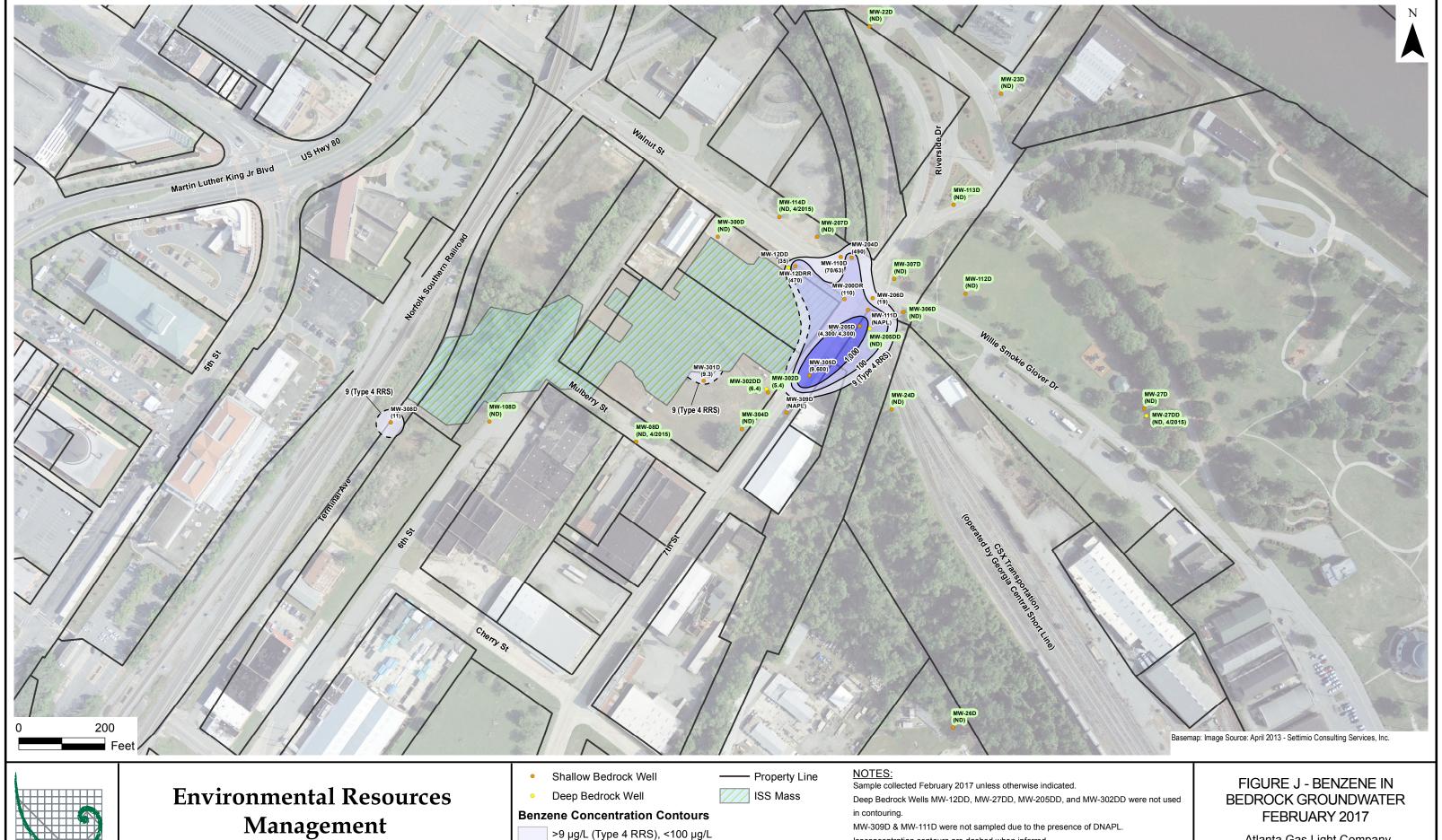
Isoconcentration contours are dashed when inferred.

- (18) Naphthalene Concentration
- (43/21) Naphthalene Concentration (Normal sample/ Duplicate sample)
- (ND) Non Detect

Sample result ND or < Applicable Cleanup Goal

# IN ALLUVIAL GROUNDWATER FEBRUARY 2017

Atlanta Gas Light Company Former Manufactured Gas Plant Macon, Bibb County, Georgia



H Sartain S Vizuete CHKD.: A Reimer REVISION: SCALE: 5/10/2017 AS SHOWN FILE: 0366660 AGL Resources Macon GW Pathforward.AR\05 - ERM Outputs\Figures\AGL\_Macon\MXD\2017 04 4thVRPPrgRpt\Fig8.mxd >9 μg/L (Type 4 RRS), <100 μg/L

>1,000 µg/L, <10,000 µg/L

>100 µg/L, <1,000 µg/L

Isoconcentration contours are dashed when inferred.

(11) Benzene Concentration

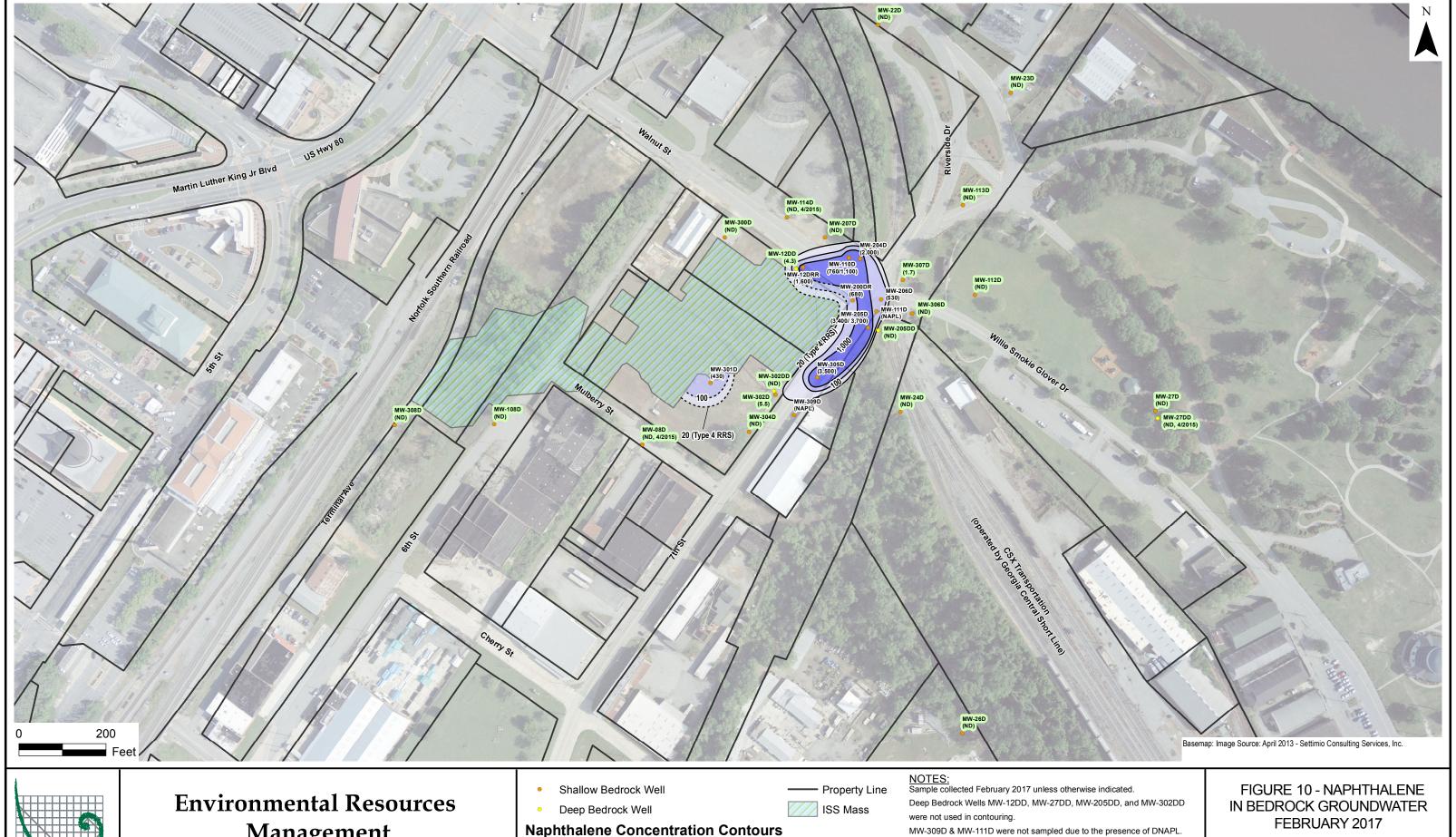
(70/63) Benzene Concentration (Normal sample/ Duplicate sample)

Sample result ND or < Applicable Cleanup Goal

Atlanta Gas Light Company

Former Manufactured Gas Plant

Macon, Bibb County, Georgia



>20  $\mu$ g/L (Type 4 RRS), <100  $\mu$ g/L

>100 μg/L, <1,000 μg/L

>1,000 μg/L, <10,000 μg/L



# Management

DESIGN:	H Sartain	DRAWN:	S Vizuete	CHKD.:	A Reimer
DATE:	5/10/2017	SCALE:	AS SHOWN	REVISION:	3
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MW-309D & MW-111D were not sampled due to the presence of DNAPL. Isoconcentration contours are dashed when inferred.

(530) Naphthalene Concentration

(760/1,100) Naphthalene Concentration (Normal sample/ Duplicate sample)

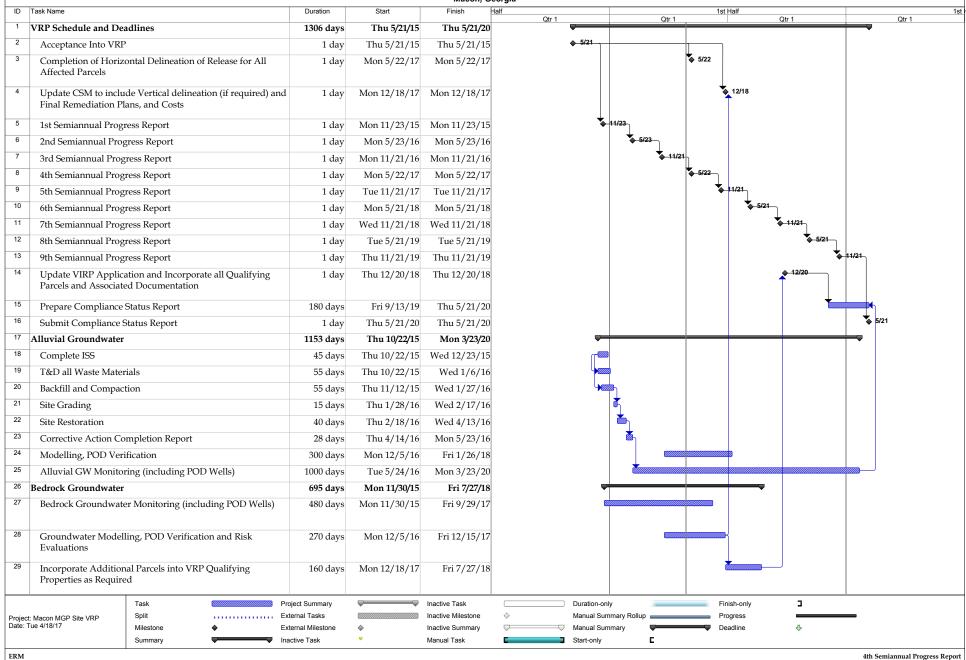
Sample result ND or < Applicable Cleanup Goal

FEBRUARY 2017

Atlanta Gas Light Company Former Manufactured Gas Plant

Macon, Bibb County, Georgia

Figure 11
VRP Projected Milestone Schedule
Atlanta Gas Light Company
Former Manufactured Gas Plant Site
Macon, Georgia



# Regulatory Correspondence During Reporting Period

Appendix A

Project No. 0366660 Atlanta Gas Light Company



### **ENVIRONMENTAL PROTECTION DIVISION**

### Richard E. Dunn, Director

Land Protection Branch 2 Martin Luther King, Jr. Drive Suite 1054, East Tower Atlanta, Georgia 30334 404-657-8600

February 21, 2017

Atlanta Gas Light Company c/o Mr. Greg Corbett Director of Environment & Sustainability Ten Peachtree Place Atlanta, Georgia 30309 VIA FIRST-CLASS MAIL AND EMAIL

Re: Comments on VRP Semiannual Reports 1, 2, and 3 and 2016 Corrective Action

Completion Report

Macon MGP Site, HSI Site Number 10511

Macon, Georgia; Bibb County

Dear Mr. Corbett:

The Georgia Environmental Protection Division (EPD) is in receipt of VRP Semiannual Progress Reports 1, 2, and 3, dated December 8, 2015, May 29, 2016, and November 21, 2016, respectively, for the Macon MGP Site. We note that a Corrective Action Completion Report was included in Appendix A of Semiannual Report 2. The reports were submitted to EPD pursuant to the Georgia Voluntary Remediation Program Act (the Act), O.C.G.A. 12-8-100. Our comments are provided below.

- 1. Based upon review of Section 2.5 and Appendix B in Semiannual Report 1, EPD will not require further evaluation of Ocmulgee River surface water, sediments, or river armoring associated with the Upper and Lower Outfall areas at this time. Environmental covenants restricting land use on site will need to include provisions for annual reporting to EPD on observed conditions in the river and specify conditions [e.g., significant rainfall (10-year event), construction activities in the river, dredging of the river, etc.] that could potentially disturb TLM or its overlying cover and would trigger a river bottom survey of the armored area associated with the Upper Outfall.
- 2. EPD is concerned about the potential for vapor intrusion into buildings at 230 and 280 7<sup>th</sup> Street, which adjoin the Mulberry MGP/Eastern Portion MGP on the southeast. DNAPL is present at MW-309D, which is a shallow bedrock well located on or next to the 230 7<sup>th</sup> Street property. Groundwater concentrations of benzene and naphthalene in bedrock wells immediately northeast of those buildings are high. Data is lacking on the quality of overlying alluvial groundwater in those areas. Accordingly, please do one of the following:
  - a. Collect soil-gas samples from several select locations next to the buildings' outer walls, then laboratory-analyze the samples for VOCs and SVOCs. If concentrations of VOCs or SVOCs are detected in the soil-gas samples, run the data through the EPA's VISL screening tool.
  - b. Install and sample additional alluvial monitoring wells on or next to the 230 and 280 7<sup>th</sup> Street properties. Laboratory-analyze the groundwater samples for VOCs and SVOCs. If

EPD Comments on VRP Semiannual Reports 1, 2, 3, and Corrective Action Completion Report Macon MGP Site, HSI Site Number 10511 February 21, 2017 Page 2 of 2

concentrations of VOCS or SVOCs are detected in the groundwater samples, run the data through the EPA's VISL screening tool.

- 3. Given that the VEFR events have not been effective in remediating the DNAPL on site, combined with the possibility that VEFR could accelerate migration of or destabilize the dissolved contaminant plume, EPD will not require additional VEFR events at this time. However, if continued monitoring of MW-111D and MW-309D shows increasing thicknesses of DNAPL, or if site conditions otherwise dictate a more aggressive remedial approach, VEFR events may be required in the future.
- 4. In lieu of removing additional bedrock well and sump installations from the remedial plan, as requested in Section 3.1.2 of Semiannual Report 3, EPD will temporarily suspend requirements for their installation, pending the collection of future groundwater monitoring data.
- 5. Based upon historical analytical data, and as requested in Section 3.6.2.1 of Appendix B of Report 3, EPD will no longer require laboratory analysis for inorganics in alluvial wells.
- 6. Based upon historical analytical data, and as requested in Section 3.6.2.2 of Appendix B of Report 3, EPD will no longer require laboratory analysis for inorganics in bedrock wells.

Atlanta Gas Light Company must address these comments to EPD's satisfaction in order to demonstrate compliance with the provisions, purposes, standards, and policies of the Act. EPD may, at its sole discretion, review and comment on documents submitted by Atlanta Gas Light Company. However, failure of EPD to respond to a submittal within any timeframe does not relieve Atlanta Gas Light Company from complying with the provisions, purposes, standards, and policies of the Act.

If you have any questions, please contact Allan Nix of the Response and Remediation Program at (404) 657-3935.

Sincerely,

David Brownlee Unit Coordinator

Response and Remediation Program

Christie Battenhouse, Atlanta Gas Light Company Adria Reimer, ERM

c:



Greg Corbett, P.E.

Managing Director –

Environmental Services

Ten Peachtree PI, NE Atlanta, GA 30309 404-584-3719 tel gcorbett@southernco.com

March 22, 2017

David Brownlee
Unit Coordinator
Land Protection Branch
Response and Remediation Program
2 Martin Luther King, Jr. Drive
Suite 1054, East Tower
Atlanta, Georgia 30334

RE: Response to Comments on VRP Semiannual Progress Reports 1, 2, and 3 and 2016 Corrective Action Completion Report
Macon Former Manufactured Gas Plant Site
Macon, Georgia; Bibb County
HSI Site Number 10511
Consent Order EPD-VRP-12

Dear Mr. Brownlee,

In the comment letter dated February 21, 2017, the Department of Natural Resources, Environmental Protection Division (EPD) provided comments on the *VRP Semiannual Progress Reports 1, 2, and 3*, dated December 8, 2015, May 29, 2016, and November 21,2016, respectively, for the Macon former manufactured gas plant (MGP) site. The reports were submitted to EPD pursuant to the Georgia Voluntary Remediation Program Act (the Act), O.C.G.A. 12-8-100. Atlanta Gas Light Company (AGLC) is submitting this letter to document our responses to EPD's comments. For clarification, EPD's comments are italicized and bolded. Since there were no comments provided on the *Corrective Action Completion Report* that was included in Appendix A of the 2<sup>nd</sup> Semiannual Progress Report, AGLC assumes that this report was approved as submitted.

1. Based upon review of Section 2.5 and Appendix B in Semiannual Report 1, EPD will not require further evaluation of Ocmulgee River surface water, sediments, or river armoring associated with the Upper and Lower Outfall areas at this time. Environmental covenants restricting land use on site will need to include provisions for annual reporting to EPD on observed conditions in the river and specify conditions [e.g., significant rainfall (10-year event), construction activities in the river, dredging of the river, etc.] that could potentially

# disturb TLM or its overlying cover and would trigger a river bottom survey of the armored area associated with the Upper Outfall.

AGLC appreciates EPD's concurrence for no further evaluation of surface water, sediments, or river armoring associated with the Upper and Lower Outfall areas in the Ocmulgee River. However, AGLC would like to reiterate the request submitted in the 1<sup>st</sup> Semiannual Progress Report to discontinue any further evaluation of the Ocmulgee River sediments based on the history of the investigation, remediation, and subsequent monitoring of the Ocmulgee River sediments near the Upper and Lower Outfalls and compliance certifications previously provided. As submitted with the 1<sup>st</sup> Semiannual Progress Report, the following describes additional lines of evidence that additional monitoring is not necessary:

- The area was re-armored with 6-inch stone to protect human health and the environment, as well as the ecosystem and to prevent scour;
- Ten years of monitoring has shown the armored sediment cap to be working to prevent scour and the 3-foot required sediment cover remains over all TLM-impacted areas;
- The ecological risk has been removed;
- There is net deposition in the armored remediation area;
- The sediments are certified to site-specific clean-up criteria for sediments developed with the EPD during the development of the CAPs for the Site; and
- All historical data shows no impact to surface water.

In addition, since the river bottom is sovereign land of the State of Georgia lying outside the boundaries of any deeded real estate parcel, the Ocmulgee River sediments are not amenable to a restrictive covenant. As such, the Ocmulgee River sediments were not included in the VIRP application submitted in 2014 as qualifying property but, instead, were addressed under Operable Unit 1 (OU-1) of Consent Order Number EPD-HSR-227 (dated July 11, 2000) and in accordance with the approved corrective action plan and subsequent revisions under the Georgia Hazardous Site Response Act (HSRA) Chapter 391-3-19, and rules promulgated thereunder. Therefore, the sediment unit (OU-1) should be considered closed as of the conclusion of the 10-year river elevation survey event.

2. EPD is concerned about the potential for vapor intrusion into buildings at 230 and 280 7th Street, which adjoin the Mulberry MGP/Eastern Portion MGP on the southeast. DNAPL is present at MW-309D, which is a shallow bedrock well located on or next to the 230 7th Street property. Groundwater concentrations of benzene and naphthalene in bedrock wells



immediately northeast of those buildings are high. Data is lacking on the quality of overlying alluvial groundwater in those areas. Accordingly, please do one of the following:

- a. Collect soil-gas samples from several select locations next to the buildings' outer walls, then laboratory-analyze the samples for VOCs and SVOCs. If concentrations of VOCs or SVOCs are detected in the soil-gas samples, run the data through the EPA's VISL screening tool.
- b. Install and sample additional alluvial monitoring wells on or next to the 230 and 280 7th Street properties. Laboratory-analyze the groundwater samples for VOCs and SVOCs. If concentrations of VOCS or SVOCs are detected in the groundwater samples, run the data through the EPA's VISL screening tool.

While dense non-aqueous phase liquid (DNAPL) has been observed in bedrock wells in the proximity of the building located at 230 and 280 7<sup>th</sup> Street and dissolved phase concentrations of benzene and naphthalene (or any organic constituent of interest [COI) in bedrock groundwater in the area have been high, concentrations in the alluvial and intermediate-zone groundwater in proximity of the building have consistently been below the Type 1 (residential) risk reduction standard or not detected for over 10-15 years. This is evident based on groundwater data from the following alluvial and intermediate groundwater wells in the near vicinity of the building and are situated hydraulically upgradient, sidegradient, and downgradient of the building:

Upgradient: MW-07, MW-15, MW-102, MW-401

Sidegradient: MW-14, MW-14I

Downgradient: MW-21

Figures B3-3 and B3-4 (Attachment A) from the most recent groundwater monitoring report shows the layout of the site monitoring wells, along with the interpreted groundwater flow in the alluvial aquifer. The summary of historical analytical groundwater data for these wells is included as Attachment B. In particular, there have been no detections of either benzene or naphthalene in upgradient alluvial monitoring wells MW-15 or MW-102 since installation in 2001 and 2002, respectively (note that the naphthalene detection in MW-102 was likely related to turbidity in the initial September 2002 sample and not verified during a subsequent resampling event in December 2002). Both MW-15 and MW-102 are located within approximately 80 feet upgradient of the 230/280 7<sup>th</sup> Street buildings. In addition, neither benzene nor naphthalene has been detected in alluvial monitoring well MW-21, which is situated directly adjacent and downgradient to the 230 7<sup>th</sup> Street property line (which is essentially the eastern wall of the building) since its installation in 2006.



In an effort to clarify why DNAPL in or around MW-309D cannot possibly be presenting a vapor intrusion risk to occupants of 230 or 280 7<sup>th</sup> Street, VOCs can only partition to the vadose zone from the shallowest groundwater zone present at a given site. In other words, VOCs do not pass through water undetected. Thus, the presence of a shallow zone of groundwater with concentrations below levels that could produce a vapor intrusion risk overlaying higher concentrations from deeper groundwater zones (whether dissolved or DNAPL) essentially means the pathway for vapor intrusion from those deeper zones is incomplete. Accordingly, the only question should be whether the network of wells monitoring the shallow zone in the vicinity of MW-309D is adequate to demonstrate the absence of concentrations at levels that could cause a vapor concern. MW-309D is surrounded by three wells installed in the shallowest zone (MW-15, MW-21, and MW-102), each of which are located within 80 to approximately 120 feet of the point that would intersect shallow groundwater directly above MW-309D. VOCs concentrations in MW-21 have been below Type 1 RRS for at least 10 years, in MW-102 for over 14 years, and in MW-15 for over 15 years. It is simply not plausible that VOC concentrations in shallow groundwater would spike from levels complying with Type 1 RRS in MW-102 to concentrations that could produce a vapor risk to occupants of the buildings at 230 or 280 7<sup>th</sup> Street and then plummet again back into compliance with Type 1 RRS in MW-21, all in the space of the less-than 120 feet separating MW-21 and MW-309D. Therefore, AGLC respectfully believes the absence of a vapor intrusion risk from any DNAPL in or around MW-309D has been demonstrated.

The sustained absence of volatile or semivolatile organic COI in the shallow groundwater above the areas where dissolved phase concentrations and/or DNAPL may be present in bedrock demonstrates that vapor phase constituents are not migrating from the bedrock groundwater and reaching the vadose zone, and thus, do not pose a vapor intrusion risk to occupants of the building.

3. Given that the VEFR events have not been effective in remediating the DNAPL on site, combined with the possibility that VEFR could accelerate migration of or destabilize the dissolved contaminant plume, EPD will not require additional VEFR events at this time. However, if continued monitoring of MW-IIID and MW-309D shows increasing thicknesses of DNAPL, or if site conditions otherwise dictate a more aggressive remedial approach, VEFR events may be required in the future.

AGLC appreciates EPD's concurrence with this request.



4. In lieu of removing additional bedrock well and sump installations from the remedial plan, as requested in Section 3.1.2 of Semiannual Report 3, EPD will temporarily suspend requirements for their installation, pending the collection of future groundwater monitoring data.

AGLC appreciates EPD's concurrence with this request.

5. Based upon historical analytical data, and as requested in Section 3.6.2.1 of Appendix B of Report 3, EPD will no longer require laboratory analysis for inorganics in alluvial wells.

AGLC appreciates EPD's concurrence with this request.

6. Based upon historical analytical data, and as requested in Section 3.6.2.2 of Appendix B of Report 3, EPD will no longer require laboratory analysis for inorganics in bedrock wells.

AGLC appreciates EPD's concurrence with this request.

AGLC would like to schedule a meeting to review these responses. If you have any immediate questions or comments, please call me 404-584-3719 or email me at <a href="mailto:gcorbett@southernco.com">gcorbett@southernco.com</a>.

Sincerely,

Greg Corbett, P

Atlanta Gas Light Company

Managing Director, Environmental Services

Attachments

cc: Lea Millet, P.G. - Georgia Power Company

Christie Battenhouse, P.G. – Atlanta Gas Light Company

Scott Laseter - Kazmarek Mowrey Cloud Laseter LLP

Hollister Hill - Troutman Sanders

Adria Reimer - ERM



### Attachment A

Figures B3-3 and B3-4 from the 3<sup>rd</sup> Semiannual Progress Report





DESIGN:	H Sartain	DRAWN:	S Vizuete	CHKD.:	N Vrey
DATE:	11/18/2016	SCALE:	AS SHOWN	REVISION:	0
FII E:					

## • Shallow Well Benzene Concentration Contour

Abandoned Shallow Well  $\longrightarrow$  >9  $\mu$ g/L (Type 4 RRS), <100  $\mu$ g/L

Destroyed Shallow Well >

>100 µg/L

- (63) Benzene Concentration
- (ND) Non Detect
- (NS) Not Sampled

### FIGURE B3-3 - BENZENE IN ALLUVIAL GROUNDWATER AUGUST 2016

Atlanta Gas Light Company
Former Manufactured Gas Plant
Macon, Bibb County, Georgia





DESIGN:	H Sartain	DRAWN:	S Vizuete	CHKD.:	N Vrey	
DATE:	11/18/2016	SCALE:	AS SHOWN	REVISION:	0	
FII F:						

Shallow Well

Intermediate Well

### **Naphthalene Concentration Contour**

- Abandoned Shallow Well >20 μg/L (Type 4 RRS), <100 μg/L
- Destroyed Shallow Well ISS Mas

- (40) Naphthalene Concentration
- (ND) Non Detect
- (NS) Not Sampled

## FIGURE B3-4 - NAPHTHALENE IN ALLUVIAL GROUNDWATER AUGUST 2016

Atlanta Gas Light Company
Former Manufactured Gas Plant
Macon, Bibb County, Georgia

### Attachment B

Select Pages from Appendix B7 of the 3<sup>rd</sup> Semiannual Progress Report: Summary of Alluvium Groundwater Analytical Data

		Type 2	Type 4			MW-07							MW-0	18				
Parameter	Units	RRS	RRS	08/06/13	08/13 DUP		08/11/09	03/05/04	08/25/16	04/05/16	04/27/15	08/05/13	02/04/13	02/08/12	02/17/11	02/23/10	08/11/09	12/12/02
Field Groundwater Quality	/ Parameters																	
pH	SU	N/A	N/A	5.	12	5.86	6.59	5.72	5.73	6.29	5.95	5.08	5.55	5.51	2.19	6.02	5.79	6.10
Specific Conductance	mS/cm	N/A	N/A	18	35	191	230	171	240.2	300	271	419	273	262	198	339	481	289
Temperature	°Celsius	N/A	N/A	24	.16	15.37	25.85	18.88	25.60	20.84	19.59	25.97	20.01	21.22	17.64	17.89	23.98	23.37
Dissolved Oxygen (YSI)	mg/L	N/A	N/A	4.	35	6.27	5.75	2.10	0.79	5.56	3.85	3.29	2.10	2.23	2.00	3.43	2.96	0.24
ORP	mV	N/A	N/A	-2	5.1	130.5	-122.4	97.0	29.0	73.5	59.2	34.6	186.2	73.2	5.7	73.4	-179.9	-8.2
Turbidity	NTU	N/A	N/A	8.	62	2.97	1.82	12.9	0.76	7.76	1.01	0.21	6.62	5.2	78.3	4.31	1.50	1.64
Laboratory Results - Natu	ral Attenuation F	arameters	•	•			•			•	•		•		•			
Nitrogen, Ammonia	mg/L	N/A	N/A															0.894
Nitrogen, Nitrate	mg/L	N/A	N/A			1.3	0.45						0.26	0.38	0.065	0.091	< 0.050	< 0.0500
Sulfate	mg/L	N/A	N/A			33	59						60	55	35	64	92	27.5
Sulfide	mg/L	N/A	N/A			< 1.0	< 1.0						< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.00
Dissolved Manganese	mg/L	N/A	N/A															0.169
Total Manganese	mg/L	N/A	N/A					0.218										0.175
Ferrous Iron	mg/L	N/A	N/A			< 0.10 HF	< 0.010 HF						1.3 HF	0.40 HF	0.19 HF	0.29	2.8	4.86
Total Iron	mg/L	N/A	N/A			19	0.16	1.21					1.8	0.79	1.2	0.99	3.1	4.82
Carbon Dioxide	mg/L	N/A	N/A			120	0.37						110	1800	1.2	1.1	0.77	120
Methane	mg/L	N/A	N/A			< 0.58	<0.19						9.3	1.7	3.3	12	3.7	100
Dissolved Nitrogen	mg/L	N/A	N/A				4.4						17	5300	3.9	4.2	4.7	16
Dissolved Oxygen	mg/L	N/A	N/A			6.5	1.6						5.2	1700	1.4	1.5	1.7	7.5
Laboratory Results - Orga	nic Constituents																	
Volatile Organic Compound																		
Benzene	μg/L	5.0*	9	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	<5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Disulfide	μg/L	329	1,700	< 5.0	< 5.0	< 2.0			<5.0	< 5.0	< 5.0	< 5.0	< 2.0				-	
Ethylbenzene	μg/L	700*	2,300	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	<5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	μg/L	1,000*	1,100	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	<5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Xylenes	μg/L	31,000	200,000	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	<5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Semivolatile Organic Compo	ounds	•	•							•			•					
Acenaphthene	μg/L	2,000*	6,100	< 10	< 10	16		< 10	< 0.50	< 0.50	< 10	< 10	1.3					< 10
Acenaphthylene	μg/L	470	3,100	< 10	< 10	13		< 10	<1.0	< 1.0	< 10	< 10	< 0.19					< 10
Anthracene	μg/L	4,700	31, 000	< 10	< 10	< 0.20		< 10	< 0.050	< 0.050	< 10	< 10	< 0.19					< 10
Benzo[a]anthracene	μg/L	1.17	3.92	< 0.20	< 0.20	< 0.20			< 0.050	< 0.050	< 0.050	< 0.20	< 0.19					
Benzo[a]pyrene	μg/L	0.2*	0.39	< 0.20	< 0.20	< 0.20			< 0.050	< 0.050	< 0.050	< 0.20	< 0.19					
Benzo[b]fluoranthene	μg/L	1.17	3.92	< 0.20	< 0.20	< 0.20			<0.10	< 0.10	< 0.10	< 0.20	< 0.19					
Benzo[g,h,i]perylene	μg/L	10	10	< 10	< 10	< 0.20			<0.10	< 0.10	< 10	< 10	< 0.19			-		
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 10	< 10	< 0.20			< 0.050	< 0.050	< 10	< 10	< 0.19		-			
Chrysene	μg/L	117	392	< 10	< 10	< 0.20			< 0.050	< 0.050	< 10	< 10	< 0.19			-		
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	< 0.20	< 0.20	< 0.20		-	<0.10	< 0.10	< 0.10	< 0.20	< 0.19		-			
2,4-Dimethylphenol	μg/L	700*	700*	< 10	< 10	< 2.0		< 10	<10	< 10	< 10	< 10	< 1.9			-		< 10
Fluoranthene	μg/L	1,000*	4,100	< 10	< 10	1.6		< 10	<0.10	< 0.10	< 10	< 10	< 0.19		-			< 10
Fluorene	μg/L	1,000*	4,100	< 10	< 10	6.0		< 10	<0.10	< 0.10	< 10	< 10	< 0.19			-		< 10
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.20	< 0.20	< 0.20		-	< 0.050	0.10	< 0.050	< 0.20	< 0.19					
2-Methylphenol	μg/L	780	5,100	< 10	< 10	< 2.0		< 10	<10	< 10	< 10	< 10	< 1.9					< 10
4-Methylphenol	μg/L	78	510	< 10	< 10	< 2.0		< 10	<10	< 10	< 10	< 10	< 1.9					< 10
Naphthalene	μg/L	20*	20*	< 10	< 10	7.8	< 9.8	< 10	< 0.50	< 0.50	< 10	< 10	< 0.19	< 5.0	< 9.4	< 9.4	< 11	< 10
Phenanthrene	μg/L	470	3,100	< 10	< 10	0.48		< 10	< 0.050	< 0.050	< 10	< 10	< 0.19					< 10
Phenol	μg/L	9,390	61,000	< 10	< 10	< 0.99		< 10	<10	< 10	< 10	< 10	< 0.97					
Pyrene	μg/L	1,000*	3,100	< 10	< 10	4.7		< 10	0.16	< 0.050	< 10	< 10	0.29					< 10
Laboratory Results - Inorg	ganic Constituen	ts																
Antimony	μg/L	6.3	40	< 20.0	< 20.0	< 20		< 40	< 20.0	< 20.0	< 20.0	< 20.0	< 20					< 40
Arsenic	μg/L	50*	50*	< 50.0	< 50.0	< 20		< 50	< 50.0	< 50.0	< 50.0	< 50.0	< 20					< 50
Barium	μg/L	2,000	7,200	31.2	31.4	100	59	39.6	59.5	48.6	72.5	61.6	66	69	58	64	0.11	56
Beryllium	μg/L	31	200	< 10.0	< 10.0	< 4.0			< 10.0	< 10.0	< 10.0	< 10.0	< 4.0					
Cadmium	mg/L	7.8	51	< 5.0	< 5.0	< 5.0			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0					
Chromium	μg/L	100	310	< 10.0	< 10.0	< 10	< 10	< 10	< 10.0	< 10.0	< 10.0	< 10.0	< 10	< 10	< 10	< 10	< 10	< 10
Copper	μg/L	630	4,100	< 10.0	< 10.0	< 20	< 20	< 10	< 10.0	< 10.0	< 10.0	< 10.0	< 20	< 20	< 20	< 20	< 20	< 10
Lead	μg/L	15*	15*	< 10.0	< 10.0	< 10	< 10	< 10	< 10.0	< 10.0	< 10.0	< 10.0	< 10	< 10	< 10	< 10	< 10	< 10
Nickel	μg/L	100	2,000	< 20.0	< 20.0	< 40	< 40	< 20	< 20.0	< 20.0	< 20.0	< 20.0	< 40	< 40	< 40	< 40	< 40	< 20
Zinc	μg/L	4,700	31,000	< 20.0	< 20.0	< 20		< 20	< 20.0	< 20.0	< 20.0	< 20.0	< 20					< 20
Mercury	μg/L	2*	2*	< 0.20	< 0.20	< 0.20		< 0.5	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20					< 0.5
Total Cyanide	μg/L	310	2,000	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Notes:																		

Notes:

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level
RRS - Risk Reduction Standard
SU - Stamdard Units
mS/cm - millisiemens per centimeter
µg/L - micrograms per liter
mg/L - milligrams per liter
my - millivolts
NTU - nephelometric turbidity units
N/A - RRS are not applicable to this parameter
- Not Analyzed
HF - Holding time of 15 minutes was exceeded
Values are listed with the laboratory-reported number of significant figures, which varies between different co

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

Units rameters SU	Type 2 RRS	Type 4											MW-	14										
	ININO	RRS	08/25/16	02/05/13	02/15/12	02/22/11	02/23/10	08/11/09	06/06/06	03/09/06	12/21/05	09/30/05	3/1505	12/14/04	10/01/04	06/08/04	03/03/04	12/16/03	09/08/03	06/11/03	03/11/03	12/10/02	09/17/02	11/08/
SU																								
mS/cm	N/A	N/A N/A	6.13 236.8	6.08 212	6.18 184	6.27 177	6.14 179	6.3 241	6.20 229	6.32 210	6.38 198	6.25 288	6.33 200	7.28 258	6.20 252	6.33 296	6.32 172	6.46 236	6.34 289	6.4 269	6.43 243	6.28 376	6.14 380	6.3 50
°Celsius	N/A N/A	N/A	24.99	17.04	19.74	17.87	15.20	30.97	22.75	18.28	18.88	26.47	17.93	19.33	26.73	23.39	15.66	19.42	26.43	22.86	17.15	20.85	26.37	24.
mg/L	N/A	N/A	0.74	3.22	2.77	3.62	3.82	4.81	0.33	0.99	3.74	0.68	3.71	0.57	1.32	1.34	4.42	4.35	1.03	1.8	2.66	1.39	0.55	0.2
mV	N/A	N/A	64.8	230.1	-36.6	6.3	108	53.9	82.1	79.1	144.3	25.9	141.0	120.5	108.9	91.2	108.2	117.6	3.4	37.2	201.0	79.9	168.9	-23
NTU	N/A	N/A	4.01	1.86	23.70	41.7	9.27	9.09	4.89	9.68	10.56	4.96	9.53	3.15	7.5	5.40	21.6		4.02	15.4	17.9	11.4	12.8	8.8
Attenuation I		N1/A	П	T	ı	1							0.00	0.00		0.00	0.00	0.00	0.00	0.000	0.000	4.00	1 4 00	0.1
mg/L	N/A	N/A		0.91	0.19	0.22	1.0	0.096					< 0.20	0.22	< 0.20	0.38	< 0.20	< 0.20	0.33	< 0.200	< 0.200	1.92	1.09	3.5 < 0.5
mg/L																								25
mg/L	N/A	N/A		< 1.0	1.4	< 1.0	< 1.0	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.00	< 1.00	< 1
mg/L	N/A	N/A											0.0534	0.0996	0.126	0.355	0.0168	0.367	0.140	0.128	< 0.0050	0.922	0.368	3.0
mg/L	N/A	N/A											0.0787	0.107	0.136	0.417	0.0308	0.551	0.174	0.231	0.643	1.13	0.347	3.0
mg/L																								3.4
									1	1														3.0
mg/L																								8
mg/L	N/A	N/A		20	5.4	4.6	4.1	4.5					23	20	16	18	20	18	14	14	17	17	14	1;
mg/L	N/A	N/A		8.6	1.7	1.6	1.5	1.6					4.7	3.5	3.0	2.8	4.9	5.9	2.2	1.5	3.7	8.4	5.6	2
Constituents	s																							
ug/l	5.0*	0.0	∠E ∩	<10	- F O	∠E∩	∠ E O	, F O	, E O	, F O	, F O	- F O	- F O	, E O	z E O	- F O	∠E ∩	, F O	, E O	- F O	- F O	, F O	∠ E ∩	< 5
μg/L μg/L					< 0.0	< 0.U	< 5.0	< 0.0	< 5.0	< 5.0	< 0.0	< 0.U	< 0.0	< 5.0	< 5.0	< 5.0	< 0.0	< 5.0	< 5.0	< 0.0	< 0.0	< 0.0	< 0.0	<:
μg/L μg/L	700*	2,300	<5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5
μg/L	1,000*	1,100	<5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5
μg/L	31,000	200,000	<5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5
ds			•		1			•					1					1				1		
μg/L																								< '
																								< '
										-					< 10								< 10	· -
μg/L μg/L																								_
μg/L	1.17	3.92	<0.10	< 0.22																				-
μg/L	10	10	<0.10	< 0.22																				
μg/L	11.7	39.2	<0.050	< 0.22																				
μg/L																								
1 ()				1																				< 1
																								< 1
μg/L	1,000*		<0.10																					< 1
μg/L	1.17	3.92	1.9	< 0.22			-	-					-					-						
μg/L	780	5,100	<10	< 2.2									< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1
μg/L	78	510	<10	< 2.2									< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1
μg/L																								< 1
		-,																						< 1 < 1
μg/L μg/L	1,000*	3,100																						< 1
. 0		-,	0.04	10.22	Į	Į			II.	II.			1.0	1.0	, ,,,,	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1 7.
μg/L	6.3	40	< 20	< 20									< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 4
μg/L	50*	50*	< 20	< 20			-						< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 5
μg/L	2,000	7,200	112	90	120	89	83	140	112	98.1	356	156	97.8	119	114	142	83.2	106	121	120	117	171	180	32
μg/L																								-
	400	0.10	4.0		- 10	- 40	- 10	 - 10	4.0			- 10		4.0	4.0				- 40		- 40	4.0	4.0	-
																								< 1
μg/L	15*	15*	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	88.8	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1
μg/L	100	2,000	< 40	< 40	< 40	< 40	< 40	< 40	< 20	< 20	< 20.0	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 2
μg/L	4,700	31,000	< 20	< 20									297	126	< 20	22.6	< 20	< 20	< 20	24.3	47	36	< 20	37
μg/L	2*	2*	< 0.20	< 0.20									< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0
μg/L	310	2,000	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	12	< 10	< 10	43	52	12
Little Coccoccional Control Coccoccional Coccoccional Control Coccoccional Coccocci	ng/L ng/L ng/L ng/L ng/L ng/L ng/L ng/L	ng/L N/A mg/L 1.17 mg/L 1.000° mg/L 1.17 mg/L 1.000° mg/L 31 mg/L 50° mg/L 31 mg/L 7.8 mg/L 7.8 mg/L 100 mg/L 630 mg/L 630 mg/L 630 mg/L 630 mg/L 630 mg/L 630	mg/L N/A N/A mg/L 1000* 1,100 ug/L 1,000* 1,100 ug/L 1,000* 1,100 ug/L 1,177 3,92 ug/L 1,000* 4,100 ug/L 1,000* 4,100 ug/L 1,000* 4,100 ug/L 1,000* 4,100 ug/L 1,000* 3,100 ug/L 1,000* 3,100 ug/L 2,000 3,100 ug/L 20* 20* ug/L 1,000* 3,100 ug/L 1,000* 3,100 ug/L 1,000* 3,100 ug/L 1,000* 5,0* ug/L 1,000* 1,000 ug/L 1,000* 3,100	ng/L N/A N/A mg/L N/A N/A N/A mg/L N/A N/A N/A mg/L N/A N/A N/A mg/L N/A N/A m	mg/L N/A N/A 21 mg/L N/A N/A 54 mg/L N/A N/A 54 mg/L N/A N/A 1.8 mg/L N/A N/A 1.8 mg/L N/A N/A 8.6 mg/L N/A N/A 8.6 mg/L N/A N/A 8.6 mg/L N/A N/A 8.6 mg/L N/A N/A 20 mg/L 329 1,700 <5.0 <2.0 mg/L 329 1,700 <5.0 <2.0 mg/L 1,000* 1,100 <5.0 <1.0 mg/L 31,000 200,000 <5.0 <2.0 mg/L 31,000 200,000 <5.0 <2.0 mg/L 31,000 200,000 <5.0 <2.0 mg/L 4,700 31,000 0.12 <0.22 mg/L 4,700 31,000 0.12 <0.22 mg/L 1.17 3.92 <0.050 <0.22 mg/L 1.00* 4,100 <0.38 <0.22 mg/L 1.00* 4,100 <0.31 <0.22 mg/L 700* 700* 700* <10 <0.22 mg/L 78 510 <10 <0.22 mg/L 78 510 <10 <0.22 mg/L 78 510 <10 <0.22 mg/L 9,390 61,000 <10 <0.22 mg/L 9,390 61,000 <10 <0.22 mg/L 50* 50* 50* <20 <20 mg/L 7.8 511 <5.0 <5.0 mg/L 100 310 <10 <10 <10 mg/L 7.8 51 <5.0 <5.0 mg/L 100 310 <10 <20 <20 mg/L 7.8 51 <5.0 <5.0 mg/L 100 310 <10 <20 <20 mg/L 7.8 51 <5.0 <5.0 mg/L 100 310 <10 <20 <20 mg/L 7.8 51 <5.0 <5.0 mg/L 100 310 <10 <20 <20 mg/L 7.8 51 <5.0 <5.0 mg/L 100 310 <10 <20 <20 mg/L 7.8 51 <5.0 <5.0 mg/L 100 310 <10 <20 <20 mg/L 630 4,100 <20 <20 <20 mg/L 7.8 51 <5.0 <5.0	mg/L   N/A   N/A     21   71   mg/L   N/A   N/A   N/A     < 1.0   1.4   mg/L   N/A   N/A   N/A           mg/L   N/A   N/A   N/A           mg/L   N/A   N/A   N/A     < 0.10   HF   3.5   HF   mg/L   N/A   N/A   N/A     < 0.10   HF   3.5   HF   mg/L   N/A   N/A   N/A     < 0.10   4.2   mg/L   N/A   N/A   N/A     54   1.7   mg/L   N/A   N/A   N/A     1.8   9.7   mg/L   N/A   N/A   N/A     20   5.4   mg/L   N/A   N/A   N/A     8.6   1.7   mg/L   329   1,700   < 5.0   < 2.0     mg/L   1,000   1,100   < 5.0   < 1.0   < 5.0   mg/L   1,000   1,100   < 5.0   < 1.0   < 5.0   mg/L   1,000   1,100   < 5.0   < 1.0   < 5.0   mg/L   1,000   1,100   < 5.0   < 2.0   < 5.0   mg/L   1,100   31,000   0.12   < 0.22     mg/L   470   3,100   4.0   < 0.22     mg/L   1,17   3.92   < 0.050   < 0.22     mg/L   1,17   3.92   < 0.050   < 0.22     mg/L   1,17   3.92   < 0.10   < 0.22     mg/L   1,17   3.92   < 0.050   < 0.22     mg/L   1,17   3.92   1.9   < 0.22     mg/L   1,17   3.92	mg/L         N/A         N/A	mg/L	mg/L	mg/L	mg/L   N/A   N/A   -   21   71   20   19   22   -   -	mg L	mg L	mg L	Name	Ng L NA NA	THE NAME NAME	THE NAME NAME OF STATE OF STAT	THE NAME NAME OF A STATE OF A STA		NA NA	NA	MA	NA

Parameter	Units	Type 2	Type 4							1				1	1	MW-14I	1		1	1	1	1	1		T	, ,		
		RRS	RRS	08/25/16	04/05/16	02/04/13	02/15/12	02/22/11	02/23/10	08/11/09	06/06/06	03/09/06	12/21/05	09/28/05	03/15/05	12/15/04	09/30/04	07/15/04	06/09/04	03/03/04	12/16/03	09/08/03	06/11/03	03/11/03	03/03 DUP	12/10/02	09/17/02	11/08/
ield Groundwater Quality	SU SU	N/A	N/A	6.24	6.52	6.69	5.83	5.87	6.18	5.95	6.24	6.17	6.11	6.31	6.15	7.39	6.15		6.10	6.11	6.2	5.15	6.38	6.27	6.27	6.08	6.13	6.1
pecific Conductance	mS/cm	N/A	N/A	514.8	0.4	269	250	278	315	423	448	416	401	432	399	417	467		463	393	436	421	421	453	453	429	464	46
emperature	°Celsius	N/A	N/A	24.83	19.77	19.53	19.58	20.67	18.22	26.35	23.02	20.43	22.05	23.40	20.69	22.48	24.15		20.95	19.96	21.57	23.43	20.86	20.58	20.58	22.27	23.47	22.0
issolved Oxygen (YSI)	mg/L	N/A	N/A	0.19	0.21	0.32	0.85	0.39	1.46	5.67	0.20	0.40	0.42	0.55	1.71	0.19	0.28		0.21	0.57	0.22	0.34	0.03	0.09	0.09	0.06	0.16	0.1
ORP Turbidity	mV NTU	N/A	N/A N/A	-27.7	4.9	-56.4	41.2	-9.5	27	-9.9 1.41	-37.3	-8.2 1.46	-13.6	-5.9	-13.4	-148.1	-59.1 0.65		-86.6 0.40	58.0 2.83	-109.2	-79.3 1.49	-151.8	4.02	4.92	-43.2	-49.9	-79 9.5
aboratory Results - Natura		N/A Parameters	N/A	2.89	24.9	3.62	8.23	8.27	1.52	1.41	0.33	1.46	2.54	0.50	1.52	2.82	0.05		0.40	2.83		1.49	9.72	4.92	4.92	2.30	1.31	9.5
itrogen, Ammonia	mg/L	N/A	N/A												11.7	12.0	11.5		10.6	12.8	11.6	11.4	11.1	12	12.2	10.5	12.2	11.
litrogen, Nitrate	mg/L	N/A	N/A			< 0.050	0.18	< 0.050	0.097	< 0.050					< 0.500	< 0.0500	< 0.0500		< 0.5	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	0.29
Sulfate	mg/L	N/A	N/A			44	18	54	32	41	-	-	-		47.3	39.5	39.6		73.7	49.0	47.7	32.0	17.2	36.9	39.6	43.2	40.5	31.
Sulfide	mg/L	N/A	N/A			< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	-				< 1.0	< 1.0	< 1.0		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.00	< 1.00	< 1.0
Dissolved Manganese Total Manganese	mg/L	N/A N/A	N/A N/A								-				1.62 1.55	1.53 1.56	1.78 1.78		1.5 1.51	1.57 1.52	1.77	1.92 1.95	1.81	1.76 1.77	1.7 1.87	1.63 1.55	1.66 1.64	1.3
errous Iron	mg/L mg/L	N/A N/A	N/A N/A			6.4 HF	< 0.10 HF	3.4 HF	7.5	6.8					17.7	12.2	13.5		16.7	6.2	6.5	12.6	13.0	12.2	13.4	14.5	14.1	11.0
otal Iron	mg/L	N/A	N/A			7.8	0.20	3.9	8.6	16					8.89	11.4	12.5		11.6	7.15	10.4	12.7	14.9	11.7	12.3	9.94	11.4	12.
arbon Dioxide	mg/L	N/A	N/A			87	830	1.0	1.5	1.3					160	170	160		180	160	140	96	160	170	200	170	180	150
Methane	mg/L	N/A	N/A			74	2.4	14	82	69					320	430	420		400	44	340	550	610	470	700	520	650	280
Dissolved Nitrogen Dissolved Oxygen	mg/L mg/L	N/A N/A	N/A N/A			18 5.0	5100 1800	4.2 1.4	3.1 1.0	4.1 1.4					26 4.2	15 1.1	16 1.2		15 0.44	17 0.89	3.6	14 0.53	14 0.66	18 2.9	16 0.55	16 6.6	17 6.4	0.7
aboratory Results - Organ			IN/A			5.0	1000	1.4	1.0	1.4					4.2	1.1	1.2		0.44	0.09	3.0	0.55	0.00	2.9	0.55	0.0	0.4	0.7
olatile Organic Compounds																												
Benzene	μg/L	5.0*	9.0	<5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	8.2	< 5.0	< 5.0	< 5.0	< 5.0	< 5.
arbon Disulfide	μg/L	329	1,700	<5.0	< 5.0	< 2.0																			-			
thylbenzene	μg/L	700*	2,300	<5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	16	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	10	7.7	< 5
oluene	μg/L	1,000*	1,100	<5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5
Naphthalene Semivolatile Organic Compo	µg/L unds	31,000	200,000	<5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.3	< 5.0	< 5.
Acenaphthene	µg/L	2,000*	6,100	4.1	4.4	3.4									38	48	43	< 5.0	24	20	29	38	57	33 J	37 J	35	36	< 10
Acenaphthylene	μg/L	470	3,100	4.0	3.3	1.2									< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	41
Anthracene	μg/L	4,700	31, 000	0.12	0.056	< 0.19			-						< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
enzo[a]anthracene	μg/L	1.17	3.92	< 0.050	< 0.050	< 0.19																						
Benzo[a]pyrene	μg/L	0.2*	0.392	0.14	< 0.050	< 0.19																						
enzo[b]fluoranthene enzo[q,h,i]perylene	µg/L	1.17	3.92 10	<0.10 <0.10	< 0.10 < 0.10	< 0.19 < 0.19																						
Benzo[g,n,ijperylene Benzo[k]fluoranthene	μg/L μg/L	12	39	<0.10	< 0.10	< 0.19				-												-						
Chrysene	μg/L	117	392	<0.050	< 0.050	< 0.19				-		-				-						-					-	
Dibenz(a,h)anthracene	μg/L	0.3*	0.392	<0.10	< 0.10	< 0.19																	-					
,4-Dimethylphenol	μg/L	700*	700*	<10	< 10	< 1.9					-				< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
luoranthene	μg/L	1,000*	4,100	0.38	0.11	0.48									< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
luorene	µg/L	1,000* 1.17	4,100	<0.10	1.60 < 0.050	0.89 < 0.19									11	14	11	< 10	< 10	< 10	< 10	< 10	12	< 10	< 10	< 10 	< 10 	< 10
ndeno[1,2,3-cd]pyrene -Methylphenol	μg/L μg/L	780	3.92 5.100	1.9 <10	< 0.050	< 1.9									< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	 < 10	< 10	< 10
-Methylphenol	μg/L	78	510	<10	< 10	< 1.9					-	-			< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
laphthalene	μg/L	20*	20*	<0.50	< 0.50	< 0.19	< 5.0	< 5.0	< 10	<9.9	< 10	80	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	23	19	21	58	48	24
Phenanthrene	μg/L	470	3,100	0.051	< 0.050	< 0.19			1						< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Phenol	μg/L	9,390	61,000	<10	< 10	1.2									< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Pyrene Paculta Incres	μg/L	1,000*	3,100	0.84	0.27	0.93									< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
aboratory Results - Inorga	anic Constitue μg/L	nts 6.3	40	< 20.0	< 20.0	< 20									< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40
rsenic	μg/L μg/L	50*	50*	< 50.0	< 50.0	< 20									< 40 < 50	< 40	< 40	< 40	< 40	< 40	< 50	< 40 < 50	< 40	< 40 < 50	< 40	< 40 < 50	< 40	< 50
arium	μg/L	2,000	7,200	112	129	71	180	180	300	220	276	281	287	301	296	292	339	292	292	277	292	369	343	379	404	314	314	394
eryllium	μg/L	31	200	< 10.0	< 10.0	< 4.0																						
admium	μg/L	7.8	51	< 5.0	< 5.0	< 5.0					-														-			
hromium	μg/L	100	310	< 10.0	< 10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ead	µg/L	630 15*	4,100 15*	< 10.0 < 10.0	< 10.0 < 10.0	< 20 < 10	< 20 < 10	< 20 < 10	< 20 < 10	< 20 < 10	< 10 < 10	< 10 < 10	< 10.0 < 10.0	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10	< 10 < 10	< 10
ickel	μg/L μg/L	100	2,000	< 10.0	< 10.0	< 10 < 40	< 10 < 40	< 40	< 10 < 40	< 10	< 10	< 10	< 10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 < 20	< 10	< 20
nc	μg/L	4,700	31,000	<20.0	20.9	< 20									< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
lercury	μg/L	2*	2*	< 0.20	< 0.20	< 0.20									< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.
	μg/L	310	2,000	< 10.0	< 10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	14	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Mercury Total Cyanide Notes: Analyte was detected abov Analyte concentration exce "Highest RRS equals Type 1 ft AMSL - feet Above Mean S RRS - Risk Reduction Stand: SU - Stamdard Units mS/cm - millisiemens per iter my/L - milligrams per liter mV - milliotts NYA - RRS are not applicable	pg/L re laboratory di eeds the Type RRS; therefore Sea Level and ntimeter	310 etection limi 2 RRS (RRS e, the cleanup	2,000 it applicable t	< 10.0	< 10.0 cation)	< 10																						
- Not Analyzed HF - Holding time of 15 minu /alues are listed with the lab			significant fig	jures, which v	aries betweei	n different cor	nstituents with	nin the same	groundwate	r sample, and	between the	e same consti	ituent in diffe	erent wells.														

Parameter	Units	Type 2	Type 4														MW-15							00/5-1-					4011-1		
Field Croundwater Ouglitu		RRS	RRS	08/25/16	04/06/16	4/16 DUP	08/12/15	02/17/15	02/06/13	02/13 DUP	02/14/12	02/12 DUP	02/23/11	02/25/10	08/12/09	06/06/06	03/08/06	12/21/05	09/28/05	03/16/05	12/14/04	09/30/04	06/08/04	03/03/04	12/16/03	09/09/03	06/10/03	03/12/03	12/10/02	09/19/02	11/06/01
Field Groundwater Quality	SU SU	N/A	N/A	5.68	5	5.45	5.71	5.09	4.	64	4.9	22	5.37	5.56	5.40	5.74	6.06	5.74	5.69	6.20	5.84	6.16	5.95	5.98	5.69	5.77	6.05	6.11	5.80	5.99	5.98
Specific Conductance	mS/cm	N/A	N/A	811.3		100	880	851		44	93		485	774	987	915	781	795	1165	568	828	650	1,022	1.000	1532	952	717	891	754	934	976
Temperature	°Celsius	N/A	N/A	26.16		0.45	24.28	14.83	16		15.5		14.96	11.36	23.86	21.23	17.58	19.02	25.54	16.39	20.03	25.08	21.11	16.63	20.66	24.33	21.06	16.85	20.10	24.28	22.16
Dissolved Oxygen (YSI)	mg/L	N/A	N/A	0.24	0	).33	0.18	0.66	0.	47	0.3	39	1.13	0.59	3.07	0.24	0.52	0.79	0.28	1.20	2.97	0.76	1.04	0.69	0.18	0.24	0.34	0.58	1.79	0.10	1.5
ORP	mV	N/A	N/A	24.1	11	16.5	-18.3	99.7	30	1.1	73.	.2	210.3	154.4	-187	192.3	157.2	220.8	-18.1	219.9	233.5	47.9	122.3	106.1	69.1	31.2	118.1	250.3	87.4	6.00	30.0
Turbidity	NTU	N/A	N/A	3.40	11	1.10	3.28	8.81	1.3	34	3.9	95	4.67	9.82	0.46	0.23	1.66	4.98	1.36	4.90	2.6	1.11	1.06	1.49		4.45	6.53	17.7	1.82	1.50	9.02
Laboratory Results - Natur					T															1	1	1				1	1				
Nitrogen, Ammonia	mg/L	N/A	N/A	-	-															< 0.20	15.7	1.54	25.6	5.97	27.8	25.8	8.15	2.62	28.4	37.9	36.0
Nitrogen, Nitrate	mg/L	N/A N/A	N/A N/A	-	-				31 370	30 370	21 310	22 310	4.8 310	6.9 330	6.4 350					13.6 124	10.3 4.83	6.93 95.8	33.6 248	35.2 240	45.2 153	58.8 116	38.9 71.9	45.9 100	17.7 201	0.0654 263	0.515 281
Sulfate Sulfide	mg/L mg/L	N/A N/A	N/A N/A				-		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0					< 1.0	< 1.0	95.8 < 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.00	< 1.00	< 1.00
Dissolved Manganese	mg/L	N/A	N/A										V 1.0				-			1.58	2.86	0.592	3.95	2.54	3.54	4.23	2.93	1.53	5.52	6.86	7.35
Total Manganese	mg/L	N/A	N/A	-																1.40	2.89	0.692	3.99	2.66	3.54	4.32	3.01	1.55	5.42	6.05	7.30
Ferrous Iron	mg/L	N/A	N/A				-		0.13 HF	0.28 HF	< 0.10 HF	0.11 HF	< 0.010 HF	< 0.010	< 0.010		-			< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.100	12.7	22.0	21.7
Total Iron	mg/L	N/A	N/A		-				0.18	0.18	0.16	0.18	0.12	0.50	< 0.010					0.213	0.230	0.159	0.166	0.293	0.104	0.338	0.781	1.89	9.12	21.4	19.9
Carbon Dioxide	mg/L	N/A	N/A	-					110	99	2.7	2.8	1.7	1.4	1.2					140	140	120	180	160	170	170	210	120	190	250	200
Methane	mg/L	N/A	N/A						2.4	2.2	1.8	2.1	<0.58	0.58	<0.19					0.77	1.1	3.2	1.4	0.62	1.5	2.2	2.4	1.4	35	93	330
Dissolved Nitrogen	mg/L	N/A	N/A N/A							7.0	5.1	5.3 1.7	3.8	4.1	4.3 1.6					26	21 2.6	17 4.4	17 0.97	18 1.6	15	14	14	16	16	16	12
Dissolved Oxygen  Laboratory Results - Organ	mg/L	N/A	IN/A						6.6	7.2	1.6	1.7	1.3	1.3	0.1		-		-	6.8	2.0	4.4	0.97	1.0	1.1	1.8	1.3	3.6	7.5	5.5	1.8
Volatile Organic Compounds		15																													
Benzene	ua/L	5.0*	9.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Disulfide	μg/L	329	1700.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0																					
Ethylbenzene	μg/L	700*	2,300	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	μg/L	1,000*	1,100	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Xylenes	μg/L	31,000	200,000	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Semivolatile Organic Compo		T			T														1								1				
Acenaphthene	μg/L	2,000* 470	6,100 3,100	<0.50 <1.0	< 0.50 < 1.0	< 0.50 < 1.0	< 0.50 < 1.0	< 10 < 10	< 0.21 < 0.21	< 0.21			-							< 10 < 10	< 10										
Acenaphthylene Anthracene	μg/L μg/L	4,700	3,100	0.14	< 0.050	< 0.050	0.11	< 10	< 0.21	< 0.21										< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 < 10
Benzo[a]anthracene	μg/L	1 17	3.92	0.13	< 0.050	< 0.050	< 0.050	< 0.050	< 0.21	< 0.21			-																		
Benzo[a]pyrene	μg/L	0.2*	0.39	0.14	< 0.050	< 0.050	< 0.050	< 0.050	< 0.21	< 0.21																					
Benzo[b]fluoranthene	μg/L	1.17	3.92	0.12	< 0.10	< 0.10	< 0.10	< 0.10	< 0.21	< 0.21			-				-														
Benzo[g,h,i]perylene	μg/L	10	10	0.16	< 0.10	< 0.10	< 0.10	< 10	< 0.21	< 0.21			1				1		-											-	
Benzo[k]fluoranthene	μg/L	11.7	39.2	0.14	< 0.050	< 0.050	< 0.050	< 10	< 0.21	< 0.21																					
Chrysene	μg/L	117	392	0.15	< 0.050	< 0.050	< 0.050	< 10	< 0.21	< 0.21		-			-		-								-						
Dibenz(a,h)anthracene	μg/L	0.3* 700*	0.39 700*	<0.10	< 0.10 < 10	< 0.10	< 0.10 < 10	< 0.10 < 10	< 0.21 < 2.1	< 0.21 < 2.1			-							< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2,4-Dimethylphenol Fluoranthene	μg/L μg/L	1.000*	4,100	<0.10	< 0.10	< 0.10	< 0.10	< 10	< 0.21	< 0.21										< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Fluorene	μg/L μg/L	1,000*	4,100	<0.10	< 0.10	< 0.10	< 0.10	< 10	< 0.21	< 0.21										< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	0.15	< 0.050	< 0.050	< 0.050	< 0.050	< 0.21	< 0.21	1																				
2-Methylphenol	μg/L	780	5,100	<10	< 10	< 10	< 10	< 10	< 2.1	< 2.1										< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
4-Methylphenol	μg/L	78	510	<10	< 10	< 10	< 10	< 10	< 2.1	< 2.1		-	-		-		-		-	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Naphthalene	μg/L	20*	20*	<0.50	< 0.50	< 0.50	< 0.50	< 10	< 0.21	< 0.21	< 5.0	< 5.0	< 5.0	<9.8	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Phenanthrene	μg/L	470	3,100	<0.050	< 0.050	< 0.050	< 0.050	< 10	< 0.21	< 0.21										< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Phenol Pyrene	μg/L uα/L	9,390 1,000*	61,000 3,100	<10 0.055	< 10	< 10 < 0.050	< 10 < 0.050	< 10 < 10	< 1.1 < 0.21	< 1.1 < 0.21										< 10 < 10											
Laboratory Results - Inorg	1.5		3,100	0.055	< 0.050	< 0.050	< 0.050	< 10	< 0.21	< ∪.∠1			-				-		-	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Antimony	ganic Constitue μg/L	6.3	40	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20	< 20										< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40
Artimony	ug/L	50*	50*	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 20	< 20			-				-		-	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Barium	μg/L	2,000	7,200	31.7	31.5	32.6	33.6	50	16	16	19	18	41	49	35	21.8	33.7	28.5	38.7	84.7	38.3	87.3	35.4	80.8	48.7	74.6	105	119	34	34	35
Beryllium	μg/L	31	200	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 4.0	< 4.0							-													-	
Cadmium	μg/L	7.8	51	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0																					
Chromium	μg/L	100	310	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10.0	< 10.0	< 10.0	< 10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Copper	μg/L	630	4,100	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 10.0	< 10.0	< 10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Lead	μg/L	15*	15*	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10.0	< 10.0	< 10.0	< 10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Nickel	μg/L	100 4,700	2,000 31.000	< 20.0 23.9	< 20.0 50.0	< 20.0 50.6	< 20.0 < 20.0	< 20.0 297	< 40	< 40 330	< 40	< 40	< 40	< 40	< 40	< 20.0	< 20.0	< 20.0	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Zinc Mercury	μg/L μg/l	4,700	31,000 2*	< 0.20	< 0.20	< 0.20	< 20.0	< 0.20	320 < 0.20	< 0.20										< 20 < 0.5											
Total Cvanide	μg/L μg/L	310	2,000	< 0.20 14.1	< 0.20 14	12	11.3	108	120	120	130	130	65	110	150	167	315	121	282	199	355	216	236	403	173	189	< 0.5 51	248	< 0.5 181	276	227
Notes:	r9/-		_,,,,,,	1.7.1	1			100	0	.20	.50	.50		0	.50		510		-52					.00	.,,,,			0	.01		

Notes:

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level
RRS - Risk Reduction Standard
SU - Stamdard Units
mS/cm - millisiemens per centimeter

µg/L - micrograms per liter
my/L - milligrams per liter
mV - millivolts
NTU - nephelometric turbidity units
N/A - RRS are not applicable to this parameter
- Not Analyzed
HF - Holding time of 15 minutes was exceeded

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

## Appendix B-7a Summary of Alluvium Groundwater Analytical Data November 2001 through August 2016 Atlanta Gas Light Company

## Former Manufactured Gas Plant Site Macon, Georgia

Parameter	Units	Type 2 RRS	Type 4 RRS			W-21	1	<b>_</b>	MW-23	1
		130021110	1,700 4 11110	08/25/16	04/06/16	04/30/15	07/12/06	02/13/12	02/24/11	03/05/04
eld Groundwater Quality Pa		NI/A	N1/A		F 00	F 00	1	6.07	0.40	2.22
ecific Conductance	SU mS/cm	N/A N/A	N/A N/A		5.92 95	5.99 58		287	6.16 272	6.20 347
emperature	°Celsius	N/A	N/A		17.35	16.44		19.25	16.63	20.76
issolved Oxygen (YSI)	mg/L	N/A	N/A		0.19	0.98		6.32	1.42	1.86
ORP	mV	N/A	N/A		5.7	-44.1		0.5	9.1	42.5
urbidity	NTU	N/A	N/A		6.8	14.1		3.89	0.56	10.65
aboratory Results - Natural	Attenuation Param	eters				•				
itrogen, Ammonia	mg/L	N/A	N/A					-		
litrogen, Nitrate	mg/L	N/A	N/A					0.85	0.75	
Sulfate	mg/L	N/A	N/A					36	35	
ulfide	mg/L	N/A	N/A			-		< 1.0	< 1.0	
Dissolved Manganese	mg/L	N/A N/A	N/A N/A							< 0.005
otal Manganese errous Iron	mg/L mg/L	N/A N/A	N/A N/A					 < 0.10 HF	< 0.010 HF	< 0.005
otal Iron	mg/L	N/A	N/A					< 0.10	< 0.010	0.171
Carbon Dioxide	mg/L	N/A	N/A					1.6	1.0	
Methane	mg/L	N/A	N/A					< 0.58	<0.58	
issolved Nitrogen	mg/L	N/A	N/A					5.0	4.4	
issolved Oxygen	mg/L	N/A	N/A					1.6	1.5	
aboratory Results - Organic	Constituents									
olatile Organic Compounds				-				-		
enzene	μg/L	5.0*	9.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Disulfide	μg/L	329	1,700	<5.0	< 5.0	< 5.0	< 5.0			
thylbenzene	μg/L	700*	2,300	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
oluene	μg/L	1,000*	1,100	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
laphthalene	μg/L	31,000	200,000	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Semivolatile Organic Compour acenaphthene	nas μg/L	2,000*	6,100	<0.50	< 0.50	< 10	< 10		I	< 10
cenaphthylene	μg/L μg/L	470	3,100	<0.50	< 1.0	< 10	< 10	-		< 10
Inthracene	μg/L	4,700	31, 000	<0.050	< 0.050	< 10	< 10			< 10
Benzo[a]anthracene	μg/L	1.17	3.92	<0.050	< 0.050	< 0.050	< 0.050			
enzo[a]pyrene	μg/L	0.2*	0.39	<0.050	< 0.050	< 0.050	< 0.050			
enzo[b]fluoranthene	μg/L	1.17	3.92	<0.10	< 0.10	< 0.10	< 0.10			
enzo[g,h,i]perylene	μg/L	10	10	<0.10	< 0.10	< 10	< 10			
Benzo[k]fluoranthene	μg/L	11.7	39.2	<0.050	< 0.050	< 10	< 10			
Chrysene	μg/L	117	392	< 0.050	< 0.050	< 10	< 0.050			
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	< 0.10	< 0.10	< 0.10			
,4-Dimehylphenol	μg/L	700*	700*	<10	< 10	< 10				< 10
Fluoranthene	μg/L	1,000*	4,100	<0.10	< 0.10	< 10	< 10			< 10
Fluorene	μg/L	1,000*	4,100	<0.10	< 0.10	< 10	< 10			< 10
ndeno[1,2,3-cd]pyrene P-Methylphenol	μg/L	1.17 780	3.92 5.100	<0.050 <10	< 0.050	< 0.050	< 0.050			
-Methylphenol	μg/L μg/L	780	5,100	<10	< 10 < 10	< 10 < 10				< 10 < 10
Naphthalene	μg/L	20*	20*	<0.50	< 0.50	< 10	< 10	< 5.0	< 5.0	< 10
Phenanthrene	μg/L	470	3,100	<0.050	< 0.050	< 10	< 10			< 10
Phenol	μg/L	9,390	61,000	<10	< 10	< 10				< 10
Pyrene	μg/L	1,000*	3,100	<0.050	< 0.050	< 10	< 10			< 10
aboratory Results - Inorgan	ic Constituents	•			•	•	•	•	•	•
ntimony	μg/L	6.3	40	<0.0200	< 20.0	< 20.0	< 20.0			< 40
rsenic	μg/L	50*	50*	<0.0500	< 50.0	< 50.0	< 50.0			< 50
Barium	μg/L	2,000	7,200	0.158	96.8	75.6	73	74	67	71.8
Beryllium	μg/L	31	200	<0.0100	< 10.0	< 10.0	< 10.0			
Cadmium	µg/L	7.8	51	0.0055	< 5.0	< 5.0	< 5.0			
Chromium	μg/L	100	310	<0.0100	< 10.0	< 10.0	< 10.0	< 10	< 10	< 10
190 mm	μg/L μg/L	630 15*	4,100 15*	0.0143 <0.0100	< 10.0 < 10.0	< 10.0 < 10.0	< 10.0 < 10.0	< 20 < 10	< 20 < 10	< 10 < 10
	μg/L μg/L	100	2,000	<0.0100	< 20.0	< 20.0	< 20.0	< 40	< 40	< 20
ead	μ <u>y</u> /∟	4,700	31,000	0.134	165	< 20.0	< 20.0	< 40	< 40	< 20
ead lickel	ua/l		01,000		< 0.20	< 0.20	< 0.20			< 0.5
ead	μg/L μg/L	2*	2*	< 0.00020					<u> </u>	

Specific Conductance	N/A	94.1 5	5.95 5.8 300 88 6.08 27. 2.26 0.9 9.0 -15	89 38 .50 98	6.49 451 13.84 5.83 81.0	5.93 706	6.54 824 20.69 0.51 151.3	6.53 575 20.89 1.75	5.5 645 26.12	5.95 739 23.47	6.54 711	5.77 594	6.08		6.41							6.20		6.17					6.34	12/16/03	<b>09/10/03</b> 6.4	6.69	6.98	NM
pH         SU         N/A           Specific Conductance         mS/cm         N/A           Temperature         "Celsius         N/A           Dissolved Oxygen (YSI)         mg/L         N/A           ORP         mV         N/A           Turbidity         NTU         N/A           Laboratory Results - Natural Attenuation Parameters         Nitrogen, Ammonia         mg/L         N/A           Nitrogen, Nitrate         mg/L         N/A         N/A           Sulfide         mg/L         N/A         N/A           Sulfide         mg/L         N/A         N/A           Dissolved Manganese         mg/L         N/A         N/A           Ferrous Iron         mg/L         N/A           Total Iron         mg/L         N/A           Carbon Dioxide         mg/L         N/A           Methane         mg/L         N/A           Dissolved Nitrogen         mg/L         N/A	N/A	876.0 3 25.40 1 0.42 0 94.1 5	800 88 6.08 27. 0.26 0.9	50 50 98 5.6	451 13.84 5.83 81.0	706 24.87 1.71 -114.2	824 20.69 0.51 151.3	575 20.89 1.75	645 26.12	739	711	594				6.06	6.25	6.61	6.66	5.02	5.03	6.20	6 64	6.17	6.24	0.04	6.70	633	6.34	6.3	6.4	6.69		
Specific Conductance	N/A	876.0 3 25.40 1 0.42 0 94.1 5	800 88 6.08 27. 0.26 0.9	50 50 98 5.6	451 13.84 5.83 81.0	706 24.87 1.71 -114.2	824 20.69 0.51 151.3	575 20.89 1.75	645 26.12	739	711	594																						
Temperature         "Celsius         N/A           Dissolved Oxygen (YSI)         mg/L         N/A           ORP         mV         N/A           Turbidity         NTU         N/A           Turbidity         NTU         N/A           Nitrogen, Ammonia         mg/L         N/A           Nitrogen, Nitrate         mg/L         N/A           Sulfiate         mg/L         N/A           Sulfide         mg/L         N/A           Dissolved Manganese         mg/L         N/A           Ferrous Iron         mg/L         N/A           Total Iron         mg/L         N/A           Carbon Dioxide         mg/L         N/A           Methane         mg/L         N/A           Dissolved Nitrogen         mg/L         N/A	N/A N/A N/A N/A N/A N/A N/A N/A N/A	0.42 C 94.1 5	0.26 0.9 i9.0 -15	98 5.6	5.83 81.0	1.71 -114.2	0.51 151.3	1.75	26.12		16 77				322		300		246	749	302	341	312	277	308	358	361		450	705	561	525	616	NM
ORP         mV         N/A           Turbidity         N/A         N/A           Laboratory Results - Natural Attenuation Parameters         N/A           Nitrogen, Ammonia         mg/L         N/A           Nitrogen, Ammonia         mg/L         N/A           Sulfate         mg/L         N/A           Sulfide         mg/L         N/A           Dissolved Manganese         mg/L         N/A           Total Manganese         mg/L         N/A           Ferrous Iron         mg/L         N/A           Total Iron         mg/L         N/A           Carbon Dioxide         mg/L         N/A           Methane         mg/L         N/A           Dissolved Nitrogen         mg/L         N/A	N/A N/A N/A N/A N/A N/A N/A N/A	94.1 5	9.0 -15	5.6	81.0	-114.2	151.3		0.04			23.72	27.53	20.58		22.19	25.33	19.87		30.10	22.76	17.74	19.58	26.38		20.28	26.12	22.74	16.35	20.69	25.3		17.59	NM
Turbidity         NTU         N/A           Laboratory Results - Natural Attenuation Parameters         N/A           Nitrogen, Ammonia         mg/L         N/A           Nitrogen, Nitrate         mg/L         N/A           Sulfate         mg/L         N/A           Sulfide         mg/L         N/A           Dissolved Manganese         mg/L         N/A           Total Manganese         mg/L         N/A           Ferrous Iron         mg/L         N/A           Total Iron         mg/L         N/A           Carbon Dioxide         mg/L         N/A           Methane         mg/L         N/A           Dissolved Nitrogen         mg/L         N/A	N/A N/A N/A N/A N/A N/A N/A								0.81	2.20	1.56	0.97	0.92	0.90	2.03	0.50	3.0	8.0	5.85	2.69	0.29	0.59	0.44	0.20	0.63	3.14	1.28			0.23	0.40	0.06	0.12	NM
Laboratory Results - Natural Attenuation Parameters           Nitrogen, Ammonia         mg/L         N/A           Nitrogen, Nitrate         mg/L         N/A           Sulfiate         mg/L         N/A           Sulfiate         mg/L         N/A           Dissolved Manganese         mg/L         N/A           Total Manganese         mg/L         N/A           Ferrous Iron         mg/L         N/A           Total Iron         mg/L         N/A           Carbon Dioxide         mg/L         N/A           Methane         mg/L         N/A           Dissolved Nitrogen         mg/L         N/A	N/A N/A N/A N/A N/A N/A	1.60 S	9.6 	-	9.52	2.24		76.5	160.4	88.4	58.1	191.3	79.1	123.5	142.8	69.7	55.8	22.4	88	-160.1	45.1	135.2	-30.9	-77.8	-59.1	16.9	-100.2			-62.9	-75.5	-206.5	-124.5	NM
Nitrogen, Ammonia         mg/L         N/A           Nitragen, Nitrate         mg/L         N/A           Sulfate         mg/L         N/A           Sulfide         mg/L         N/A           Dissolved Manganese         mg/L         N/A           Total Manganese         mg/L         N/A           Ferrous Iron         mg/L         N/A           Total Iron         mg/L         N/A           Carbon Dioxide         mg/L         N/A           Methane         mg/L         N/A           Dissolved Nitrogen         mg/L         N/A	N/A N/A N/A N/A N/A			-			0.42	6.17	16.4	4.62	2.04	41.1	11.6	4.76	5.05	0.12	2.42	7.12	5.21	3.45	0.21	0.02	1.58	2.71	2.50	2.2	0.2	109.2	1.96		1.87	5.15	4.65	NM
Nitrogen, Nitrate         mg/L         N/A           Sulfate         mg/L         N/A           Sulfate         mg/L         N/A           Sulfate         mg/L         N/A           Dissolved Manganese         mg/L         N/A           Total Manganese         mg/L         N/A           Ferrous Iron         mg/L         N/A           Total Iron         mg/L         N/A           Carbon Dioxide         mg/L         N/A           Methane         mg/L         N/A           Dissolved Nitrogen         mg/L         N/A	N/A N/A N/A N/A N/A			-																					0.50	0.00	4.07		1 4 05			0.00	5.04	8.85
Sulfate         mg/L         N/A           Sulfide         mg/L         N/A           Dissolved Manganese         mg/L         N/A           Total Manganese         mg/L         N/A           Ferrous Iron         mg/L         N/A           Total Iron         mg/L         N/A           Carbon Dioxide         mg/L         N/A           Methane         mg/L         N/A           Dissolved Nitrogen         mg/L         N/A	N/A N/A N/A N/A	-		_			0.13				0.26				0.064		-		7.4	0.81			-	-		0.32 0.459				0.412		3.80 < 0.500		2.47
Sulfide         mg/L         N/A           Dissolved Manganese         mg/L         N/A           Total Manganese         mg/L         N/A           Ferrous Iron         mg/L         N/A           Total Iron         mg/L         N/A           Carbon Dioxide         mg/L         N/A           Methane         mg/L         N/A           Dissolved Nitrogen         mg/L         N/A	N/A N/A N/A			-			350				220				66				29	220					51.5	4.83		81.7		50.0	104	71.9		183
Total Manganese         mg/L         N/A           Ferrous fron         mg/L         N/A           Total Iron         mg/L         N/A           Carbon Dioxide         mg/L         N/A           Methane         mg/L         N/A           Dissolved Nitrogen         mg/L         N/A	N/A			-	-		< 1.0				< 1.0			-	< 1.0	-		-	< 1.0	< 1.0			-		< 1.0	< 1.0	< 1.0			< 1.0	< 1.0	< 1.0	< 1.0	< 1.00
Ferrous Iron         mg/L         N/A           Total Iron         mg/L         N/A           Carbon Dioxide         mg/L         N/A           Methane         mg/L         N/A           Dissolved Nitrogen         mg/L         N/A				-					-								-								2.66	1.75		0.827		0.255	1.72	1.43		1.22
Total Iron         mg/L         N/A           Carbon Dioxide         mg/L         N/A           Methane         mg/L         N/A           Dissolved Nitrogen         mg/L         N/A	N/A			-				-					-			-		-							2.59			0.651		0.223			1.92	1.24
Carbon Dioxide         mg/L         N/A           Methane         mg/L         N/A           Dissolved Nitrogen         mg/L         N/A	N/A					-	< 0.10 HF 0.11				< 0.10 HF < 0.10				< 0.010 HF 0.13	-	-	-	0.12	< 0.010			-		3.0 2.60	0.6 0.915	1.1	0.2 10.2		0.4 0.515	15.2 15.8	9.4 8.97	7.93	0.133 4.94
Methane         mg/L         N/A           Dissolved Nitrogen         mg/L         N/A	N/A N/A			-			0.11				0.10				0.13	-			0.45	0.57					100	83	49	160	120	0.515	120	90	49	81
Dissolved Nitrogen mg/L N/A				-			< 0.58				< 0.58	-			3.5				15	0.23				-	180	74		7.1		2.5	7.8	150	110	14
Dissolved Oxyger mg/L N/A		- 1		-			19		-		5.0				4.5	-	-		3.9	4.4			-	-	26	15	16	16	22	16	13	15	21	15
	N/A			-	-		7.8	-	-		1.6			-	1.5	-	-		1.4	1.5				-	6.5	1.4	1.9	0.92	1.1	1.6	0.47	0.48	0.69	7.5
Laboratory Results - Organic Constituents																																		
Volatile Organic Compounds	0		50 L 5					4.0					F.0				50		F 0				5.0				F.0							
Berizerie pg/E 5	J	<5.0 <						< 1.0 < 2.0	< 1.0 < 2.0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
		<5.0 <						< 1.0				< 5.0	< 5.0	< 5.0	< 5.0				< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
		<5.0 <							< 1.0			< 5.0							< 5.0			< 5.0						< 5.0		< 5.0				< 5.0
Total Xylenes µg/L 31,000	200,000	<5.0 <	5.0 < 5	5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0				< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Semivolatile Organic Compounds																																		
		<0.50 < <1.0 <							< 0.19 < 0.19	< 0.22	-					-		-	-				-		< 10 < 10	< 10 < 10	< 10 < 10	< 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10
Acenaphthylene         μg/L         470           Anthracene         μg/L         4,700		<0.050 <						< 0.20		< 0.22							-		-		-		-		< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10	< 10
Benzo[a]anthracene µg/L 1.17		0.069 < 0					< 0.25	< 0.20		< 0.22		-												-										
Benzo[a]pyrene µg/L 0.2*	0.39	<0.050 < 0	0.050 < 0.0	050 <	< 0.050	< 0.20		< 0.20		< 0.22	-					-	-						-	-						-				-
Benzo[b]fluoranthene µg/L 1.17		<0.10 <							< 0.19	< 0.22	-		-	-		-	-	-	-				-				-							
		<0.10 <							< 0.19							-	-		-				-				-							
		<0.050 < 0				< 10 < 10	< 0.25 < 0.25	< 0.20 < 0.20	< 0.19 < 0.19	< 0.22 < 0.22	-						-						-	-										<del></del> +
		<0.000 <							< 0.19																				<del>-</del> -					<del>+</del>
2,4-Dimethylpheno µg/L 700*		<10 <						< 2.0		< 2.2	-			-		-		-	-				-		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Fluoranthene µg/L 1,000*		<0.10 <				< 10	< 0.25	< 0.20		< 0.22							-				-				< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10	< 10
Fluorene µg/L 1,000*		<0.10 <			< 10		< 0.25	< 0.20		< 0.22						-			-				-		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
		<0.050 < 0						< 0.20	< 0.19 < 1.9	< 0.22 < 2.2	-						-						-	-	< 10	< 10	< 10	< 10	< 10	< 10	< 10	 < 10	< 10	< 10
2-Methylpheno         μg/L         780           4-Methylpheno         μg/L         78		<10 <						< 2.0		< 2.2						_	_	-						-		< 10	< 10		< 10	< 10	< 10		< 10	< 10
	20*	<0.50 <	0.50 < 0.	.50		< 10		1.2	< 0.19	< 0.22	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<9.8	<9.8	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10	< 10
Phenanthrene µg/L 470		<0.050 < 0				< 10	< 0.25	< 0.20	< 0.19	< 0.22	-		-	-		-	-	-	-				-		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
		<10 <							< 0.95							-			-				-			< 10		< 10		< 10			11	< 10
μg/L 1,000	3,100	<0.050 < 0	0.050 < 0.0	050	< 10	< 10	< 0.25	< 0.20	< 0.19	< 0.22													-	1	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Inorganic Constituents	40	22.2			00.0	- 00.0		- 00	- 00	- 20															- 40	- 40	- 40		10	10	< 40	40	- 40	- 40
Antimony         μg/L         6.3           Arsenic         μg/L         50*	40 50*	< 20.0 < < 50.0 <	20.0 < 20	0.0	< 20.0	< 20.0	< 20	< 20	< 20 < 20	< 20 < 20						-										< 40 < 50	< 40 < 50		< 40	< 40	< 40 < 50		< 40	< 40 < 50
Barium μg/L 2,000		129 5				180	51	110	110	110	97	120	290	180	88	-	_		82	220	154	158	116	125	147	129	106	146		104	163	137	104	180
Beryllium µg/L 31	200	< 10.0 <	10.0 < 10	0.0	< 10.0		< 4.0	< 4.0	< 4.0	< 4.0				-	-	-	-														-			
Cadmium µg/L 7.8	Ö.	< 5.0						< 5.0		< 5.0	-	-			-	-		-	-		-						-	-		_		-		_=_
Chromium µg/L 100		< 10.0 <						< 10		< 10	< 10	< 10	< 10	< 10	< 10	-			< 10	< 10.0	< 10.0	< 10.0	< 10.0 < 10.0	< 10		< 10 < 10	< 10	< 10		< 10 < 10	< 10	< 10	< 10 < 10	< 10
Copper         μg/L         630           Lead         μg/L         15*		< 10.0 < < 10.0 <			< 10.0 < 10.0			< 20 < 10	< 20 < 10	< 20 < 10	< 20 < 10	< 20 < 10	< 20 < 10	< 20 < 10	< 20 < 10				< 20 < 10	< 20 < 10.0	< 10.0 < 10.0	< 10.0	< 10.0 < 10.0	< 10 < 10	< 10 < 10	< 10	< 10 < 10		< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10	< 10 < 10
Nickel µg/L 100		<20 0.0	0408 < 20	0.0	< 20.0	< 20.0	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	-	_		< 40	< 40	< 20.0		< 20.0		< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Zinc μg/L 4,700	31,000	304	532 24	12	124	184	470	28	< 20	30				-		-	-							-	< 20	< 20	< 20	55	< 20	< 20	< 20	< 20	< 20	30
Mercury μg/L 2*	2*	< 0.20 <	0.20 < 0.	.20	< 0.20	< 0.20	< 0.20	< 0.20		< 0.20	-	-	-			-	-	-	-			-	-	-		< 0.5		< 0.5	< 0.5	< 0.5		< 0.5	< 0.5	< 0.5
	2,000	247 <	10.0 < 10	0.0	17	106	22	21	180	170	34	-			55				46	390	57	56	57	59	41	35	90	95	101	159	133	46	190	293
Notes:  Analyte was detected above laboratory detection limi Analyte concentration exceeds the Type 4 RRS (RRS app *Highest RRS equals Type 1 RRS; therefore, the cleanup go the AMSL - feet Above Mean Sea Level RRS - Risk Reduction Standard SU - Stamdard Units mS/cm - millisiemens per centimeter ug/L - milligrams per liter mg/L - milligrams per liter mV - millivolts NTU - nephelometric turbidity units NTU - nephelometric turbidity units NTA - RRS are not applicable to this parameter - Not Analyzed HF - Holding time of 15 minutes was exceeded	pplicable to th	he well location																																

## Appendix B-7a

## **Summary of Alluvium Groundwater Analytical Data** November 2001 through August 2016 Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

D	H-M-	T 0 DDC	Time 4 DDC		MV	V-400		MW-401
Parameter	Units	Type 2 RRS	Type 4 RRS	8/24/2016	8/16 DUP	4/6/2016	04/29/15	08/24/16
oundwater Quality Param	neters							
H	SU	N/A	N/A		.53	5.54	5.90	5.73
Specific Conductance	mS/cm	N/A	N/A		7.2	1000	520	201.2
emperature	°Celsius	N/A	N/A		1.62	21.48	16.72	25.01
Dissolved Oxygen (YSI)	mg/L	N/A	N/A		81	0.24	2.71	0.27
ORP	mV	N/A	N/A		1.5	119.7	-7.1	48.4
Turbidity	NTU	N/A	N/A	1.	.38	4.37	9.2	8.19
_aboratory Results - Natu	ural Attenuation Pa	arameters						
Nitrogen, Nitrate (as N)	mg/L	N/A	N/A					
Sulfate	mg/L	N/A	N/A					
Sulfide	mg/L	N/A	N/A					
errous Iron	mg/L	N/A	N/A					
Total Iron	mg/L	N/A	N/A					
Carbon Dioxide	mg/L	N/A	N/A					
Methane	mg/L	N/A	N/A					
Dissolved Nitrogen	mg/L	N/A	N/A					
Dissolved Oxygen	mg/L	N/A	N/A					
_aboratory Results - Orga	anic Constituents							
/olatile Organic Compound								
Benzene	μg/L	5*	9	<5.0	<5.0	11	< 5.0	<5.0
Carbon Disulfide	μg/L	329	1,700	<5.0	<5.0	< 5.0	< 5.0	<5.0
Ethylbenzene	μg/L	700*	2,300	<5.0	<5.0	< 5.0	< 5.0	<5.0
Γoluene	μg/L	1,000*	1,100	<5.0	<5.0	< 5.0	< 5.0	<5.0
Total Xylenes	μg/L	31,000	200,000	<5.0	<5.0	< 5.0	< 5.0	<5.0
Semivolatile Organic Comp	oounds	•			•	•	•	
Acenaphthene	μq/L	2,000*	6,100	<0.50	0.52	1.0	< 10	<0.50
Acenaphthylene	μg/L	470	3,100	<1.0	<1.0	1.30	< 10	<1.0
Anthracene	μg/L	4,700	31,000	0.14	0.17	0.15	< 10	0.093
Benzo[a]anthracene	μg/L	1.17	3.92	<0.050	< 0.050	< 0.050	< 0.050	< 0.050
Benzo[a]pyrene	μg/L	0.2*	0.39	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Benzo[b]fluoranthene	μg/L	1.17	3.92	<0.10	<0.10	< 0.10	< 0.10	<0.10
Benzo[g,h,i]perylene	μg/L	10	10	<0.10	<0.10	< 0.10	< 10	<0.10
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 0.050	< 0.050	< 0.050	< 10	< 0.050
Chrysene	μg/L	117	392	< 0.050	< 0.050	< 0.050	< 10	< 0.050
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	<0.10	< 0.10	< 0.10	<0.10
2,4-Dimehylphenol	μg/L	700*	700*	<10	<10	< 10	< 10	<10
Fluoranthene	μg/L	1,000*	4,100	<0.10	<0.10	0.11	< 10	<0.10
Fluorene	μg/L	1,000*	4,100	0.19	0.21	0.28	< 10	<0.10
ndeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	<0.050	<0.050	< 0.050	< 0.050	<0.050
2-Methylphenol	μg/L	780	5,100	<10	<10	< 10	< 10	<10
3 & 4 Methylphenol	μg/L	78	510	<10	<10	< 10	< 10	<10
Naphthalene	μg/L	20*	20*	<0.50	<0.50	1.70	< 10	<0.50
Phenanthrene	μg/L	470	3,100	< 0.050	<0.050	< 0.050	< 10	<0.050
Phenol	μg/L	9,390	61,000	<10	<10	< 10	< 10	<10
Pyrene	μg/L	1,000*	3,100	0.13	0.13	0.14	< 10	1.0
norganic Constituents	. •	•		- · · ·		•		
Antimony	μg/L	6.3	40	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Arsenic	μg/L	50*	50*	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0
Barium	μg/L	2,000	7,200	68	67.6	67.6	38.1	122
Beryllium	μg/L	31	200	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Cadmium	μg/L	7.8	51	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium	μg/L	100	310	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Copper	μg/L	630	4,100	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
.ead	μg/L	15*	15*	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Nickel	μg/L μg/L	100	2.000	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Zinc	μg/L	4,700	31,000	145	147	88.7	< 20.0	166
Mercury	μg/L	2*	2*	<0.20	<0.20	< 0.20	< 0.20	<0.20
Total Cyanide	μg/L μg/L	310	2.000	288	167	< 10	9.9	<0.20
Notes:	μy/L	310	2,000	∠00	10/	< 10	9.9	<10

Notes:

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Stamdard Units

mS/cm - millisiemens per centimeter

μg/L - micrograms per liter

my/L - milligrams per liter

mV - millivolts

NTU - people/metric turbidity units

NTU - nephelometric turbidity units
N/A - RRS are not applicable to this parameter

-- Not Analyzed

HF - Holding time of 15 minutes was exceeded

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

# **Groundwater Sampling Logs (CD ONLY)**

Appendix B

Project No. 0366660 Atlanta Gas Light Company

(2)										,		
ERM		AG	<u>_</u>				0366	660		2/21/1-	7	
	Client	Mac	- () 4			Project No.	: <u> </u>	000	Sampling Date: _	ir 50	014.601	_
	Site/Location:		<del>y</del>			Λ	. 0	· 1 11:	Sampler's Name: _	1/1	evacek	_
	Well ID:	-73		_ Pu	ımp Type/Model:	A(ex)	> rep	stalt	Sample Collection Time: _	1912		_
	Total Depth (ft) <sup>a</sup> :	10.9	197	<b></b>	Tubing Material:		<u> </u>	=	Sample Purge Rate (L/min) <sup>c</sup> :	<u> </u>		`
	Depth to Water (ft):	11.2	- 7	Pump	Intake Depth (ft):	1	6		Sample ID: _	AMW-6	-20170	221-0)
	Well Diameter (in):	2		_	Purge Method:	Low	Flow		QA/QC Collected?_	NO		_
*Well Volum	me (gal) = 0.041d <sup>2</sup> h:			Start/S	Stop Purge Time:	1330	/135.	5	QA/QC I.D.			
				− Purge Rate (L/ı	min) <sup>b</sup> : O . \	Total F	/ Purge Volume (L):	25	Laboratory Analyses:	Cos		
Well Type:	Flush / Stick U	_		,	, <del></del>	-		Sa	ampling Method: A soda straw			
	dition: Good / Rep	place Other		_			~	(che	ck all that apply) pump head di			
Well Lock:	Yes /No		Well Bolted: DO	Yes / 😡	ORP	Bolts Needed: Turbidity	Yes / No.) Purge Volume	H₂O Depth	Bailer (only us	ed if necessary) water clarity, odor, pury	ze rate issues with	<b>7</b>
Time <sup>d</sup>	Temp. (°C)	Spec. Cond.	(mg/L)	pH (SU)	(mV)	(NTUs)	(L)	(ft)		mp/well/weather/etc.)	5	
1333	5 21.06	100 15	3.89	6.45	107.4	20.1	0.5	11.41				
1340	2128	599.60	2 2 2	6.45	106.9	13.3	1.0	11.45				1
1340	$\frac{20.20}{21.31}$	( ni 3	270	1,43	106.8	13.8	1.5	1147				
13.30	2(1)	569	LI 2 8	1040	100.0	13.8	2.0	11 40				-
	21.49	- ( (, )	17,52	6.17	100.	9 7-	2.5	11:10	-C411	0,		-
1355	21.49	599.4	4.68	6.45	106.8	9,2	۲. ۶	11.48	->table		4/11/0	_
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below)g

+/- 10%

(see note

Stabilizing

Criteria<sup>e</sup>

1°C

(a) - Do not measure depth to bottom of well until atter purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 ipm or less
(c) - Sampling rate to be 0.5 ipm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Salabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since ittifal reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Sandard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Sandard Operating Procedure

+/-

0.1 unit

+/- 10 mV

(see note

<10 NTUs OR

+/- 10%

(see note

below)d

(see note

below)f

+/-

3%

d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

3		ΛΓ	í				- 110	( <del>-</del>		2/22/1	7	
ERM	Client:	HO	<u> </u>			Project No.:	03666	50	Sampling Date:	K. Spera	- 1k	
	Site/Location:	Ma	CON						Sampler's Name:	1640	ice >	<del></del>
	Well ID:	MW-C	28	Pun	np Type/Model: _	Alexi	s Pe	-	Sample Collection Time:	1070		
	Total Depth (ft) <sup>a</sup> :	19.0	8-	٦	Tubing Material: _	<u> </u>	S E		Sample Purge Rate (L/min) <sup>c</sup> :	11.46	701	70222 -
	Depth to Water (ft):	12,92	2/	Pump ir	ntake Depth (ft): _	<u> </u>	t		Sample ID:	1010000	<u>-201</u>	022
	Well Diameter (in):	2			Purge Method:	Low FT	<u>~</u>		QA/QC Collected?			
*Well Volur	me (gal) = 0.041d <sup>2</sup> h:			Start/St	top Purge Time: _	1600			QA/QC I.D.			
				Purge Rate (L/m	nin)b: 💇 🌊	Total Pur	rge Volume (L): _	2.5	Laboratory Analyses: mpling Method: Soda straw	02		
Well Type:	Flush / Stick U	р						Sa (chec	mpling inetriod. Social straw	discharge		
	dition: Good / Re	place / Other	Well Bolted:	Yes / No		Bolts Needed:	Yes / No	(2	☐ Bailer (only	used if necessary)		
Well Lock: Time <sup>d</sup>	Temp,	Spec. Cond.	DO	pH (SU)	ORP (mV)		Purge Volume (L)	H <sub>2</sub> O Depth (ft)	Notes (Purge metho	l, water clarity, odor, pu oump/well/weather/etc.)	irge rate, issues )	With
· /	(°C)	Z = S =	(mg/L)	6.53	111.8	917	0.5	12.94	And and a second department of the second of			
<u> 16025</u>		208.2	6.58	6.47	107.8	6.56	1.0	1294				
1610	<u> 20.75</u>		6.48	6.73	106.9	437	1.5	12.94				
1613	20.66	12.00	670	6.47	107.3	7.14	2,0	R.94				. / / / 6
1620	20.51	-12.60	6.44	6.44	106.6	5, 5	2.5	12,94	- Stuble	Sumpleh	(D)	1640
1625	20.65	214.10	10,74	6,7	106.0	J. 1		131				
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-												
Stabiliz		+/- 3%	+/- 10% (see note	+/- 0.1 unit	+/- 10 mV (see note	<10 NTUs O +/- 10%	R (see note below) <sup>d</sup>	(see note below) <sup>f</sup>				

below)g

Criteria<sup>e</sup>

1°C

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending times that may be resiting on the weil bottom
(b) - Purge rate to be 0.5 fpm or less
(c) - Sampling rate to be 0.5 fpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
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(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or fees since ithic toading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Croundwater sampling" SESD Sandard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Croundwater sampling" SESD Sandard Operating Procedure.

below)h

d = well diameter (inches); h = length of water column (feet)

0.12 0.16 0.64 Casing Diameter 1 in 2 in 4 in

					GROU	ND WATER SA	AMPLING LOG	SHEET	
<b>\</b> 2		1							
ERM	Client:	AG	C-1	Maco	0	Project No.:	03666	60	Sampling Date: 02-22-/7
	Site/Location:	Macor				4			Sampler's Name: M. Ber, h
		AMW-11	1	Pu	mp Type/Model:	Alexis	/Per;	. 19	Sample Collection Time: 1235
	Total Depth (ft)a:	1 00			Tubing Material:	1005	-/ '		Sample Purge Rate (L/min)°: 200 mg C/m 11
	Depth to Water (ft):	8.31	9	Pump I	ntake Depth (ft):	10			Sample ID: AMW-11-20170222 - 01
	Well Diameter (in):	2		_	Purge Method:	Cou FI		8	QA/QC Collected?
*Well Volur	me (gal) = 0.041d <sup>2</sup> h:			Start/S	Stop Purge Time:	1203	1228		QA/QC I.D.
				Purge Rate (L/n	nin) <sup>b</sup> : 200	Total Pu	urge Volume (L):		Laboratory Analyses:
Well Type:	Flush / Stick U	р							ampling Method: Soda straw
Well Cap Con-	dition: Good / Rep	place / Other						(che	ck all that apply)
Well Lock:	Yes / No		Well Bolted:	Yes / No		Bolts Needed:			☐ Bailer (only used if necessary)
Time <sup>d</sup>	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H <sub>2</sub> O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
	STREET PROBLEMS AND ASSESSED.								
1208	20.79	670.20	0.19	6.10	70.10	15.5	1.0	8.65	Weather - Cloudy & windy
1213	20.79	690.20		6.10	70.10	15.5	2.0	8.65	Weather - Cloudy & windy
1213			0.19	6.09	65.20 65.10	5.60	1.0 2.0 3.0	8.69	
1213 1218 1223		667.80	0.19		65.20	5.60	2.0	8.69 8.72 8.74	
1213 1218 1223	20.79	667.80 663.90 658.90	0.19	6.09	65.20 65.10	5.60	3.0	8.69	
1208 1213 1218 1223 1228	20.79 21.03 21.16	667.80 663.90 658.90	0.19	6.09	65.20 65.10 66.90	5.60	2.0 3.0 4.0	8.69 8.72 8.74	65F
1213 1218 1223	20.79 21.03 21.16	667.80 663.90 658.90	0.19	6.09	65.20 65.10 66.90	5.60	2.0 3.0 4.0	8.69 8.72 8.74	65F
1213 1218 1223	20.79 21.03 21.16	667.80 663.90 658.90	0.19	6.09	65.20 65.10 66.90	5.60	2.0 3.0 4.0	8.69 8.72 8.74	65F
1213 1218 1223	20.79 21.03 21.16	667.80 663.90 658.90	0.19	6.09	65.20 65.10 66.90	5.60	2.0 3.0 4.0	8.69 8.72 8.74	65F
1213 1218 1223	20.79 21.03 21.16	667.80 663.90 658.90	0.19	6.09	65.20 65.10 66.90	5.60	2.0 3.0 4.0	8.69 8.72 8.74	65F

+/- 10%

(see note

below)g

Stabilizing

Criteria<sup>e</sup>

+/-1°C

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
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(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

+/-

0.1 unit

+/- 10 mV

(see note

below)h

<10 NTUs OR

+/- 10%

(see note

below)d

+/-3%

d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per fool
1 in	0.12
2 in	0.16
4 in	0.64

(see note

below)f



ERM	Client:	AGL	-			Project No.:	0366	660	Sampling Date: 2 (21/17
	Site/Location:	M	a (0/	1	-				Sampler's Name: K. Spevacek
	Well ID:	AM	Nr - 12	*	mp Type/Model:	Ale	218	Per;	Sample Collection Time:
	Total Depth (ft)*:	19.	78		Tubing Material:	1 1	200	~-	Sample Purge Rate (L/min) <sup>c</sup> :
	epth to Water (ft):	V57	97	- o /	ntake Depth (ft):		<del></del>	· · · · · · · · · · · · · · · · · · ·	Sample 10: AMW-12-20170221-0
		_	- (· <u>)</u>	_C Pumpi			F(0~		
	Vell Diameter (in):				Purge Method:	1100/	1120		**************************************
-vveii voiume	(gal) = 0.041d <sup>2</sup> h:			_ Start/S Purge Rate (L/r	top Purge Time:			2 6	QA/QC I.D
Well Type:	(Flush) / Stick U	D.		Purge Rate (Dr	nin)": U# L	_ Total P	urge Volume (L):		Laboratory Analyses:ampling Method: Soda straw
Well Cap Conditi		place / Other							eck all that apply) oump head discharge
Well Lock:	Yes / No			Yes / No		Bolts Needed:			☐ Bailer (only used if necessary)
Time <sup>d</sup>	Temp. (°C)	Spec. Cond.	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	(ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1105	21,37	355.7	3,59	5.67	139.00	1,38	0.5	9.80	
1110	21.26	357.7	3.32	2.62	138.20	1.01	1.0	9.81	
1113	21.11	356.6	3.27	5.65	137.6	1.24	1.5	9,81	
1120	2(.03	336.1	3.26	5.65	137.5	1.13	2.0	7.82	
1125	21.05	356.8	3.27	5.65	137.5	1,00	2.5	9.82	- Stable
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+/- 10%

(see note

below)g

Stabilizing

Criteria<sup>e</sup>

1°C

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(g) - DOs in so tha subhilization criterion for the "Groundwater sampling" SEDS Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SEDS Standard Operating Procedure.

0.1 unit

+/- 10 mV

(see note

below)h

<10 NTUs OR

+/- 10%

(see note

below)<sup>d</sup>

(see note

below)

+/-3%

d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foo
1 in	0.12
2 in	0,16
4 in	0.64

ERM	Client:	Д	GL			Project No.:			Sampling Date: 2 / 2 9 / ) —
	Site/Location:		$\omega$ $\epsilon$ $\epsilon$ $\epsilon$	, (r A					Sampler's Name: T / Ye Un
	Well ID:	$\frac{1}{\sqrt{1}}$	1-761	n	mp Type/Model:	A10	كزيز	for	Sample Collection Time:
	Total Depth (ft)*:	21.9	) W	•	Tubing Material:	10/1/	t		Sample Purge Rate (L/min)°:
	Depth to Water (ft):	7.5	5	-	ntake Depth (ft):	<u>, 164 a</u>			Sample ID: WW- ) 112. 2017 Or 20-2
	Well Diameter (in):	$\overline{}$		•	Purge Method:		f/84	/	QA/QC Collected?
	ne (gal) = 0.041d²h:			- Start/S	top Purge Time:	<del></del>	1/		QA/QC I.D. VO
				- Purge Rate (L/n	(/)	1	irge Volume (L):		Laboratory Analyses: VNC 1.5 1/0 C
Well Type:	Flush Stick U					• '		Sa	ampling Method: Soda straw
	lition: Good / Rep Yes / No	place / Other				D. 6 M	(T)	(che	eck all that apply)
Well Lock: Time <sup>d</sup>	Yes / No ) Temp.	Spec. Cond.	Well Bolted:	Yes / No pH	ORP	Bolts Needed: Turbidity	Purge Volume	H₂O Depth	Notes (Purge method, water clarity, odor, purge rate, issues with
	(°C)	(mS/cm)	(mg/L)	pH (SU)	(mV)	(NTUs)	(r.)	(ft)	pump/well/weather/etc.)
941	12.34	6707	1 0.36	5,56	P. 7.8	7.41	0 (	7.99	
9016	الرالم	66.3	2.3	25	84.4	737.		2.05	
9+1	12131	617.1	8.26	178	13:01	7.21		10.5	
9761	1366	625.)	1571	328	43.V	9.7	17	7.01	
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Stabilizing Criteria <sup>s</sup>	1°C	+/- 3%	+/- 10% (see note below) <sup>8</sup>	+/- 0.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below)	

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom (b) - Purge rate to be 0.5 ipm or less (c) - Sampling rate to be 0.25 ipm or less (d) - Field parameter measurements to be recorded every 3 to 5 minutes (e) - Subbilization criteria based on three most recent consecutive measurements (e) - Subbilization criteria based on three most recent consecutive measurements (g) - Do is not a stabilization criterion for the "Croundwater sampling" SFSD Standard Operating Procedure (h) - ORP is not a stabilization criterion for the "Groundwater sampling" SFSD Standard Operating Procedure.

d = well diameter (inches);
 h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0,64

Criteri	a 10		below) <sup>8</sup>	monding tines that m	ay be resting on the wel	ll bottom			<ul> <li>d = well diameter (inches);</li> <li>h = length of water column (feet)</li> </ul>	
Stabiliz		+/- 3%	+/- 10% (see note	+/- 0.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>		
			7							
				<u></u>						· · · · · · · · · · · · · · · · · · ·
		1/2	p d	(2)	- //	UV				
	<u>_</u>		1 "			) Y				
			<b>\</b>	D	) ] {	21				
)19	1 20.76	624	8,37	2.24	330.9	<i> -  </i>	-1	- ) -		
9.1-1 DI6	17.49	987.7	8.13	75	128.7	1.57	7	y h		
1446	80.W	676.8	D. 2)	3.97	108.01	175	7	y. 2		
ell Lock: Time <sup>d</sup>	Yes / No Temp. (°C)	Spec. Cond. (mS/cm)	Well Bolted: Ye	PH (SU)	ORP (mV)		irge Volume (L)	H <sub>2</sub> O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)	
ell Type: ell Cap Cond	Flush Stick Up	ace / Other		~	D	olts Needed: Ye	s /�	(check	ik all that apply) 🗓 rump head discharge	
*Well Volum	e (gal) = 0.041d²h: _		 Pı	Start/Stop irge Rate (L/min	Purge Time:	Total Purge	Volume (L):	4	Laboratory Analyses: VOC J VOL mpling Method: ☐ soda straw	
	epth to Water (ft): Well Diameter (in):	3.0		•	urge Method:	10~	£100		QA/QC Collected?	
	Total Depth (ft)*:	11/1			oing Material: ke Depth (ft):	D 1	5		Sample Purge Rate (L/min) <sup>c</sup> :	للال
	Site/Location: Well ID:	MIN	100 47	Pump	Type/Model:	A 167	is for		Sample Collection Time:	
RM	Client:	162				Project No.:			Sampling Date: Sampler's Name:	

(a) Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
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(g) - DO is not a stabilization criterion for the "Croundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

Gallons per foot 0.12 0.16 0.64 Casing Diameter
1 in
2 in
4 in



9
FRM

. 9							_		62 -22 -17
) RM	Client	AGL -	Macor	7		Project No.:	36666	0	Sampling Date: 62-22-17 Sampler's Name: Mark is Barkh Sample Collection Time: 15/15
	Cita/I ocation:	Macon	C2 G						Sampler's Name:
	WAII ID:	AGL- Macon, AMW-13	-201702	22-01 Pun	np Type/Model: _	Alexis Pa	eri		Sample Collection Time:
	Total Depth (ff)a.	20			ubing Material: 1				Sample Purge Rate (L/min) <sup>5</sup> : 200 m L/min Sample ID: AMW-13-20170222 -0
D	Total Depth (ft) <sup>a</sup> : _epth to Water (ft): _	12.72		Dumn Ir	take Denth (ft):	1)			Sample ID: AMW-13-381 18 222 0
	Vell Diameter (in):				Purge Method:	Cow Flow			QA/QC Collected?
	e (gal) = 0.041d <sup>2</sup> h:			- Start/St	top Purge Time:	1430/1	505		
*Well Volume	(gai) = 0.0410 11.			- Purge Rate (L/m	nin)b: 200	Total Pur	505 rge Volume (L):_	7	Laboratory Knalyses:ampling Method:
'ell Type:	Flush / Stick Up	р						Sa	mpling Method: ☐ soud sulaw ck all that apply) ☐ pump head discharge
	tion: Good / Rep			No. (No.		Bolts Needed:	Yes / No	(Cite	☐ Bailer (only used if necessary)
/ell Lock:	Yes / No Temp.	Spec. Cond.	Well Bolted:	Yes / No	ORP	Turbidity	Purge Volume	H <sub>2</sub> O Depth	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
Time <sup>d</sup>	(°C)	(mS/cm)	(mg/L)	(SU)	(mV)	(NTUs)	(L)	(ft)	AS I opened the well Lid
1435	24.15	131.80	3.31	5.69	197.56	2.26	1.0	13.21	there were Fire Ants (Several)
140	24.06	130,60	3.22	5.65	201146	1.94	5.0	13.41	Present. I waited until they
10145	23.92	126.66	2.69	5.66	200,46	1.93	3.0	13.49	Settled down before I started
1450	23.88	121.36	2.32	5.67	198.00	1.91	1.0	13,50	on well
1455	24.33	121.00	2.06	5.68	197.10	1.77	5.0		0/1. (N-eil )
1500	24.06	124,70	2.10	5.64	196.78	1.69		13.49	
1505	23.77	117,30	1.64	5.71	19120	1.75	7.0	13.50	
				l					
2		A 6				,			
							_		
								-	
Stabilizi	ng +/-	+/-	+/- 10% (see not	+/-	+/- 10 mV (see note	+/- 10%		(see note below) <sup>f</sup>	
Criteria		3%	below)		below)h	1,- 1070	50011)		• d = well diameter (inches);

below)g

Criteria<sup>e</sup>

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending times that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.5 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Salabilization criteria based on three most recent consecutive measuremes
(e) - Salabilization criteria based on three most recent consecutive measuremes
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since littlal reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Sandard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

' d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

## WATER SAMPLING LOG SHEET

		GROUND \
<b>9</b>		
RM	AG/	E

M	Client:	AGL				Project No.:	93666	60	Sampling Date: 2/2/1/7
	Site/Location:		COn					C 1 (1) c	Sampler's Name: K. Spevacek Sample Collection Time: 1630
	Well ID:	AMW	-14	Pum	np Type/Model: _	Alexis		5tultic	0.7
1	rotal Depth (ft)a:	23,01		Т	ubing Material:	LDF	<del></del>		Sample Pulge Nate (L/IIII)
Dep	oth to Water (ft):	<u> 9.55</u>		Pump In	take Depth (ft): _		2/ 17		A 10
We	ell Diameter (in):	<u> 2</u>	~~		Purge Method: _	Low	Flow		
Vell Volume (	gal) = 0.041d <sup>2</sup> h:	1.79-1:	: 6.5 L		op Purge Time: _	1453		03 62	QA/QC I.D
				Purge Rate (L/m	in) <sup>b</sup> : 0 / 1	Total Purg	ge Volume (L):	22.0 Sar	Laboratory Analyses:
Type:	Flush / Stick U	place / Other					_	(check	k all that apply) a pump head discharge
Lock:	Yes)/ No			Yes (Ng			es No		☐ Bailer (only used if necessary)  Notes (Purge method, water clarity, odor, purge rate, issues with
Time <sup>d</sup>	Temp. (°C)	Spec. Cond.	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H <sub>2</sub> O Depth (ft)	pump/well/weather/etc.)
500	22.93	259.0	3.64	6.41	109.40	3.62	0,5	9.95	
302 300	22.57	260.60	3.38	6.36	106.10	1,41	1.0	10.20	<b>D</b>
3(0_	22.70	260,20	<u> </u>	6.34	105.60	1.15	1.5	10.38	-Excosive Unandam
	22. 10				1.7				Flow Set & O. 4 L/min
2125	}								Water Level Chusel Lown
522	21.01	259.3	3.18	6.34	106.9	5.64	6.5	14.4	1st Volume
538	22.4)	258.3	595	6.35	8.801	7,62	13.0	17.48	2nd volume
<del></del>									Flow Reduced to 0.25 L/nin
604	23.15	257.8	5.27	6.36	1(2-3	8.67	19.5	17.71	3rd volume
209	23.34	5252	602	6.39	1150	7.21	<u>2 3.75</u>	17.34	
514	23.31	25.8.3	5.38	6.38	1(3,8	7.88	22,00	17.28	Stable
									Samplet (2) (631)
		./							2007
	4-						-		
	4								
								<u> </u>	
-								-	
Stabilizing	+/-	+/- 3%	+/- 10% (see note	+/- 0,1 unit	+/- 10 mV (see note	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>	
Criteria <sup>e</sup>	1°C	376 Luntil after purging and s	below)g		below)h  y be resting on the wel		-		* d = well diameter (inches);
b) - Purge rate to be ( c) - Sampling rate to d) - Field parameter	0.5 lpm or less be 0,25 lpm or less measurements to be re	corded every 3 to 5 minut	les	***					h = longth of water column (feet)  Casing Diameter Gallons per foot 1 in 0.12
- Stabilization crite - Monitor DTW ev	eria based on three mos ery 5 min. Well drawd	st recent consecutive meas lown to be 0.3 ft or less size of Croundwater sumpline	surements nce ititial reading. Pur * SPSD Standard One:		lowered as necessary to	o keep drawdown belov	w 0.3 ft before switch	ing to three well volume	
		e *Groundwater sampling he *Groundwater samplir							

Casing Diameter	Gallons per fool
1 in	0.12
2 ln	0.16
4 in	0.64



E		
\ 9		
	0.0.1	^^

ERM	Client:	AGL -	Maca	γn		Project No.:	13066	660	Sampling Date: 02-24-17
	-	Macon	09	5				Sampler's Name: M. Burch	
		MW-14		Pur	np Type/Model:	ALEXI	5/Peri		Sample Collection Time: 1150
т	otal Depth (ft) <sup>a</sup> :				Fubing Material:	LDPE			Sample Purge Rate (L/min) <sup>c</sup> :
	oth to Water (ft):	0 0 2		Pump Ir	ntake Depth (ft):	11		12	Sample ID:
	ell Diameter (in):	2			Purge Method:	(cle F	106		QA/QC Collected?
	gal) = 0.041d <sup>2</sup> h:			Start/St	top Purge Time:			QA/QC I.D.	
Well Volume (§	gai) - 0.0414 11.			Purge Rate (L/m			ge Volume (L):		Laboratory Analyses:
Vell Type:	Flush / Stick Up	p						mpling Method: 🖵 soda straw	
Well Cap Condition								(chec	k all that apply)    pump head discharge  Bailer (only used if necessary)
	Yes / No	Spec. Cond.	Well Bolted:	Yes / No	ORP		Yes / No Purge Volume	H <sub>2</sub> O Depth	Notes (Purge method, water clarity, odor, purge rate, issues with
Time <sup>d</sup>	Temp. (°C)	(mS/cm)	(mg/L)	(SU)	(mV)	(NTUs)	(L)	(ft)	pump/well/weather/etc.)
1002	19.06	145,90	B.57	6.57	130.20	9.48	1.0	7.06	
1007	19.10	148.70	0141	6.28	126.00	9.71	20	7.50	Taking Purge hate down
1012	19.40	153,70	0.41	6.18	123,50	4.15	3.6	7.43	to 150 ml Due to draw
1017	19.38	153,20	0149	6.16	123.90	8.67	4.0	8.45	down -
1022	1,76		V				5.6		
1022									3 well volumes are needed
1040	20112	154.80	7,58	6136	93.60	12.7	5,50	10,29	due to continous draw
1047	20.93	149:10	7.91	6.53	1 1 10 17	8.70	6.0	10.29	down
10 54	31.20	124:10	8.13	6.63	82.40	7,65	450	10.29	
10 29	0.00	10-4110	012			.03			
1101	21.33	151.40	3.48	6.33	120,70	7.25	6.75	10:29	34
	20.93	153,60	6.36	6.30	116.80	9.15	7.0	10.29	
1106	21/44	154.80	-	6.38	109.70	9.96	7.25	10.27	
1111	2210			6.31	119.00		7.50	10.26	
1116	21.87	155.70	9.94	6.23	125.50	12.3	7.15	10.26	
	22.04	157.00	5.07	6.21	130.60	12.7	8.0	10.26	_ 1
1126	21.91	158.00	5.10	6.21	131.00	15.0	8.25	10.24	
1131	22.09	158.00	5.24	6.21	131.10	15.7	8.50	10.24	
1136	15.07	138.40	2.04	0.21	. 5/1.10		0.30	10.04	
		1							· · · · · · · · · · · · · · · · · · ·
Stabilizing Criteria <sup>e</sup>	+/- 1°C	+/- 3%	+/- 10% (see note below) <sup>8</sup>	+/- 0.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below)	
(a) - Do not measure de	onth to bottom of well	until after purging and s	ampling to reduce rest	uspending fines that ma	y be resting on the wel	l bottom			• d = well diameter (inches);

(a) Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(d) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Sabilitation criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since ititial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

Casing Diameter	Gallons per foot				
1 in	0.12				
2 in	0.16				
4 in	0.64				



		GROUND
9		
	001 100	
א אר פיורי	001 100	

ERM	Client:	AGL-	Maca	n	47	Project No.:	03666	60	Sampling Date: 02-23-17		
	-	Maran	(20	1			,		Sampler's Name: M. Burch		
		MW-14I		Pun	np Type/Model:	Alexis	/ Peri		Sample Collection Time: 1645		
Т	otal Depth (ft)a:	15			ubing Material:	LDPE	1.		Sample Purge Rate (L/min)°: LOOMLANA		
	th to Water (ft):	6173		Pump In	take Depth (ft):	10			Sample ID: MW-14I-20170223-17		
	Il Diameter (in):	2			Purge Method:	OW E	de		QA/QC Collected?		
*Well Volume (g	- · · · · · · · · · · · · · · · · · · ·			Start/St	op Purge Time:	143			QA/QC I.D.		
11011 10141110 (3	_			Purge Rate (L/m			rge Volume (L):	19	Laboratory Analyses:		
Well Type:	Flush / Stick Up								mpling Method: Soda straw		
Well Cap Condition								(chec	k all that apply) ☐ pump head discharge ☐ Bailer (only used if necessary)		
	Yes / No Temp.	Spec. Cond.	Well Bolted:	Yes / No	ORP		Yes / No Purge Volume	H <sub>2</sub> O Depth	Notes (Purge method, water clarity, odor, purge rate, issues with		
Time <sup>d</sup>	(°C)	(mS/cm)	(mg/L)	(SU)	(mV)	(NTUs)	(L)	(ft)	pump/well/weather/etc.)		
11148	21.57	87.80	0115	6.54	13 4.50	3.95	1.0	7.21	Well missing a bott, I replaced		
1453	21.80	88.30	Oill	6.48	116.80	4.07	2.0	7.21	with new one - Weather-Sunny 711		
1458	-	91.10	0.11	6,43	84,70	3.78	3.0	721			
1503	21.78	96.10	009	639	76.10	3.15	4.0	7.21	Speci Cond is rising each		
1508	21,43		0.09	6.34	59.90	3.27	5.0	7.21	reading and is out of tolerance		
1513	21.65	118.60	0.09	6.28	53.30	3.30	6.0	7.21	level.		
1518	21.85	135.40	0,09	6.24	20.00	3.74	7.0	7,21			
1523	22.53	112.90	0.08	6.19	51.70	3.97	8.0	7.21			
1528	21.50	160,40	0.08	6.15	52.00	3.81	4885	7.21	Slowed Purge rate down		
1533	22,40	171.70	0.06	6.11	53.80	3.70	10.6	7.21	to 150ml Due to Conductivity		
1538	22.53	194	0.06	6.07	56.40	3.49	10.5	7.17	rising.		
1543	22.62	198.30	0.07	6.06	61.00	3.45	11.0	7.15			
1518	22,20	224.60	0.07	6.02	63.60	3.50	11.5	7.15			
1553	21,77	242,10	0.08	6.00	63.60	3.07	12.0	7.15			
1558	21,54	249.10	0.08	5.99	61,20	3.14	12.5	7.09			
1603	21,42	252.60	0.08	598	58.90	3.06	13.0	7.69			
1608	32.78	253.60	0.08	5.98	57.80	4.00	13.5	7.00			
1613	82.62	265.80	0.08	597	58.10	2.68	14.0	6.11			
1618	22.58	276.60	0.08	5.95	60.70	259	14.5	7.11			
1623	21.69	281.80	0.08	5.95	62.10	2.62	158	7.11			
1628	21.42	297.00	0.08	5.94	60.80	2.4 1	15.5	7.12	0 1 1 166 1 1 1 1		
1633	2137	295.30	0:10	5.94	58.40	2.47	16.0	7.05	Drop Purge Rate to 100m/min		
Stabilizing Criteria <sup>e</sup>	+/- 1°C	+/-	+/- 10% (see note below) <sup>g</sup>	+/- 0.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>			
		all for an all and an	Delow)	panding fines that may	y be resting on the well	bottom			* d = well diameter (inches);		

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since littial reading, Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DOs in ot a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

h = length of water column (feet)

0.12 0.16 0.64 Casing Diameter 1 in 2 in 4 in



RM Client AGL-Mac		70		Project No.:	3666	06	Sampling Date: 02-23-17					
		Macon.	(2a		-	,		2	Sampler's Name: M. Burch Sample Collection Time: 1645			
		MW-14	T	Pum	p Type/Model: _	Alexis/	Peri					
	Total Depth (ft)a:	3 000			ubing Material:	0 10 000		Sample Purge Rate (L/min)c: LOOMU MIN				
	pth to Water (ft):	27			ake Depth (ft):				Sample ID: 14 T - 2017 0223 - 2011			
		2			Purge Method:	COW, Flo	W		QA/QC Collected?			
				Start/Sto	p Purge Time:	14431			QA/QC I.D.			
				Purge Rate (L/mi			ge Volume (L):		Laboratory Analyses:			
II Туре:	Flush / Stick L								ampling Method: □.soda straw ck all that apply) □ pump head discharge			
	on: Good / Re Yes / No	place / Other	Well Bolted:	Yes / No		Bolts Needed:	Yes / No	☐ Bailer (only used if necessary)				
Lock: Time <sup>d</sup>	Temp.	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)		Purge Volume (L)	H <sub>2</sub> O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)			
038	21,24	298.50	0.11	5.93	56.60	2.32	16.25	7.00				
958	21.29	0-10130	0.11		7	0	1000					
100												
									×			
							.11					
									*			
								٥				
							6. 5.					
							WI					
						I.						
Stabilizing Criteria <sup>c</sup>	+/- 1°C	+/- 3%	+/- 10% (see note below) <sup>8</sup>	U.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs OI +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>				
) - Do not measure	depth to bottom of we	ll until after purging and		esuspending fines that ma		ll bottom			<ul> <li>d = well diameter (inches);</li> <li>h = length of water column (feet)</li> </ul>			
b) - Purge rate to be c) - Sampling rate to d) - Field parameter e) - Stabilization crit f) - Monitor DTW er	0.5 lpm or less be 0.25 lpm or less r measurements to be r teria based on three mo very 5 min. Well draw	ecorded every 3 to 5 min	nutes easurements since ititial reading. P	urge/sampling rate to be			w 0.3 ft before switch	ing to three well volum	Casing Diameter Gallons per foot 1 in 0.12			

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

Contract of the Contract of th	GROUND WATER SAMPLING LOG SHEET  2 2 3 17	
PPM Client AGL	036660 Sampling Date: K. Spervet	
ERIVE COMMENT OF COMMENT	Pump Type/Model: Alens Perista (172 Sample October 1) 136 = Sample Purge Rate (L/min) Sample Pur	
q. 10	Tubing Material:  Pump Intake Depth (ft):  Purge Method:  Dury 13 V-14 Mc 5  QA/QC Collected?  QA/QC I.D.  Dury -02 - 2017 02 23 - 0 [  QA/QC I.D.  Dury -03 - 2017 02 23 - 0 [  QA/QC I.D.	
wall Diameter (in):	Start/Stop Purge Time: Laboratory Start Start Stop Purge Volume (L): Sampling Method: Soda straw Sampling Method: Soda straw  Sampling Method: Source head discharge	
Well Type: Flush Stick Up Well Cap Condition Good / Replace / Other Well Bolted: Yes /	Bolts Needed: Yes / CO Notes (Purge method, water clarity, odor, purge that pump/well/weather/etc.)  Notes (Purge method, water clarity, odor, purge that pump/well/weather/etc.)	
Well Look: Temp. Spec. Cond. (mg/L) (**C) Wes(cm) (mg/L)		ωſ
1355 71.35 171.6 1.60 1355 71.35 171.6 1.54 5	70 137.8 3.43 1.0 10.93 - Druhown Excessive - Water Level 70 135.1 3.11 2.0 11.50 - Druhown Excessive - Water Level 70 135.1 3.137 2.5 11.50 - Elaw Set @ 0.5 L/min	
1410 2209 170.8 1.46 S	7/ 126.6 5.46 7.0 16.97	
1419 21.73 181.5	5.71 128.7 6.85 14.0 19.74 Flow Set @ 0.32 M	
1433 22.21 178.7 1.90 C	The set of	
2/22/17	24.45 Well Dri 14.54 Sampled Recharge	
7/23/17 1155		
2/23/17 11.5.5		
	(see note	
+/- 10°, (see no below	/6	

Lacep drawdown below 0.3 ft before switching to three well volume method



()													
ERM	Client:	AGL-	-Maco	in		Project No.:	036661	Ó	Sampling Date: 02-23-17				
		Macon,							Sampler's Name: MIBUCh				
	Well ID:	MW-15		Pur	mp Type/Model:	AlexisI	Peri		Sample Collection Time: 1050				
	Total Depth (ft) <sup>a</sup> :	11		-	Tubing Material:	INDE		Sample Purge Rate (L/min) <sup>c</sup> : 200 mV m 1					
	epth to Water (ft):	1		-	ntake Depth (ft):	9.5		Sample ID: MW-15-20170223-01					
	Well Diameter (in):				Purge Method:	Cowflow	).	QA/QC Collected?					
	*Well Volume (gal) = 0.041d <sup>2</sup> h:				top Purge Time:	1005	1040		QA/QC I.D.				
vveii voidine	(gui) - 0.0414 11.			Purge Rate (L/m			urge Volume (L):	7	Laboratory Analyses:				
Well Type:	Flush / Stick U	р		r argo reato (Em	Sampling Method: Soda straw								
Well Cap Conditi	ion: Good / Rep	place / Other						(che	ck all that apply)				
Well Lock:	Yes / No		Well Bolted:	Yes / No	ORP	Bolts Needed: Turbidity	Yes / No Purge Volume	H <sub>2</sub> O Depth	Notes (Purge method, water clarity, odor, purge rate, issues with				
Time <sup>d</sup>	Temp.	Spec. Cond. (mS/cm)	DO (mg/L)	pH · (SU)	(mV)	(NTUs)	(L)	(ft)	pump/well/weather/etc.)				
1010	18.88	1011,20	0.15	4.90	207.70	7.78	1.0	6.65	Weather 70F & Sunny - Well				
1015	18.78	1007,00	0.13	1.89	191,90	5.54	2.0	6.67	Seems to be in good condition				
1020	18.92	98820	0.14	5.01	184,60	1.52	3.0	6.68	all boths are accounted for.				
1025	18.92	975.50	0:16	5.08	181.40	1.50	4.0	6.68					
1030	18.88	979.00	0.16	5.09	182160	1.03	5.0	6.68					
1035	18.83	976.70	0:19	5.11	181.60	1.01	6.0	6.68					
1040	18.17	979,90	0.23	5.11	180.00	1.23	7.0	6.68					
701									71				
		•											
				11									

below)g

+/- 10%

(see note

Stabilizing

Criteria<sup>e</sup>

+/-

1°C

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since ititial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

+/-

0.1 unit

+/- 10 mV

(see note

below)h

<10 NTUs OR

+/- 10%

(see note

below)d

(see note

below)f

+/-3%

0.12 0.16 0.64 Casing Diameter 1 in 2 in 4 in

d = well diameter (inches); h = length of water column (feet)



	<b>\</b> \\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\									
	ERM	Client:	AG	L			Project No.:	0366	660	Sampling Date: 2/27/17
		Site/Location:	Ma	(01						Sampler's Name: K. SpevaceK/M. Rogers
		Well ID:	MW.	21	Pu	mp Type/Model:	Alex	is Pe	r.	Sample Collection Time:
		Total Depth (ft)*:	9.36			Tubing Material:		PE	J	Sample Purge Rate (L/min)°:
	De	epth to Water (ft):	365		Pump I	ntake Depth (ft):		゚゚゚゙゙゙゙゙゙゙゙゙゙゙゚゙゙゙゙゚		Sample ID: MW-21-20170227-01
	w	/ell Diameter (in):	2			Purge Method:	Loui	Plow -		QA/QC Collected?
	*Well Volume	(gal) = 0.041d <sup>2</sup> h:	1.0444	(= 4.0	L Start/S	top Purge Time:	1132			QA/QC I.D.
		_	J		Purge Rate (L/n	nin) <sup>b</sup> : 🐧 🕻	Total P	urge Volume (L):	15.7	S Laboratory Analyses: 82608, 8276C
	Well Type:	Flush Stick U	•							ampling Method: A soda straw
	Well Cap Condition Well Lock:	on: Good / Re Yes / No	place / Other	Well Bolted:	Yes No		Bolts Needed:	Yes /65	(che	eck all that apply) Sopump head discharge
1	Time <sup>d</sup>	Temp.	Spec. Cond.	DO	pН	ORP	Turbidity	Purge Volume		Notes (Purge method, water clarity, odor, purge rate, issues with
		(°C)	(mS/cm)	(mg/L)	(SU)	(mV)	(NTUs)	(L)	(ft)	pump/well/weather/etc.)
	1140	17.41	146.10	323	221	6270	14.7	0.5	4.00	
_	1142	17.18	170.20	307	549	67.40	107	1.0	4,13	
1150-	1300	17.09	193.6	2.67	5.45	71.20	9.31	1.5	4.24	
1122-	1308	17.06	213.5	2.41	542	74-2	8-11	2.0	4,27	
1200	1210	7.00	208,5	229	£43	74-1	6.45	8.2	4.28	
1205	121S	7.00	226.9	2.19	245	76.2	7.11	30	4.40	-Excessive Drawdown
-					-					Flow Set @ O.S L/mh and water Level
										40W1
1207.	217	16.84	228.g	2.00	5.40	77.0	7.33	4.0	4.60	1 St volume
_					-					
1215	1225	16.69	244.2	1.70	5.41	76-8	8.95	8.0	5.42	211 Volume
		<u> </u>								Flow Reduced to 0.25L/min
123 1	1238	16.96	262.7	1.60	5.37	79.1	4.98	12.0	5.64	3rd Volume
	1236	17-32	268.8	].81	5.39	77.6	4,77	13.23	5,60	
	124/	738	263.5	1.93	\$ 5.2	79.8	3.13	1450	5.62	14.50 Tatse volune
	1246	17.37	263.6	1.78	5.37	80.4	265	海里	5.12	- Stable

+/- 10%

(see note

below)g

Stabilizing

Criteria

+/-

1°C

+/-

0.1 unit

+/- 10 mV

(see note

below)h

<10 NTUs OR

+/- 10%

(see note

below)d

(see note

below)f

+/-3%

d = well diameter (inches); h = length of water column (feet)

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Casing Diameter	Gallons per fool
1 in	0.12
2 in	0,16
4 in	0.64

<sup>(</sup>a) - Do not measure depth to bottom of well until after purging and sampling (b) - Purge rate to be 0.5 lpm or less

<sup>(</sup>c) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurezwer's to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements

<sup>(</sup>g) - Sudualization Criteria teach of tuter union recent consists curved as a sudualization of the constraint of the con



ERM	Client	AGL	Mac	σN		Project No.	)3666	60	Sar	npling Date: 02	-23-1	7	
		Malar	169			A / .			Samp	oler's Name: M	Burch		
		MW-10		Pu	mp Type/Model:	Alex /P	eri		Sample Coll	ection Time: 170	25		
	Total Depth (ft)a:	15		_	Tubing Material:	COPE			Sample Purge R	ate (L/min)°:	enclini	Λ	1
D	epth to Water (ft):	4.01		Pump I	Intake Depth (ft):	10				Sample ID:	1-101-6	20170223-01	
	Vell Diameter (in):			_	Purge Method:	Couff	JW .		QA/Q0	Collected?	\$		
	e (gal) = 0.041d <sup>2</sup> h:			Start/S	Stop Purge Time:	1133/1	158	0		QA/QC I.D.	0		
		1			min)b: 2-00		rge Volume (L):	5	Laborato	ry Analyses:			
Well Type:	Flush / Stick L	Jp								mpling Method: ☐ soda straw			
	ion: Good / Re	place / Other	Mall Daltade	Vec / No		Bolts Needed:	Vos / No	(che	ck all that apply)	pump head dischar Bailer (only used if			
Well Lock:	Yes / No Temp.	Spec. Cond.	Well Bolted:	Yes / No	ORP	Turbidity	Purge Volume	H <sub>2</sub> O Depth		urge method, water	r clarity, odor, j	ourge rate, issues with	
XX	(°C)	(mS/cm)	(mg/L)	(SU)	(mV)	(NTUs)	(L)	(ft)		pump/v	vell/weather/et		
1138	20.35	359.80	0.16	6.14	134,40	7.55	1.0	8.39	Will	take	Dup	From this	
1143	19.99	35430	0.12	6.12	126.45	8.47	2.6	8.61	well.		•		
1148	20.04	354.00	0.10	6.09	116.30	5.86	3.6	8.69					
1153	20.04	360.10	6.08	6.07	100.80	4.25	4.6	8.71			5		
1158	20.08	366,20	0.08	6.05	98.30	3.65	5.0	8.73					
	4												
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Stabilizing Criteria <sup>c</sup>	+/- 1°C	+/- 3%	+/- 10% (see note below) <sup>g</sup>	+/- 0.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>					
(a) - Do not measure	denth to bottom of well	until after nurging and sa	impling to reduce resu	aspending fines that ma	y be resting on the wel	bottom		and the second second		• d = wel	I diameter (inches);		

(a) Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) Purge rate to be 0.51 pm or less
(c) - Sampling rate to be 0.251 pm or less
(d) Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since tittial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Croundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Croundwater sampling" SESD Standard Operating Procedure.

h = length of water column (feet)

Casing Diameter
1 in
2 in
4 in 0.12 0.16 0.64



ERM	Client:	AGL				Project No.:	0366	660	Sampling Date: 2/27/17
	Site/Location:		n Ga			1			Sampler's Name: M. Ragers K. Speker
		MW-102		Pu	ımp Type/Model:	Alexis P.	erictatic	, ,	Sample Collection Time:
	Total Depth (ft)a:	10	ſ			LDPE			Sample Purge Rate (L/min)°:
	Depth to Water (ft):	901			Intake Depth (ft):				Sample ID: Mw-ind-2677
	Well Diameter (in):				Purge Method:	Low from	J		QA/QC Collected?
*Well Volum	ne (gal) = 0.041d <sup>2</sup> h:			Start/S	Stop Purge Time:	2825	•		QA/QC I.D. MS /MSD
				Purge Rate (L/r	min) <sup>b</sup> :	Total Pu	ırge Volume (L):		Laboratory Analyses: See COC
Well Type:	Flush / Stick U								ampling Method: Soda straw
Well Cap Cond Well Lock:	lition: 🗫d / Rep		Well Bolted:	Yes / No		Bolts Needed:	Yes / No	(che	eck all that apply) Dump head discharge  Bailer (only used if necessary)
Time <sup>d</sup>	Temp.	Spec. Cond.	DO	pH	ORP	Turbidity	Purge Volume		Notes (Purge method, water clarity, odor, purge rate, issues with
	(°C)	J (ms/cm)	(mg/L)	(SU)	(mV)	(NTUs)	(L)	(ft)	pump/well/weather/etc.)
0830	16.43	794.9	1.90	569	123.2	1.26	0.5	9.08	
0832	16.87	714.8	0.42	5.37	1(7.3	1.42	1.0	9.10	
0840	16.92	724.5	0.90	557	114.2	0.52	1.5	9.11	
0847	17.25	758.9	1.31	223	113.	0.96	2.0	9.14	
0850	17.22	755.8	1.02	2.56	110.1	0.88	2.5	9.15	
5580	7.27	760-7	0.97	5: 2 (	109.0	0.71	3.0	9.15	· 7+2012
									Samled @ 0910
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Stabilizing	+/-	+/-	+/- 10% (see note	+/-	+/- 10 mV (see note	<10 NTUs OR	(see note	(see note	
Criteria <sup>e</sup>	1°C	3%	below) <sup>g</sup>	0.1 unit	below)h	+/- 10%	below) <sup>d</sup>	below) <sup>f</sup>	
(a) - Do not measur	e depth to bottom of well u	antil after purging and sar	mpling to reduce resu	spending fines that may	y be resting on the well	bottom			<ul><li>d = well diameter (inches);</li></ul>

[a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.51 pm or less
(c) - Sampling rate to be 0.25 pm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Sabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since littial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

Gallons per foot 0.12 0.16 0.64 Casing Diameter 1 in

h = length of water column (feet)

(E)			GROUND WATER SAMPLING LOG SHEET	
ERM	Client:	96L	Project No.:	Sampling Date: _ 1 / 1 7 / 1 7
	Site/Location:	Mrcan		Sampler's Name:
	Well ID:	min-197	Pump Type/Modei: A 11711 W	Sample Collection Time:
	Total Depth (ft)*:	24/13/0	Tubing Material:	Sample Purge Rate (L/min) <sup>c</sup> :
	Depth to Water (ft):	14.23	Pump Intake Depth (ft):	Sample ID: MW-1W-LO
	Well Diameter (in):	~	Purge Method:	QA/QC Collected?

Purge Rate (L/min)b: Laboratory Knalyses: Sampling Method: Soda straw Well Type: (check all that apply) pump head discharge

Bailer (only used if necessary) Well Cap Condition: 6000 / Replace / Other

Well Lock: /	Yes / No		Well Bolted:	Yes / No		Bolts Needed:	Yes / No		☐ Bailer (only used if necessary)
Time <sup>d</sup>	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H <sub>2</sub> O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
[157]	18.66	79.5	2.98	3.02	-147.	4.88		19.91	AAAA AAAA AAAA AAAAA AAAAA AAAAA AAAAA AAAA
1150	1/25	811	6.35	2,23	1377	7.5	>	14.691	
Hon	1111	83.7	(2	(1)	130.1	235	15	14.97	
13.24	273	Pum	1.69	3.35		375	Ť	20/2	
<i>( ( ( ( ( ( ( ( ( (</i>								, , , ,	
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		$\sim$	<del>                                     </del>				, ,	1 /	
			56~	17	~	12	4	$\geq$	
				In	<u> </u>	1, 0	7		
					7	14.0			
	:							<u> </u>	
Stabilizing Criteria <sup>e</sup>	+/- 1°C	+/- 3%	+/- 10% (see note below) <sup>g</sup>	+/- 0.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>	

\*Weil Volume (gal) = 0.041d2h:

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.5 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most record consecutive measurements
(1) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since itilial reading. Purgey/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DOs in so ta sabilization criterion for the "Groundwater sampling" SESS Dandard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESS Dandard Operating Procedure.

d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64



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ERM	Client:	A	62			Project No.:			Sampling Date: 1)14117
	Site/Location:	У	n216	^					Sampler's Name:
	Well ID:	Mw-	104		mp Type/Model:	A 12 mi	( & (		Sample Collection Time:
	Total Depth (ft) <sup>a</sup> :	740	)	•	Tubing Material:		1.04		Sample Purge Rate (L/min)°:
	Depth to Water (ft):	١٤. ک	L	Pump I	ntake Depth (ft):	7			Sample ID: 7 - 10 9 - 1077827-8
	Well Diameter (in):	7			Purge Method:	100	416a		QA/QC Collected?
*Well Volun	ne (gal) = 0.041d <sup>2</sup> h:			Start/S	Stop Purge Time:	13+2	1/10	J.	QA/QC I.D.
	$\sim$			Purge Rate (L/n	$_{\text{nin})^{b}}$ : $\bigcirc$ , $\setminus$	Total Pu	urge Volume (L):	7.5	Laboratory Analyses:
Well Type:	Flush Stick Up							Sa	ampling Method: Soda straw
Well Cap Cond		place / Other						(che	ck all that apply) Dyump head discharge
Well Lock:	Yes No Temp.	Spec. Cond.	Well Bolted: DO	es No	ORP	Bolts Needed: Turbidity	Purge Volume	H <sub>2</sub> O Depth	☐ Bailer (only used if necessary)  Notes (Purge method, water clarity, odor, purge rate, issues with
Time <sup>d</sup>	(°C)	(mS/cm)	(mg/L)	(SU)	(mV)	(NTUs)	(L)	(ft)	pump/well/weather/etc.)
135	F 31.83	178.3	1.75	573	1653	17.9	0.5	627	
17	11.58	178.5	1.17	5.73	161.3	37.2	Ĭ	4:12	
1411	79,97	179.2	16)	5.74	1581	J.D. 8	1:5	622	
1417	123	1784	157	5.74	134.1	10.5	,	6.52	
17/2	12.19	1797	7.35	5.79	152.1	9.91	2.7	6+1	
147-	72.29	778.1°	1,-1	5.77	150,6	2.55	3	6.52	
143	13.49	179.1	150	75.73	749.4	76	3.5	6.52	
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-		)	10	1 6	9				
		7	/	11.					
				10.					
Stabilizing	+/-	+/-	+/- 10%	+/-	+/- 10 mV	<10 NTUs OR	(see note	(see note	
Criteria	1°C	3%	(see note below) <sup>g</sup>	0.1 unit	(see note below) <sup>h</sup>	+/- 10%	below)d	below)f	
(a) - Do not measur	depth to bottom of well ur	ntil after purging and san	npling to reduce resus	pending fines that may	A THE RESIDENCE OF THE PARTY OF	bottom			* d = well diameter (inches);

(a) - Do not measure depth to bottom or well until after purging and sampling to reduce resuspending rines that may be resting on the well concern (b) - Purge rate to be 0.5 ipm or less
(c) - Sampling rate to be 0.25 ipm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since lital reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64



ERM	Client	A6L		^		Project No.:	036661	00	Sampling Date: 02-22-17	
	Site/Location	Macon	1/29						Sampler's Name: M.Burch	
	Well ID	MW-10	1	Pu	ımp Type/Model:	Alexis	1 Peri		Sample Collection Time: 1055	
	Total Depth (ft) <sup>a</sup>	20ft		_	Tubing Material:				Sample Purge Rate (L/min) <sup>c</sup> : 200mL/min	
	Depth to Water (ft)	6.05			Intake Depth (ft):	1224			Sample ID: MW-108-2017-0222-01	
	Well Diameter (in)				Purge Method:	Cow flo	النا	,	QA/QC Collected?	
*Well Volur	ne (gal) = 0.041d²h			- Start/S	Stop Purge Time:		250		QA/QC I.D.	
	,			Purge Rate (L/r		Total Pu	rge Volume (L):	5	Laboratory Analyses:	
Well Type:	Flush / Stick l	Uр		(= .				Sa	Sampling Method: Soda straw	
	dition: Good / Re	eplace / Other						(che	eck all that apply)  pump head discharge	
Well Lock: Time <sup>d</sup>	Yes / No Temp.	Spec. Cond.	Well Bolted:	Yes / No	ORP	Bolts Needed:	Yes / No Purge Volume	H <sub>2</sub> O Depth	☐ Bailer (only used if necessary)  Notes (Purge method, water clarity, odor, purge rate, issues with	.000
Time	(°C)	(mS/cm)	(mg/L)	(SU)	(mV)	(NTUs)	(L)	(ft)	pump/well/weather/etc.)	
1030	22.00	451,70	0.15	6.61	-68.90	6.24	1.0	6.95		
1035	21.93	458.30	0.12	6.45	-65.10	3.89	2.0	6.99		
1040	21.78	463,10	0.11	6.40	-60:00	3.07	3.0	7.00	2. ·	
1045	21.72	465.90	0.10	6.30	-57.20	3.34	4.0	7.01	T2	
1050	21.79	465,90	0.09	6.37	-59.60	1.76	5.0	7.01		
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Stabilizin		+/-	+/- 10% (see note	+/-	+/- 10 mV (see note	<10 NTUs OR	(see note	(see note		100000
Criteria <sup>e</sup>	1°C	3%	below) <sup>g</sup>	0.1 unit	below)h	+/- 10%	below) <sup>d</sup>	below) <sup>f</sup>		
(a) - Do not measu	re depth to bottom of well	until after purging and sa	impling to reduce rest	aspending fines that ma-	y be resting on the well	bottom			* d = well diameter (inches);	

h = length of water column (feet)

Gallons per foot 0.12 0.16 0.64 Casing Diameter

<sup>(</sup>a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 ipm or less
(c) - Sampling rate to be 0.25 ipm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since lital reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

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Well Diameter (in):	
Well ID:	Spevacek
Total Depth (ft):	1040
Well Diameter (in):	O, i
Well Diameter (in):	-109-20170222-0
*Well Volume (gal) = 0.041d²h: Start/Stop Purge Time: 1000/(025) QA/QC I.D. —  Purge Rate (L/min) <sup>b</sup> : 0.1 Total Purge Volume (L): 2.5 Laboratory Analyses:	0
Well Type: Velusty / Stick Up  Well Cap Condition: Good / Replace / Other  Well Bolted: Vel / No  Well Bolted: Vel / No  Well Bolted: Vel / No  Bolts Needed: Yes / No  Bolts Needed: Yes / No  Time Temp. Spec. Cond. DO pH ORP (NTUs) (I)  (CC) CC (mg/L) (SU) (mV) (NTUs) (I)  DOS 21.3 (173.60 1.9 (14.91 177.0 1.84 0.5 6.90 1.00 0.00 0.00 0.00 0.00 0.00 0.00 0	
Well Type: Velusty / Stick Up  Well Cap Condition: Good / Replace / Other  Well Bolted: Vel / No  Well Bolted: Vel / No  Well Bolted: Vel / No  Bolts Needed: Yes / No  Bolts Needed: Yes / No  Time Temp. Spec. Cond. DO pH ORP (NTUs) (I)  (CC) CC (mg/L) (SU) (mV) (NTUs) (I)  DOS 21.3 (173.60 1.9 (14.91 177.0 1.84 0.5 6.90 1.00 0.00 0.00 0.00 0.00 0.00 0.00 0	> C
No   Well Bolted:   No   Well Bolted:   No   Bolts Needed:   Yes   No   Bailer (only used if necessary   No   No   No   No   No   No   No   N	
Time <sup>4</sup> Temp. Spec. Cond. DO pH (SU) (SU) (my) Purge Volume H,O Depth (ft) Notes (Furge method, water clarify pump/well/v (SU) (T) (SU) (T) (T) (T) (T) (T) (T) (T) (T) (T) (T	ssary)
1005 21.31 173.60 1.91 4.91 177.0 1.84 0.5 6.90 1010 20.93 170.40 1.71 4.90 167.8 0.24 1.0 7.03	ty, odor, purge rate, issues with
1010 20.93 170.40 1.71 4.90 167.8 0.24 1.0 7.03	/eather/etc.)
1015 20.93 171.30 1.67 4.90 160.8 0.39 1.5 7.08	
1020 21.02 170.60 1.70 4.90 156.7 0.33 2.0 710	
1025 20.92 170.20 1.70 4.90 151.2 0.27 2.5 7.12 - Stable	
Samole)	a + 0401
	10 10
	j.
Stabilizing +/- +/- (see note below) <sup>6</sup>	

d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

<sup>(</sup>a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 Jpm or less
(c) - Sampling rate to be 0.5 Jpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since tilital roading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESID Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESID Standard Operating Procedure.

4,											
					GROU	ND WATER SA	AMPLING LOG	SHEET			
ERM	Client:	AG	L- M	acon		Project No.:	0366	660	Sampling Date:	2/22/17	
	Site/Location:		icon						Sampler's Name:	K. SpevaceK	
	Well ID:	MW-	205	Pu	ımp Type/Model:	Alexi	s rep	-;	Sample Collection Time:	1725	
	Total Depth (ft)a:	28.19	7		Tubing Material:	<u>1</u>	PE		Sample Purge Rate (L/min) <sup>c</sup> :	6.1	
	Depth to Water (ft):	6, 3	3 /	<del></del>	Intake Depth (ft):	2_	2-		Sample ID:	MW-205-2017	0222-01
	Well Diameter (in):				Purge Method:	LowF	Uw		QA/QC Collected?	1/0	
*Well Volu	me (gal) = 0.041d <sup>2</sup> h:			- Start/S	Stop Purge Time:	1145	11210		QA/QC I.D.		
***********	o (gai)				min) <sup>b</sup> : <u>O. (</u>		urge Volume (L):	2.52	Laboratory Analyses:	COC	
Vell Type:	Flush / Stick U	р		, algoritato (D.	,.	, Total 1	argo volumo (E).	Sa	mpling Method; Soda straw		
Nell Cap Cor	dition: Good / Rep	place / Other						(chec	ck all that apply) 🔀 pump head o	discharge	
Well Lock:	Reg / No		Well Bolted:	Yes (No		Bolts Needed:	Yes No		☐ Bailer (only u	used if necessary)	
Time <sup>d</sup>	Temp. (°C)	Spec, Cond.	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H <sub>2</sub> O Depth (ft)		l, water clarity, odor, purge rate, issues with nump/well/weather/etc.)	
1150	24.14	286.40	0.78	6.36	-68.20	9,26	0.5	677			
1155	23.63	288.40	0.76	636	-69.80	2.78	1.0	6.77	412112		
200	23.24	287,90	1.04	6.36	-69.60	7,16	1.5	6.78			
1205	22.71	288.80	1.61	6.36	~70.10	4.37	2.0	6.78			
1210	22.40	- 62 .	0,91	6.37	-69.80	5.50	2.5	6.78	- Stalle	4-46	
									5 1	(a) 177	
		•		, .					Jampiet		J
			•	1						•	
,											
		1						4			

+/- 10%

(see note

below)<sup>8</sup>

Stabilizing

Criteria<sup>e</sup>

+/-

1°C

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Sampling rate to be 0.25 lpm or less
(e) - Slabilization criteria based on three most recent consecutive measuremens
(e) - Slabilization criteria based on three most recent consecutive measuremens
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since itital reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" \$55D Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" \$55D Standard Operating Procedure.

+/-

0.1 unit

+/- 10 mV

(see note

below)h

<10 NTUs OR

+/- 10%

(see note

below)d

(see note

below)f

+/-3%

d = well diameter (inches); h = length of water column (feet) 5 a.

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

					GROU	JND WATER S	AMPLING LOG	SHEET			
		^ _	j				-111			2/23/17	
ERM	Client	76	<u> </u>			Project No.	03666	60	Sampling Date:	<u>~(~3/17</u>	
	Site/Location:	Ma	CUA						Sampler's Name:	K. Spevacek	<u> </u>
	Well ID:	MW-	400	PL	ımp Type/Model:	Alex	is fe	ri	Sample Collection Time:	1545	
	Total Depth (ft)a:	18,-		_	Tubing Material:		LDPI		Sample Purge Rate (L/min)°:	0. 1	
	Depth to Water (ft):	/3	5'5-	Pump	Intake Depth (ft):	. 1	6-		Sample ID:	MW-400-2017	<u>82</u>
	Well Diameter (in):	' 1	~	_	Purge Method:	Lew	Flow		QA/QC Collected?	Yes	
*Well Volu	me (gal) = 0.041d <sup>2</sup> h:	<u>-</u> ·		- Start/S	Stop Purge Time:	1435	1152!	<u> </u>	QA/QC I.D.	DUP-03-2017	70 Z 23-0
				- Purge Rate (L/r	min) <sup>b</sup> : O	Total P	urge Volume (L):	5.0	Laboratory Analyses:	8260, 8270	j
/ell Type:	Flush / Stick U	>				-1	. ,		ampling Method: Soda straw	· · · · · · · · · · · · · · · · · · ·	
/eil Cap Cor	ndition: Good / Rep	lace / Other					_	(chec	ck all that apply) Doump head d	lischarge	
/ell Lock:	7 fes / No		Well Bolted:	Yes /(No)		Bolts Needed:	Yes /No		☐ Bailer (only u	sed if necessary)	
Time <sup>d</sup>	Temp. (°C)	Spec, Cond,	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H <sub>2</sub> O Depth (ft)		, water clarity, odor, purge rate, issues wit ump/well/weather/etc.)	h
1440	22.74	436.6	1.42	5,32	65.5	60.7	0.5	1375		_	
1445	22.00		0,80	5.38	99.6	126.	1.0	13.78	Spec Cond=	515.3 m5/cm	
450	22.27	606.50	6.49	5.46	1107	79.7	1.5	13.76			
1455	22.02	615,3	1.82	5.43	110,3	53.6	2.0	13.76			
ISOC		693.4	७,५8	5,43	117.3	19.0	2.5	13.76			
				1		1	1 4				

1455 27.02615,3 1. 82 543 10.3 53.6 2.0 13.76  1500 22.27 6934 0.48 543 17.3 19.0 2.5 12.76  1505 21.86 728.2 0.2 5 5.43 120.0 11.1 3.0 13.76  1510 21.29 760.8 0.43 5.43 121.7 8.19 3.5 13.76  1515 21.82 785.2 6.33 5.41 13.5 7 5.21 4.0 13.76  1520 21.82 716.9 0.2 6 5.42 142.7 3.6 7 4.5 13.76  1523 21.88 806. 50.24 5.41 1481 3.12 5.0 13.76 — Stable  Sumplet © 1545	1450	22.27	606.50	0.49	2.46	1107	79.7	1,5	13.76	
1505 21.86 728.20.25 5.43 120.9 11.1 3.0 13.76  1510 21.29 760.8 0.43 5.43 121.7 6.19 3.5 13.76  1515 21.32 785.2 6.33 5.41 135.7 5.21 7.0 13.76  1520 21.82 796.9 0.26 5.42 142.7 3.67 4.5 13.76  1529 21.88 806. 50.24 5.41 148.1 3.12 5.0 13.76 — Stable  Sampled @ 1545				12				2.0		
1510 21,29 760.8 0.43 5.43 121.7 6.19 3.5 13.76  1515 21.32 785.2 6.33 5.41 135.7 5.21 4.0 13.76  1520 21.32 796.9 6.26 5.42 142.7 3.67 4.5 13.76  1525 21.88 806. 50.24 5.41 148.1 3.12 5.0 13.76 — Stable  Sampled @ 1545	<u> 1500 </u>						19.0	<u> 2.s</u>	13.76	
1515 21.82 785.2 6.33 5.41 135.7 5.21 4.0 13.76 1520 21.82 796.9 6.26 5.42 142.7 3.67 4.5 13.76 1525 21.88 806.5 5.24 5.41 148.1 3.12 5.0 13.76 - Stable  Sampled @ 1545		21,86	1	0.25	<del> </del>	150, 2	1,1,1		13.76	
1520 21.82 796.9 6.26 5.42 142.7 3.67 4.5 13.76 - Stable 1525 21.88 806. 50.24 5.41 148.1 3.12 5.0 13.76 - Stable  Sampled @ 1545		21.29	760.8	0.43				3,5	13, 76	
182821.88 806. 50.24 5.41 148 ( 3.12 5.0 13.76 - Stable  Sampled @ 1545	1212	21.82				135.7	5.21	4.0	13.76	
1828 21.88 806. 5 7.24 5.41 148.1 3.12 5.0 13.76 - Stable  Sampled @ 1545	1250	21.82	796.9	0,26	5.42	142,7	3.67	4.5	13,76	,
Sampled @ 1545	1828	21.88	806, 5	0.24	5.41	148.6	3/15	5.0		-Stable
		0		,	7			•		
										Sampled @ 1545
Stabilizing +/- +/- 10% +/- 10 mV <10 NTUs OR (see note (see note )										7
Stabilizing +/- +/- 10% +/- 10 mV <10 NTUs OR (see note (see note )										
Stabilizing +/- +/- 10% +/- 10 mV <10 NTUs OR (see note (see note )										
Stabilizing +/- +/- 10% +/- 10 mV <10 NTUs OR (see note (see note )								***************************************		
Stabilizing +/- +/- 10% +/- 10 mV <10 NTUs OR (see note (see note )										
						·				
Stabilizing +/- +/- 10 mV <10 NTUs OR (see note (see note										
Stabilizing +/- +/- +/- +/- +/- 10 mV   510 NTUs OR   (see note										
Criteria 1°C 3% (see note below) belo	Stabilizing Criteria <sup>e</sup>	+/- 1°C	+/- 3%	(see note	+/- 0.1 unit	(see note	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>(</sup>	

d = well diameter (inches);
 h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0,64

<sup>(</sup>a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending times that may be resting on the well bottom
(b) - Purge rate to be 0.5 ipm or less
(c) - Sampling rate to be 0.5 ipm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most record consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since titial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.



										7 /-1.1.	
ERM	Client:	AG	L			Project No.:	0366	660	Sampling Date:	-127/17	
	Site/Location:	Mo	LCON						Sampler's Name:	K. Spevalek	_
	Well ID:	Mw.	-401	Pu	ımp Type/Model:	Ale	XU P	eri	Sample Collection Time:	1110	-
	Total Depth (ft)a:	20.	15	_	Tubing Material:		DPE		Sample Purge Rate (L/min) <sup>c</sup> :	0.1	_
	Depth to Water (ft):	12.	55-	-	Intake Depth (ft):	10	91		Sample ID:	MW-401-201703	224-0
	Well Diameter (in):	1	10	_	Purge Method:	i	Flow		QA/QC Collected?	NO (	
*Well Volu	me (gal) = 0.041d <sup>2</sup> h:			Start/S	Stop Purge Time:	1 000 0			QA/QCÎ.D.	_	_
		2		− Purge Rate (L/r	1- 1		urge Volume (L):	3,0	Laboratory Analyses:	8260, 8270	_
Vell Type:	Flush / Stick U	P			-	•		Sa	ampling Method: Soda straw	1	_
	dition: Good / Rep	place / Other						(che	ck all that apply		
Vell Lock: Time <sup>d</sup>	Yes / No Temp.	Spec. Cond.	Well Bolted:	Yes (No)	ORP	Bolts Needed:	Yes No Purge Volume	H <sub>2</sub> O Depth		sed if necessary) water clarity, odor, purge rate, issues with	
	(°C)	(mS/cm)	(mg/L)	(SU)	(mV)	(NTUs)	(L)	(ft)		ump/well/weather/etc.)	
1030	21.07	342.2	0.81	6.04	59.5	51.3	0.3	12.56	*		7
1035	21.42	399.8	1.32	6.02	65.1	33.0	1.0	12.56			~
1040	21,21	339.7	1.13	6.04	64.3	25.1	1.5	12.56			7
1045	21.37	343,2	0.88	6.00	60,3	18.3	2.0	12.26			7
1050	21.47	339,3	0.88	6,06	59.8	12.9	5 3	12.56	· ·		7
1055	21.43	339.9	0.88	6.05	61.3	9.18	3.0	12.56	Chible		7
						1			7 (200		
					-				Sampled	(P) 1110	7
(8										<b>*</b>	
											1
											7
											7
	2			1							1
			17.5								1
										4-30-1-2-3	-
											1
								-			┨
		-								· · · · · · · · · · · · · · · · · · ·	-
											$\dashv$
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Stabilizin		+/-	+/- 10% (see note	+/- 0.1 unit	+/- 10 mV (see note	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>			
CITICITA	10	070	below) <sup>g</sup>	o.z unit	below)h	1/- 10/0	Delow)	belowj			

d = well diameter (inches);
 h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

<sup>(</sup>a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom

(b) - Purge rate to be 0.5 ipm or less
(c) - Sampling rate to be 0.25 ipm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since ititial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.



Well Cap Condition: Good / Replace / Other (check all that apply) pump head discharge	EIXIVI		AGL				Project No.:			Sampling Date: 2-23-17		
Test Depth (th) 3.5.5  Depth to Water (th) 11.6.9  Well Dameler (th) 2.2.7  Well Type:		Site/Location:	Macon	Ga						Sampler's Name: MROGERS		
Total Open for Visite (fit): 11.6.9  Very Dearen to Visite (fit): 11.6.9  Very Purper Reads (Limin): 22  Purper Reads (Limin): 23  Purper Reads (Limin): 24  Purper Reads (Limin): 24  Purper Reads (Limin): 25  Purper Reads (Limin): 25  Purper Reads (Limin): 25  Purper Reads (Limin): 25  Very Purper Reads (Limin): 25		Well ID:	MW-08D	>	Pu	mp Type/Model:	Altxis Pe	Mstaltic		Sample Collection Time: 16/4		
Depth to Water (R)		Total Depth (ft)4:	<u> 53.5                                   </u>			Tubing Material:	LDPE			Sample Purge Rate (L/min) <sup>c</sup> : . / L/m, n		
Well Volume (gail) = 0.041-8hr	De	epth to Water (ft):	11.69		Pump l	ntake Depth (ft):	~45			Sample ID: MW-08 D-2017 0223 -0;		
Well Volume (gat) = 0.0416*hr	W	/ell Diameter (in):	2			Purge Method:	La. Com	!		QA/QC Collected? No		
Vival Type:   California   Forest   Seek	*Well Volume	(gal) = 0.041d <sup>2</sup> h:	<b>9</b> 27.	400/103	.TL Start/S	top Purge Time:	0945					
Well Type:   Each   Sists Us   Sampling Method:		•		J	Purge Rate (L/n	nin) <sup>b</sup> : 2	Total Pu	rge Volume (L):		-		
Well Lock   Yes   No	Well Type:	Elium / Stick U	р						Sa	ampling Method:   soda straw		
Time   Teap   Spec Cond   Do   pH   (RU)   (SU)   (RU)			place / Other						(che			
CG			Spec Cond			ORP			H <sub>e</sub> O Denth			
0955 21.57 274.4 C21 C87 -110.8 B. C1 2 7200 Dcc Px to .1001/min 1000 21.73 272.7 C.19 C94 -111.0 0.C4 3 7220 4 4 1005 21.69 271.1 0.20 C99 1073 B.C2 4 12.26 1610 21.87 269.0 0.20 7.02 1054 0.53 5 12.20  Para meters Stable  Stabilizing 4 4 4 14.10% 4 14.10mV Genale Ge	rime											
1000 21.73 2727 6.18 C.94 -111.0 0.04 3 12.20 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	0950	21.31	278.0	0.32	6.74	-106.6	0.56	1	11.96			
1000 21.73 2727 6.18 C.94 -111.0 0.44 3 12.20 \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$ \$	0955	21.57	274.4	021	687	-110.8	6.61	2	12.00	Dec PR to 1004/min		
1610 21.87 2(9.0 0.20 7.02 -1054 0.53 5 1220  Parameters Stable  Shilling 4/ 4/ 1/10% (see note of the stands of t	1000			0.18	6.94	-111.0	0.64	3	l .	<b>♦ ♦</b>		
1610 21.87 269.0 C20 7.02 7054 0.53 5 1220  Para meters Stable  Sabilizing 4, 4, 4/10% (see note thank of the context of the c	1005	21.69	271.1	0.20	(99	107,3	0.62	4	i			
Para neters Stable  Sampling @ 014  Stabilizing #- #- 10% (see note general see note see note beauth	1610	21.87	269.0	0.20		7054	0.53	5	12.20			
Stabilizing +/- +/- 10% (see note (s								6				
Stabilizing +/- +/- 10% (see note (s												
Stabilizing +/- +/- 10% (see note (s												
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Stabilizing +/- +/- 10% (see note (s												
Stabilizing +/- +/- 10% (see note (s	<del></del>	1	Fara	metrica	Sta	ble						
Stabilizing						1 /	2002/10	. B	014			
Stabilizing +/- +/- 10% +/- t-10 mV (see note							7	)	1			
Stabilizing +/- +/- 10% +/- t-10 mV (see note												
Stabilizing +/- +/- 10% +/- t-10 mV (see note												
Stabilizing +/- +/- 10% +/- t-10 mV (see note												
Stabilizing +/- +/- 10% +/- 10 mV <10 NTUs OR (see note		٠										
Stabilizing +/- +/- 10% +/- 10 mV <10 NTUs OR (see note									<u> </u>			
Stabilizing +/- +/- 10% +/- 10 mV <10 NTUs OR (see note												
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Stabilizing +/- +/- (see note +/- (see note -/- (see note -/- (see note -/- (see note -/- ))												
				(see note		(see note			The state of the s			

(a) Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) Purge rate to be 0.25 ipm or less
(c) - Sampling rate to be 0.25 ipm or less
(d) Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Subdiziation criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since titial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DOs not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ONP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

h = length of water column (feet)

Gallons per foot 0.12 0.16 0.64 2 in 4 in



EKIVI	Client:	Attanta	Gas light	(		Project No.:	03666	60.11	Sampling Date: <u>1-23-17</u>
	Site/Location:	Abl-Ma	50h	Maron	beogen				Sampler's Name: Markuster Honer
	Well ID:	MW-121	00	Pu	mp Type/Model:	Pen Selh	e / Shexr	1	Sample Collection Time: _///o <
	Total Depth (ft)a:	974		-	Tubing Material:	LDPE		4	Sample Purge Rate (L/min) <sup>c</sup> :
	Depth to Water (ft):	1496		Pump I	ntake Depth (ft):	92			Sample ID: MW-1200-2017-0223-07
	Well Diameter (in):	1	10		Purge Method:	Low- Pla	v		QA/QC Collected? <u>No</u>
*Well Volu	me (gal) = 0.041d <sup>2</sup> h:	13.45		Start/S		1330/1			QA/QC I.D.
Well Lock:	Flush / Stick U dition: Good / Re Yes / No	place / Other		Purge Rate (L/r Yes / No	nin) <sup>b</sup> :	Total Pur	rge Volume (L): Yes /No	Sa (cheo	Laboratory Analyses: See CoC ampling Method: □ soda straw ck all that apply) □ pump head discharge □ Bailer (only used if necessary)
Time <sup>d</sup>	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H <sub>2</sub> O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1335	13 45	114.50	1.38	2.112	-23 40	155	0.5	15.68	
1340	22.04	222.20	132	7.118	-46.30	1.20	1.0	16.00	
1345	21.98	129.00	0.69	7.63	-103.70	1.20	1.5	16.47	
1350	21.91	223.20	0.49	7.63	-110.40	1.19	20	1120	
1355	22.09	223,30	0.10	7.70	-114.80	1.56	2.5	7.69	
1400	22.45	225.20	0.34	7.63	-17.00	1.74	3-0	18.31	
			All	Erandy.	Jahh.	,			
			14/01	Partly 6	lardy Bon	very			
			Tofe	1 Deft	92.9764				
			Mahr	- LA					
		,							* *
				-					
									4
	1 2								
			1					-	
Stabilizin Criteria	CAROLE CONTRACTOR OF STREET	+/-	+/- 10% (see note	+/- 0.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note	
(a) - Do not measu	re depth to bottom of well	until after purging and s	below)g	enonding fines that ma	The state of the state of the state of	bottom			* d = well diameter (inches);

h = length of water column (feet)

Casing Diameter	Gallons per foot				
1 in	0.12				
2 in	0.16				
4 in	0.64				

<sup>(</sup>a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending times that may be resuing on the well oction.

(b) - Purge rate to be 0.5 ipm or less
(c) - Sampling rate to be 0.25 ipm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Sabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 if or less since little treading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

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Lin:	111	915	44	YP.
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N	N	1147		ij
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ERM	Client:	AGL				Project No.:	03116	660	Sampling Date: 2-24-17
		Macon.	GA						Sampler's Name: 1 Hurdle
	Well ID:	MW-12	DRR	Pu	mp Type/Model:	alexi	3 Peri	Staltic	Sample Collection Time: 1005
	Total Depth (ft)a:	52.0f	4 (52	.31	Tubing Material:	LDPE			Sample Purge Rate (L/min)°: 0 - 2
D	epth to Water (ft):	9.58		Pump li	ntake Depth (ft):	44.5			Sample ID: MW - 12DR R-20170224-01
	Well Diameter (in):	2			Purge Method:	Zow fli	ρW		QA/QC Collected? NO
*Well Volume	e (gal) = 0.041d <sup>2</sup> h:	10.910an)	210.332	Start/S	top Purge Time:	09371	1007		QA/QC I.D.
		<del>- 10901 /</del>		Purge Rate (L/n	nin) <sup>b</sup> : 0.2	Total Pu	ırge Volume (L):	5.0	Laboratory Analyses: 8200, 8270C
Well Type:	Flush Stick U			,				Sa	ampling Method: Soda straw
	ion: Good / Rep	place / Other		NA				(chec	ck all that apply)
Well Lock: Time <sup>d</sup>	Yes / No Temp.	Spec, Cond.	Well Bolted: DO	Yes / No pH	ORP	Bolts Needed: Turbidity	Yes / No Purge Volume	H <sub>2</sub> O Depth	Notes (Purge method, water clarity, odor, purge rate, issues with
Time	(°C)	(mS/cm)	(mg/L)	(ຮົບ)	(mV)	(NTUs)	(L)	(£t)	pump/well/weather/etc.)
0942	21.31	511.4	0.36	10.14	52.8	0.38	1.0	9.41	Water Has Odor (Strong)
0947	21.28	510.0	O. Z3	6.28	34.1	0.25	2.0	9.63	J
0952	21.14	505.4	0.24		20.5	1.24	3.0	9.44	
0957		500.3	0.21	10.38	10.5	0.69	4.0	9.46	
1002	21.91	493.6	0.18	6.42	1.00	0.74	5.0	9.06	
									·
invest	W 1er	rei an	Dar	imete	vs 5t	uble	****		
	iditi	410.00							
1.2	1117	70.00	70,101					_	
INGL	O Pron	be S	um Olea	/				/	
	A CON		11110						
						<u> </u>			
	+ -								
	<del>                                     </del>			-					
	1								
Stabilizing Criteria"	+/- 1°C	+/- 3%	+/- 10% (see note below) <sup>8</sup>	+/- 0.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>r</sup>	

<sup>(</sup>a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending times that may be resting on the well bottom
(b) - Purge rate to be 0.5 lipm or less
(c) - Sampling rate to be 0.5 lipm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Sabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since slittle reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Croundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Croundwater sampling" SESD Standard Operating Procedure.

d = well diameter (inches);
 h = length of water column (feet)

Casing Diameter
 Gallons per foot

 1 in
 0.12

 2 in
 0.16

 4 in
 0.64

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EN PRE	0.434
1,111,113	
Term Term	-
1412	NΛ
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ERM	Cliant	pal				Desirat No.	01767	J. a	Sampling Date: 02/21/2017
			r c 1			Project No.;	01787	40	Sampler's Name: A-SHOLE DETS
	Site/Location.	MACON MW-22I	) <del>/ ~ / ~ /</del>	<b>D</b>	mp Type/Model:	MEXIC	PERES	TALTE	Samplers Name: 74:04000
		(66.0) H		_	Tubing Material:		97-10-	1.12/-	Sample Collection Time: 72.00
	epth to Water (ft):		, - 1 - 2	Pump Intake Depth (ft): 45.5					Sample Fulge Rate (DMM) - 272D - 2017-0221-01
	/ell Diameter (in):			_ Pumpi			04/64	VOLUN	
*\0\0\1\0\1\0\*	/esi Diameter (iii).	345 (13	05L)	- 0110	Stop Purge Time:			70- 17	QA/QC I.D. MS (MSD)
Well Volulite	(gai) - 0.04 id II.		<del></del>	Durgo Dato /1 /n	nin) <sup>b</sup> : <u>6.1/6.1</u>	Total Du	ana Mahama (I.)	3.50	Laboratory Analyses: SEE COC
Well Type:	Flush / Stick U	p		ruige Nate (Di	(IIIII) <u>0.170.1</u>	. S TOTAL PO	rge volume (L).	Sa	ampling Method: A soda straw
	on: 6000/Rep							(che	ck all that apply) 🎢 pump head discharge
Vell Lock: Time <sup>d</sup>	Yes∕ No Temp.	Spec. Cond.	Well Bolted: O	Yeś / No pH	ORP	Bolts Needed: ( Turbidity	Yes / No Purge Volume	H <sub>2</sub> O Depth	☐ Bailer (only used if necessary)  Notes (Purge method, water clarity, odor, purge rate, issues with
11me	(°C)	S Cm	(mg/L)	(SU)	(mV)	(NTUs)	(L)	(ft)	pump/well/weather/etc.)
13:35	2203	379.20	2.08	6.93	-113.10	2.24	6.5	1220	Increased punge vale to 150 mb/mh.
13:46	21.37	414.00	0.65	694	-131.40	0.62	1.25	12.25	<b>V S</b>
13:45	21.15	416.80	0.37	7.01	-134.30	0.63	2.00	12.30	
13:50	21.15	418.90	6,30	6.99	-115.60	\$.39	2.75	12.35	
13:00.	21.21	418.20	0.26	6.91	-97,30	0.66	3.50	12:38	Drawdown Slowme
PARAN	(ETER	S AR	E 557	ABZE,	WELL	- CAN	BE	SAMP	LEN,
					,				
							13		
									7
Stabilizing Criteria <sup>e</sup>	+/- 1°C ✓	B +/- V	+/- 10% - (see note below) <sup>g</sup>	+/- ✓ 0.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>	

d = well diameter (inches);
 h = length of water column (feet)

<sup>(</sup>a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending times that may be resting on the well bottom
(b) - Purge rate to be 0.25 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Field pramater measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since thitial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

Casing Diameter
1 in
2 in
4 in Gallons per foot 0.12 0.16 0.64



1		)
ER	N	1

ERM	0.11	AGL				Btttl-	01767	<i>L</i> A	Sampling Date: 02/22/2017	
	Citerit.	MACO	1 G A-			Project No.:	01/07	<del>40</del>	Sampler's Name: A. SHOREDITS	
	Site/Location:	MACON MW-23	N WA			ALEXT	- 5 000	255741	TFK Sample Collection Time: 10.40	
	Well ID:	131 7	<u>に</u> んつユリ	_ Pur						
		(36) 3	4.27 3	عله ح		LDPE	<del>,</del>	٠ ١.١٠	Sample Purge Rate (L/min) <sup>c</sup> : 0. (5 Sample ID: <i>MW-23D-2017</i> 0222-0	$\Delta t$
	Depth to Water (ft):			- Pump Ir	ntake Depth (ft):	30.0 5	<del>10</del> 0	. 1 6-1 114	Sample ID: MW 23 D2 CET TO CCE 1	
	Well Diameter (in):	4.00	1 : 1 - 1 -					VOLUM		
*Well Volun	ne (gal) = 0.041d <sup>2</sup> h:	16:28 (6	1.626	) Start/St	top Purge Time:	10:06/	10:31	·	QA/QC I.D. NA	
	_			Purge Rate (L/m	nin) <sup>b</sup> : <b>0.1/0-1</b>	Total Pu	rge Volume (L):	<u> 3,25 </u>	Laboratory Analyses: SEE CoC	
Vell Type:	Flush-/ Stick U	•							ampling Method: X soda straw	
Vell Cap Cond Vell Lock:	dition: Good / Rep		Well Bolted:	Yes (No		Bolts Needed:	Yes / No	(che	eck all that apply) 💢 pump head discharge	
Time <sup>d</sup>	Temp.	Spec. Cond.	DO (mg/L)	pH (SU)	ORP (mV)		Purge Volume (L)	H <sub>2</sub> O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)	
10:17	L 21.51		1.11	6.22	67.00	12.8	0.5	10.61	Lave particles on water	
10:16		389.90	O.LI	6.06	52.40	10.1	1.0		Increased orre rule to 150ml/m	 N~_
10:2		389.30		6.04	4710	10.5	(,1.75	10.24	# · · · · · · · · · · · · · · · · · · ·	
	5 2238		0:25		44.80	\$8.36		20.64		
10:3					43.20	7.84	3.25	10.64		
(	,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	30 11(0	0.00		1 250	F.0.4	<u> </u>	20.00	-	
PARA	METER	\$ 40 £	E STA	B/JE.	1.135 [4]	CAN	BF C	AMPI ?	ŧ0	
1 - (1211	1 0 1 1	73 /1,03	631 /-	,,,,,,	WU	0.7.0	<i>p</i>	1000		
				1						
				ļ						_
				ļ						
Stabilizinę Criteria <sup>e</sup>	g +/- ✓ 1°C	N +/- V	+/- 10% (see note below) <sup>8</sup>	+/- ✓ 0.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>		

\* d = well diameter (inches); h = length of water column (feet)

	ions per foot
1 in	0.12
2 in	0.16
4 in	0.64

<sup>(</sup>a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending times that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Shapling rate to be 0.25 lpm or less
(d) - Shapling rate to be 0.25 lpm or less
(e) - Shabilization criteria based on three most recent consecutive measurements
(o) - Shabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since tittal reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

( )									
ERM	Client:	AG	L			Project No.:	0366	160	Sampling Date: 2/28/17
	Site/Location:	Mac	02,6	A				No.	Sampler's Name: K. Sperice K
	Well ID:	MW-	24D	Pu	mp Type/Model:	Alex	ris Pe	ristalt	Sample Collection Time: 000
	Total Depth (ft)":		39.751	)	Tubing Material:	1 401	≘		Sample Purge Rate (L/min) <sup>c</sup> :
	Depth to Water (ft):			Pump I	ntake Depth (It):	35.	-		Sample ID: MW-240-2017022
	Well Diameter (in):	(2,000	411		Purge Method:	Low	Flow		QA/QC Collected?
	e (gal) = 0.041d <sup>2</sup> h:			Start/S	top Purge Time:	0923	Flow 10948	?	QA/QC I.D.
VVCII VOIGII	o (gai) - a.o. i a i a			Purge Rate (L/n		Total Pur	ge Valume (L):	2.5	Laboratory Analyses 8260, 8370
Nell Type:	(lush) / Stick U	р		, orgo more (E.			3	Sa	ampling Method
Well Cap Cond	ition Good / Rep	place / Other					6	(che	eck all that apply)
Well Lock:	FOR / No	L 6 6 1		Yos / No pH	ORP	Bolts Needed: ` Turbidity	Yes (No Purge Volume	H <sub>2</sub> O Depth	Notes (Purge method, water clarity, odor, purge rate, issues with
Time <sup>d</sup>	Temp.	Spec. Cond. (mS/cm)	DO (mg/L)	(SU)	(mV)	(NTUs)	(L)	(fi)	pump/well/weather/etc.)
6928	16,78.	729.2	0,73	5,95	112.4	1.34	0.5	5.14	cond=53.5 mS/cm Ks
0933	17.12	51.00	6.57	5.75	101.6	1.30	1,0	5,24	
0938	17,23	49.10	0.44	571	94.2	1.41	1.5	5.29	
0943	17.23	48.80	0.41	5.70	91.3	179	2,0	5,33	· ·
6948	7.36	49.20	0.38	5.70	90.3	1.39	2.5	5.36	- stable
									Sampled @ 1000
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				-	-		F .	-	
						1	1.100.1 10.0940		
Stabilizin	g +/-	+/-	+/- 10%	+/-	+/- 10 mV (see note	<10 NTUs OR	(see note	(see note	

+/- 10%

below)"

below)

(see note

below)"

Criteria\*

1°C

0.1 unit

below)h

ti = well diameter (mohes); h = length of water column (feet)

Casing Dumeler 1 in Gallens per foot 0.12 0.16 0.64

<sup>(</sup>d). Denot measure depth to be trained used until after purging and sampling to mine resuspending time that may be resting on the well tottom
(b). Darge use to be 0.5 fprove less
(c). Sampling rate to be 0.5 fprove less
(d). Supplying rate to be 0.5 fprove less
(e). Subjection content based on fine to the discrete content in the second description to the second description of the discrete measurements.
(e). Subjection content based on fine to the discrete content instance into the order of the discrete of



EKM	Client:	Afflinge	Sas fl	all.		Project No.:	03666	60-11	Sampling Date: 2-22-17
	Site/Location:	A61 - Ma	son 1	Macon Good	gla				Sampler's Name: Markusous Thomas
	Well ID:	MW-26,	0	Pui	mp Type/Model:	Parisfal +	E / Mac		Sample Collection Time:
	Total Depth (ft)a:	42				LAPE			Sample Purge Rate (L/min) <sup>c</sup> :
	Depth to Water (ft):	1.23	v	Pump li	ntake Depth (ft):	37			Sample ID: Ma) - 26 D - 20/10222-01
	Well Diameter (in):		¥			Low Han	,		QA/QC Collected? 160
	ne (gal) = 0.041d <sup>2</sup> h:		. 1	•		1435			QA/QC I.D.
		- was	1			Total Pu	•		Laboratory,Analyses: Sec POC
Well Type:	Flush / Stick U	p					.9 (-)-	Sa	impling Method: Soda straw
	dition: Good / Rep	place / Other						(chec	ck all that apply)
Well Lock: Time <sup>d</sup>	Yes / No Temp.	Spec. Cond.	Well Bolted:	Yes / No	ORP	Bolts Needed:	Yes / No Purge Volume	H <sub>2</sub> O Depth	☐ Bailer (only used if necessary)  Notes (Purge method, water clarity, odor, purge rate, issues with
Time	(°C)	(mS/cm)	(mg/L)	(SU)	(mV)	(NTUs)	(L)	(ft)	pump/well/weather/etc.)
1490	22.15	230.40	0.76	10.36	42.80	9.23	35	1.45	
1495	11.33	233.90	0.42	10.32	91.10	8.56	1.0	2-63 Ner	1.63
1450	21.11	236.20	0.34	10.30	39.20	8.13	1.5 -	2.86 mir	1.86
1455	21.64	237.90	AMER	10.27	37.80	8.22	2.0	207	D.23 mg/L
1500	21.16	234.20	0.26	10.22	35.90	8.01	2.5	120	
		7007.700	All Ro	musters &	11/1/0	ent 12.1	(-1,-1)		
			INOT !	Vac. lie	AL now	a John 1	a de		,
	4		Tale	Part :	29 41	modern, a	may		
			11.	1/1/					
			- Vas	- man					=
				1		~			
Stabilizin <sub>i</sub> Criteria <sup>e</sup>		+/- 3%	+/- 10% (see note below) <sup>8</sup>	+/- 0.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>	
(a) - Do not measur	re denth to bottom of well u	intil after nurging and sa	mpling to reduce resus	pending fines that may	he testing on the well	bottom			<ul> <li>d = well diameter (inches):</li> </ul>

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 Jpm or less
(c) - Sampling rate to be 0.25 Jpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since littled reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Croundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Croundwater sampling" SESD Standard Operating Procedure.

h = length of water column (feet)

Casing Diameter



EKM	Client:	AG	L			Project No.:			Sampling Date: 2-2/-17
	Site/Location:	AGL	Macon	Ga		*			Sampler's Name: MRMtCS
	Well ID:	18.5	D	Pui	mp Type/Model:	Alexis F	Eristatti C	,	Sampling Date: 2~2/~17  Sampler's Name: MRatc3  Sample Collection Time: 1012
	Total Depth (ft)a:	48.5			Tubing Material:	LDPE			Sample Purge Rate (L/min)°:
	Depth to Water (ft):	8,58	-	- Pump li	ntake Depth (ft):	~ 455			Sample ID: MW-27D-20170221-01
,	Well Diameter (in):	2				Low flo-	~		QA/QC Collected?
*Well Volum	e (gal) = 0.041d <sup>2</sup> h:				top Purge Time:				QA/QC I.D.
				Purge Rate (L/m			urge Volume (L):	7	Laboratory Analyses: 500 C
Well Type:	Flush / Stick Up	0				-		Sa	ampling Method: 🛘 soda straw
	tion: Good / Rep	lace / Other						(chec	ck all that apply)
Well Lock:	Yes/ No Temp.	Spec. Cond.	Well Bolted:	/es / No pH	ORP	Bolts Needed:	Purge Volume	H <sub>2</sub> O Depth	Notes (Purge method, water clarity, odor, purge rate, issues with
Time	(°C)	(mS/cm)	(mg/L)	(SU)	(mV)	(NTUs)	(L)	(ft)	pump/well/weather/etc.)
0937	REAL	DING W	AS N	5	AVED		1	8.73	Water is dark grey
0942	18.93	238.5	1.86	7.88	-17.1	21.7	2	8.80	J )
0947	19.33	235.2	0.24	4.93	-20.6	18.43	3	8.84	
0952	19.37	200.4	C.16	6.62	-16.4	7.37	4	8,85	
0957	19.33	218,2	0.15	6.52	-14.2	5,24	5	8.85	
1002	19,38	216.9	0.13	6.49	-13,5	5,41	6	8.85	
1007	19.5	25.9	0.11	6.46	-13.1	5.26	7	5.85	
				- 4					
			1						
			=						
				2.7					
						-			
Stabilizing Criteria <sup>e</sup>	+/- 1°C	+/- 3%	+/- 10% (see note below) <sup>g</sup>	+/- 0.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>	
(a) - Do not measure	donth to bottom of wall up	atil after nurging and ear	mpling to raduce resus	ponding fines that may	be resting on the well	bottom			* d = well diameter (inches);

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

<sup>(</sup>a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.51 pm or less
(c) - Sampling rate to be 0.25 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since littial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DOs not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.



ERM	Client:	Allerfa	low + fre	AL		Project No.:	03666	30-11	Sampling Date: 1-22-17
	Site/Location:	AGL -Ma	ean M	neen bear	ga				Sampler's Name: Makeum Thomas
	Well ID:	MW-108	30	Pu	mp Type/Model:	Peristall	he / Alexo		Sample Collection Time:
	Total Depth (ft)a:	58.5			Tubing Material:	LPPE			Sample Purge Rate (L/min) <sup>c</sup> :
	Depth to Water (ft):	11.14		Pump I	Intake Depth (ft):	53.5			Sample ID: MW-108D-20170222
	Well Diameter (in):	4		_	Purge Method:	Low-flo	iw		
*Well Volum	ne (gal) = 0.041d <sup>2</sup> h:	30.926	eal	Start/S	Stop Purge Time:	1015/1	050		QA/QC I.D.
Well Type:	Flush / Stick Up			Purge Rate (L/r	min) <sup>b</sup> :	Total Pu	urge Volume (L):	S	Laboratory Analyses:
Well Lock:	Yes No	nace / Other	Well Bolted:	Yes / No		Bolts Needed:	Yes / No	(Cite	☐ Bailer (only used if necessary)
Time <sup>d</sup>	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H <sub>2</sub> O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1020	26.15 M	· A	lo water	- in d	Carrell	1.64	.5	11.16	
1025	26.7 MT	150.20	1.13	6.88	-97.60	1.37	1.0	11.25	
1030	22.32	152.60	0.54	7.36	-195-90	0.92	1.5	11.29	
1035	26.15 NF	153.00	0.42	7.58	-159.40	1.11	2.0	11.35	
1040	22.35	152.20	0.37	7.68	-155.50	0.81	2.5	11.37	
1045	22.22	151.10	B.33	7.71	-152.60	0.92	3.0	11.46	
1050	22.95	151.60	0.30	7.70	149.30	0.90	3.5	11.12	
			All	Evanulo	. Lehh				
			670×	Cloude a	I Wind			3	
	× .		Solul	Dept	58.03	el			
_			Mel	21					
			,						
									4
						*			
				1					
						И			
									·
			12						
									*
Stabilizing Criteria <sup>e</sup>	; +/- 1°C	+/-	+/- 10% (see note	+/- 0.1 unit	+/- 10 mV (see note	<10 NTUs OR +/- 10%	(see note	(see note below)	•
(a) Daniel			below) <sup>g</sup>	and the affine that was	below)h	hausan			

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 pm or less
(c) - Sampling rate to be 0.25 pm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Sabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since tittal reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Croundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64



ERM	Client:	Allerta 6	as Light			Project No.:	536ddd	6.11	Sampling Date: 123-17
	Site/Location:	AGL-Ma	eon	Macen 1	resone		-		Sampler's Name: Markeyons Thomas
		NW-110,		Pun	np Type/Model:	Project No.:	Mexico		Sample Collection Time: // CALO
		43			Tubing Material:		/ 1		Sample Purge Rate (L/min)°:
	Depth to Water (ft):				ntake Depth (ft):				Sample ID: MW-1100-10170113-01
	Well Diameter (in):								
	e (gal) = 0.041d <sup>2</sup> h:					15501			QA/QC I.D. <u>DUP-4-20770223-0</u> 7
				Purge Rate (L/m	-		rge Volume (L):	2.5	Laboratory Analyses: See CoC
Well Type:	Flush / Stick Up						-	Sai	ampling Method: 🗓 soda straw
	ition: Good / Rep	place / Other	Moll Balls	Vom / N-		Bolte Nondada	Vac INT	(chec	ck all that apply)
Well Lock: Time <sup>d</sup>	Yes / No Temp.	Spec. Cond.	Well Bolted: OO	pH	ORP		Purge Volume	H <sub>2</sub> O Depth	Notes (Purge method, water clarity, odor, purge rate, issues with
	(°C)	(mS/cm)	(mg/L)	(SU)	(mV)	(NTUs)	(L)	(ft)	pump/well/weather/etc.)
1555	23.46	5/3.30	1.35	6.51	40.70	55.9	-5	7.24	
1600	21.93	517.10	0.33	6.35	-43.50	11.2	10	7.26	
1605	22.75	523.10	0.28	6-31	-95.90	7.84	1.5	7.26	-
1610	23.14	522.00	021	Cor 30	-47.50	4.59	2.0	7.26	
1615	13.35	512.60	0.19	6.30	-9.6.50	5.95	2.5	7.26	
			All Per	anter	Steph	7			
			FTOF	Rest (	ouly, B	eves			
			Total	Berth 3	33.86	el .			
			Makin	11					
									2
								-	
	,								
					,				
			-						
Stabilizing		+/-	+/- 10% (see note	+/-	+/- 10 mV (see note	<10 NTUs OR	(see note	(see note	
Criteria <sup>e</sup>	1°C	3%	below)g	0.1 unit	below)h	+/- 10%	below) <sup>d</sup>	below) <sup>f</sup>	* d = well diameter (inches):

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 lpm or less
(c) - Sampling rate to be 0.5 lpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since tittial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

Casing Diameter	Gallons per foot				
1 in	0.12				
2 in	0.16				
4 in	0.64				



HERESTEE !
1 9
ERM

ERM	Client	492				Project No.:	01767	740	Sampling Date: 02/22/2017
	Site/Location:	MACON	IGA			_		<del></del>	Sampler's Name: A-SHOREDITS
		MW-112		Pu	mp Type/Model:	ALEXI	s PFR	ESTALT.	Sample Collection Time: 14:40
	Total Depth (ft) <sup>a</sup> :	(36) 30	5.20 5	foc	Tubing Material:	LPPE,	D.17"I	.D.	Sample Purge Rate (L/min) <sup>c</sup> : Ø - [
	Depth to Water (ft):	451			ntake Depth (ft):	30.0°			Sample ID: MW-112D-20170222-01
	Well Diameter (in):	4.00				LOW FL		VOLHME	QA/QC Collected? $\mathcal{N} \mathcal{O}$
*Well Volur	ne (gal) = 0.041d <sup>2</sup> h:	20.16	<u> 16:284)</u>	Start/S	top Purge Time:	14:03/	14:33		QAQC I.D. NA
Well Type:	Flustr / Stick U			Purge Rate (L/n	nin)b: 0-11/0	Total Pu	rge Volume (L):	<u> </u>	Laboratory Analyses: VOCS SVOCS
	dition: Good / Re	•							ampling Method: 🎜 soda straw / / / / / / / / / / / / / / / / / / /
Well Lock:	Yes / No		Well Bolted: (		<b>.</b>	Bolts Needed: (			☐ Bailer (only used if necessary)
Time	Temp. (°C)	Spec. Cond.	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H₂O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
14:0		284.80	5-42	8.99	85.00	1.71	0.55	4.72	Drawdown to continuing white particle
14:13	21.50	290.00	5.45	9.18	79.60		1.05	4.96	Drawdown to continuing white particle
14:18	21.96	289.30	5.35	9.20	76.30		1.55	5.17	
14:2:		<del></del>		9.20	73.40		2.05	6.38	
14:28		288:30		9.21	71.80	1.18	2.55	56	
14:37	\$ 22.10	287.40	5.23	9.22	71.10	1.43	3.05	5.75	
DARA	METER	5 005	C2-6.2	1 8 an	1160 5	-11 A a i	201	(2 x 1)	
1511	MEN 12	S KKE	DE AD		1550	19170 18 CG	W Com	45/E	
1 AR	VOLUN	1 VOL	UMES	SANS	1 TAIC	WELL		471-	
	10 20		10, (03	1 3.11.01	247/4	10000	-		
	1								
								· ·	
Stabilizing Criteria <sup>e</sup>	5 +/- 1°C	9 +/- V	+/- 10% (see note	+/- V 0.1 unit	+/- 10 mV (see note	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below)	
(a) - Do not measur	e depth to bottom of well u		below) <sup>g</sup>		below) <sup>n</sup> be resting on the well				* d = well diameter (inches);
	e 0,5 lpm or less to be 0,25 lpm or less er measurements to be reco	rded every 3 to 5 minutes	3						h = longth of water column (feet)  Casing Diameter   Gallons per foot
(e) - Stabilization co (i) - Monitor DTW	iteria based on three most every 5 min. Well drawdor bilization criterion for the	recent consecutive measu wn to be 0.3 ft or less sinc	rements e ititial reading. Purge,	/sampling rate to be lo	wered as necessary to	keep drawdown below	0.3 ft before switching	to three well volume i	1 in 0.12
(h) - ORP is not a st	abilization criterion for the	"Groundwater sampling	* SESD Standard Opera	ting Procedure.					7.00 (3.54)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64





ERM	Client:	AGL				Project No.:	017671	4 O	Sampling Date: 02/22/2017
			,as						Sampler's Name: A. SHOREDETS
	Well ID:	MACON MW-113	D	Pui	mp Type/Model:	ALEXIS	PERT	STALTI	C Sample Collection Time: 12-20
		(39.5)					10.17"I		
D	epth to Water (ft):		,	Pump Ir	ntake Depth (ft):	34.0.			Sample ID: MW-11370-20170222-0
٧	Vell Diameter (in):	4.00			Purge Method:	LOWF	10~1/10	or role	IME QA/QC Collected? NO
*Well Volume	(gal) = 0.041d <sup>2</sup> h:	20.3 (	76.84)	Start/St	ton Purge Time	11:501	12:10		OA/OCID WA
				Purge Rate (L/m	nin)b: 0-15/0	· 16 Total Pu	ırge Volume (L):	3.3	Laboratory Analyses: SEE COC (VOCs , SVOCs)
Well Type:	Flush:/ Stick U							Sa	ampling Method: A soda straw
Well Cap Condit Well Lock:	ion: 600d / Rep	olace / Other	Well Bolted:	Yes J No		Bolts Needed:	Vac (No.	(che	ck all that apply)   □ pump head discharge □ Bailer (only used if necessary)
Time <sup>d</sup>	Temp.	Spec. Cond.	DO (mg/L)	pH (SU)	ORP (mV)		Purge Volume (L)	H₂O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
11:65	2281		0.51	6.87	68.20	0.75	0-9	7.86	Lowered purge rate to 160 mlforin
		356.90	0.36	582		7.12		7.91	prosper formers
		356.70		5-81	68.20			7-91	
12:10			0.20	580	68.60	1.10	3.3	7.92	
							-		
PARAM	PETER	S ARE	STAG	ZE, W	PUL C	AN B	E SAM	PLED.	
				l					
Stabilizing Criteria <sup>e</sup>	+/- <b>✓</b> 1°C	37 +/- V	+/- 10% (see note below) <sup>g</sup>	+/- 0.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs ÖR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>	

Casing Diameter	Galions per foot
1 in	0.12
2 in	0.16
4 in	0.64

<sup>(</sup>a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending tines that may be resting on the well bottom
(b) - Purge rate to be 0.5 [pm or less
(c) - Sampling rate to be 0.5 [pm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Shabilization criteria based on three most recent consecutive measurements
(f) - Monitor [DTW every 5 min. Well drawdown to be 0.3 ft or less since littial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Croundwater sampling" SESD Slandard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Croundwater sampling" SESD Slandard Operating Procedure

<sup>\*</sup> d = well diameter (inches); h = length of water column (feet)



ERM	Client:	AG				Project No.:			Sampling Date:
	Site/Location:	AGLI	Macos			•			Sampler's Name: MR1975
	Well ID:	MWG	SOON	Pui	mp Type/Model:	Alegis	RO		Sample Collection Time: 1066
	Total Depth (ft) <sup>a</sup> :		_(39.8 <sup>~</sup>	`	Tubing Material:		, 0,		Sample Purge Rate (L/min) <sup>c</sup> : , i L/win
De	epth to Water (ft):	5:78		Pump lr	ntake Depth (ft):	~51			Sample ID: MW-Z0002-Z5170234-01
W	Vell Diameter (in):	ð		_	Purge Method:	Las flow	<i>)</i>		QA/QC Collected? \( \lambda \)
*Well Volume	$(gal) = 0.041d^2h$ :			Start/St	top Purge Time:	- 001			QA/QC I.D.
				Purge Rate (L/m	nin) <sup>b</sup> : <u>,                                   </u>	Total Pu	ırge Volume (L):	3	Laboratory Analyses: See CDC
Well Type:	Flust / Stick U						·		ampling Method: Soda straw
Well Cap Condition Well Lock:	on: Good / Rep	place / Other	Well Bolted:	Yes / No		Bolts Needed:	Yes / No	(che	ck all that apply)   pump head discharge  Bailer (only used if necessary)
Time <sup>d</sup>	Temp.	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H <sub>2</sub> O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
0941	20.31	458.7	0.32	6.51	-57.3	10.8	1	6.67	Dec PR to 15/mm
09416	51.02	454.7	026	6.53	C P Z ~	10.0	1.5	6.68	See 12 17 17 17 17 17 17 17 17 17 17 17 17 17
0951	2083	455.1	025	6.57	-59, 3	9.67	2.6	1.7	
0956	20 88	454.5	0,23	4.53	-58-9	1. ( 2)	2.5	6.7	
1001	21.06	4542	(۵.۵)	6.53	-58.8	151	7,0	6.7	
							Í	,	
	<b>_</b>		ļ						
				-					
				1					·
			-	-	<u> </u>				
ec. Unit	1 ,		+/- 10%		+/- 10 mV		, and a	,	
Stabilizing Criteria <sup>e</sup>	+/- 1°C	+/- 3%	(see note below) <sup>g</sup>	+/- 0.1 unit	(see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>	

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending tines that may be resting on the well bottom
(b) - Purge rate to be 0.5 jm or less
(c) - Sampling rate to be 0.25 jm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 3 min. Well drawdown to be 0.3 for less since listilar reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Croundwater sampling" \$250 Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Croundwater sampling" \$250 Standard Operating Procedure.

d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64



EKM	Client:	Atlanta 6	astrell			Project No.:	036660	00-11	Sampling Date: 2-24-17-
	Site/Location:	AGC - M	lacon	Maca	Crecer				Sampler's Name: Makengur Thomas
		MW-204		Pui	mp Type/Model:	Alexis 1	Roisilh		Sample Collection Time:
	Total Depth (ft)a:	45.5			Tubing Material:				Sample Purge Rate (L/min)c:
	Depth to Water (ft):	7.5			ntake Depth (ft):				Sample ID: MW-2047-2017-0824-01
	Well Diameter (in):		4			Low - P.	low		QA/QC Collected? Llo
*Well Volur	me (gal) = 0.041d <sup>2</sup> h:			- Start/Si		1025/1			QA/QC I.D.
						Total Pu			Laboratory Analyses: 4cc CoC
Well Type:	Flush / Stick U	p						Sa	ampling Method: 🗹 soda straw
	dition: Good / Rep	place / Other						(chec	ck all that apply)  pump head discharge  □ Bailer (only used if necessary)
Well Lock: Time <sup>d</sup>	Yes No No Temp.	Spec. Cond.	Well Bolted: <	Yes / No	ORP	Bolts Needed:	Purge Volume	H <sub>2</sub> O Depth	Notes (Purge method, water clarity, odor, purge rate, issues with
	(°C)	(mS/cm)	(mg/L)	(SU)	(mV)	(NTUs)	(L)	(ft)	pump/well/weather/etc.)
1080	24.89	149.30	1.55	7.12	-10,10	5.02	.5.	2.57	
1035	23.47	1119.20	043	6.34	-14.00	1.22	1.0	2.58	′
1000	1352	419.60	0.30	6.24	-15.20	2.02	1.5	7.60	
1045	1375	177.60	0.24	6.22	-15.20	1.27	20	7.61	
1056	23.93	097.30	021	6.22	-16.80	1.61	25	7.62	
		All	Fares	ulon	Stelle				
		21	OF Som	Lull	Lower				
		10	Il Rent	45.14	2				
		M	///						
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				-					
					,				
	1								
Stabilizin Criteria <sup>e</sup>		+/-	+/- 10% (see note	+/- 0.1 unit	+/- 10 mV (see note	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below)	
	re depth to bottom of well u		below) <sup>g</sup> mpling to reduce resus		below)h be resting on the well		,	,	• d = well diameter (inches);

(a) - Do not measure copen to oction or wen until after purging and sampling to reduce research units of the Copen 
Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

V.S			GROUN	ID WATER SAN	IPLING LOG SHEET
ERM	Client: _	AGIL		Project No.:	)3lelelele0
	Site/Location:	Macon, GA			
	Well ID:	MW-205D	Pump Type/Model:	avexis	Peristaltic

(41.55) Pump Intake Depth (ft):

> Start/Stop Purge Time: \_1/0 **5**/ Total Purge Volume (L): 4.0

Sample Purge Rate (L/min)<sup>c</sup>: 0.2 Sample ID: MW 205 D-20170224-01 QA/QC I.D. DUP-5 - 20170224-0

Laboratory Analyses: <u>EPA - 82(00</u>, 82700 Sampling Method: Soda straw

Well Type: Flush / Stick Up Well Cap Condition Good / Replace / Other

Total Depth (ft)

Depth to Water (ft):

Well Diameter (in):

\*Well Volume (gal) = 0.041d2h: 23-84 and

(check all that apply) pump head discharge

Sampler's Name: Sample Collection Time:

Well Lock:	Yes /(No		Well Bolted:	(Yes) / No		Bolts Needed: (	Yee / No		☐ Bailer (only used if necessary)
Time <sup>d</sup>	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	(NTUs)	Purge Volume (L)	H <sub>2</sub> O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1110	23.43	697.2	0.25	6.43	-41.3	0.36	1.0	6.80	Strong odor
1115	23.52	(088.0	0.19	6-62	-55.5	1.06	2.0	6.85	J
1120	23.16	686.2	0.14	(0.52	-52.8	1.12	3.0	6-85	·
1125	22.92	Q73.0	0.12	6.54	-55.1	0.90	4.0	6.85	
wit	er lei	ul a	nd P	arame	fev5	Stub	le		
TUYK	pidity	< 10.0	> 1/1	4					
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wel	Cau	1 be	San	pied					
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/					-			1	
Stabilizing Criteria <sup>e</sup>	+/- 1°C	+/- 3%	+/- 10% (see note below) <sup>8</sup>	+/- 0.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>	

(a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom (b) - Purge rate to be 0.5 lpm or less

(b) - Purge rate to be 0.3 ipm or less
(c) - Sampling rate to be 0.25 ipm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since fittial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Croundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Croundwater sampling" SESD Standard Operating Procedure.

d = well diameter (inches); h = length of water column (feet)

Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64



ERM	Client:	Atlanta	las 1	ight	-	Project No.:	03666	0.11	Sampling Date: 2-24-1-2
	Site/Location:	AGC -N			6000910	3			Sampler's Name: Mechuson Thomas
	Well ID:	MW-20.	500	Pu	mp Type/Model:	Meas 5	Periste	the	Sample Collection Time: // 195
	Total Depth (ft)a:	100				LOPE			Sample Purge Rate (L/min) <sup>c</sup> :
	Depth to Water (ft):	14.95		Pump I	ntake Depth (ft):	95			Sample ID: MW-205017-2017-0224-01
	Well Diameter (in):	4		<u></u>	Purge Method:	fon - p	low		QA/QC Collected?
*Well Volu	me (gal) = 0.041d <sup>2</sup> h:	55.5		Start/S	top Purge Time:	1210/12	240		QA/QC I.D.
				=		Total Pu		3.0	Laboratory Analyses: See CoC
Well Type:	Flush / Stick U							Sa	ampling Method: Soda straw
Well Cap Cor Well Lock:	Yes / No		Well Bolted:	Yes No		Bolts Needed:	Vos (No.	(che	ck all that apply)
Time <sup>d</sup>	Temp.	Spec. Cond.	DO	pH	ORP	Turbidity	Purge Volume		Notes (Purge method, water clarity, odor, purge rate, issues with
10	(°C)	(mS/cm)	(mg/L)	(SU)	(mV)	(NTUs)	(L)	(ft)	pump/well/weather/etc.)
12/5	28,41	356.00	2.60	8.62	-8.50	1.30	.6	15.02	
1220	13.23	393.90	1.08	4.5h	-53.10	0.33	60	15.15	
1225	22.91	903.70	0.60	8.49	-98.50	0.93	1.5	15.39	
1230	23.00	396.10	0.61	8.44	-23:40	1.34	2.0	15.52	
1235	23.01	390.00	0.55	8.46	6.90	0.83	2.5	15-69	
1290	2285	333.60	0.49	8.50	26.40	1.29	30	15.85	9
			All	Paramer	en State			-	
			71	Sing	· Loss	hever			
			Tot	I Dent	: 99.0	34			N
			May	LI			6		
								5	-
							*		·
						,			
									,
Stabilizir Criteria	1°C	+/- 3%	+/- 10% (see note below) <sup>g</sup>	+/- 0.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>	
(a) - Do not measu	re depth to bottom of well u	ntil after nurging and sar	mpling to reduce resus	spending fines that may	he resting on the well	bottom			d = well diameter (inches):

h = length of water column (feet) Casing Diameter
1 in
2 in
4 in Gallons per foot 0.12 0.16 0.64

<sup>(</sup>a) - Do not measure deepth to bottom of well until after purging and sampling to reduce resuspending tines that may be resting on the well bottom
(b) - Purge rate to be 0.5 ipm or less
(c) - Sampling rate to be 0.25 ipm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTV every 5 min. Well drawdown to be 0.3 ft or less since lift reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

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ERM		AGL				Project No :	03666	e (e 0	Sampling Date: 2-27-17
	Site/Location:	Macor	1,6A						Sampler's Name: C. Hurdle
	Well ID:	MW-200	D	Pu	mp Type/Model.	Alexi	s Peris	taltic	Sample Collection Time: 1030
	Total Depth (ft)":	46.0			Tubing Material	LDPE	=		Sample Purge Rate (L/min) <sup>c</sup> : 0.2
	Depth to Water (ft);	6.89		Pump t	ntake Depth (it):	38,5			Sample (D: MW-2010)-20170227-01
	Well Diameter (-n):	Lj	1		Purge Method:	20W-f	10W		QA/QC Callected? 100
*Well Volum	o (gal) = 0,041d²h;	25.66	al 197.11	L Start/S	itop Purge Time:				GAGCID NO
		1	7-1		ninj <sup>b</sup> : 0-2	,	rge Valume (L):	10.0	Laboratory Analyses SUC COC
Well Type	Flust / Stick Ut	p			1-010 (489)		•		empling Method Soda straw
Well Cap Cond		lace / Other		O		S 11 41 4 4	. <i>6</i> 0	(che	ck all that apply). A pump head discharge.  ☐ Bailer (cnly used if necessary).
Well Lock. Time <sup>d</sup>	Yes / No Temp.	Spec. Cond.	Well Bolted: DO	Yes] / No pH	િલા	Bolls Needed Turbidity	Purge Volume	H <sub>2</sub> O Depth	Notes (Purge method, water clarity, odor, purge rate, issues with
241110	(°C)	(mS/cm)	(mg/L)	(SU)	(mV)	(NTUs)	" (L)	(n)	pump/wetl/weather/etc.)
0943	19.95	509.7	0.29	0.2Le	6.90	50.2	1.0	6.94	Large Particles of red Secliment in Itie
0948	20.53	552.9	0.22	6.24	4.80	38.2	2.0	7.00	Strong odor present
0953	20.65	545.4	0,19	6.23	3,20	31.4	3.0	7.00	,
2958	20.84	541.3	0.18	6.23	1.10	21.6	4.0	7.00	- Parameters + Wester level Stable
1003	21.08	5310.9	0.110	6.23	-1.00	17.5	5.0	7.00	
1008	21.03	530.0	0.14	6.23	-1.90	12-8	6.0	7.00	
10.3	21.09	531.5	0.14	6.15	0.40	10.7	7.0	7.00	
1018	21.33	522.1	0-12	6.25	-5.50	11.3	8.0	7.00	-PH not stable
1023	21.48	520.9	0.12	6.21	-3.70	9.91	9.0	7.00	
1028	21.101	518.9	0.11	6.23	-4,60	11.48	10.0	7.00	
	1.02	70.1							
Paro	meters	and	uxiter	leve	11 St	able			
		not a	1 .		NTU	<del></del>	noverin	CA .	
	ound it	10, 9	<u> </u>	1000	, , , , , , ,	1200			
	OKCHOC 11			<u> </u>					
Wel	l can	be 8	ample	1					
VV	Cari		Punyire	1					
		<b></b>	·	<del> </del>					
			-						
					<del> </del>	<b> </b>			
	+				<del> </del>				
	+		-	1	1			<b>-</b>	
	<u> </u>		+/- 10%	<b>-</b>	+/- 10 mV	arn sens on	(mm mat -	funa mat-	
Stabilizing Criteria <sup>e</sup>	+/- 1°C	+/- 3%	(see note below) <sup>g</sup>	+/- 0.1 unit	(see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>e</sup>	(see note below) <sup>c</sup>	
(a) Ho not me asor	dopth to both an or well a	not after progress and so		gene's options dust nea		l lastem	1	<u> </u>	' n - well-daze-te: (malus),

Caring Diameter	Gallons per foot
1 in	5 12
2 m	5 16
4 in	0.64

<sup>(</sup>a) Front is some depth to be from the well related parging and someting to reduce measured in growth exchanges the well bettern
(b) Front is some depth to be from the well content to the content of th



EKM	Client:	Aflanta	600 L	ight		Project No.:	05666	60.11	Sampling Date: 123-11
	Site/Location:	AGL - M	bear	Moren 6	rosge				Sampler's Name: Morkerow Hann
	Well ID:	MW-207	ZP	Pur	mp Type/Model:	Porsalt	2/Mess		Sample Collection Time: 1205
	Total Depth (ft)a:	16.5			Tubing Material:	LOPE			Sample Purge Rate (L/min) <sup>c</sup> :
0	epth to Water (ft):	6.73	1	Pump Ir	ntake Depth (ft):	40			Sample ID: MW-2077-2017-0823-01
\	Well Diameter (in):	4			Purge Method:	Low - the	ai		QA/QC Collected?
*Well Volume	e (gal) = 0.041d <sup>2</sup> h:	25.92 ge		Start/St	op Purge Time:	1030/20	90		QA/QC I.D.
				Purge Rate (⊔m	nin) <sup>b</sup> : _/	Total Pu	rge Volume (L):		Laboratory Analyses: See COC
Well Can Condit	Flush / Stick Up								ampling Method: 🖫 soda straw ck all that apply) 🖂 pump head discharge
Well Lock:	Yes / No	nace / Other	Well Bolted:	Yes No		Bolts Needed:	Yes /No	(Criec	□ Bailer (only used if necessary)
Time <sup>d</sup>	Temp.	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)		Purge Volume (L)	H <sub>2</sub> O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1035	2/36	561.20	0.78	223	-37.10	9.99	0.5	6.63	
1640	22.09	558,70	6.39	6.57	-96.30	14.3	1.0	6.91	
1045	22.01	557.60	0.31	6.62	-95.70	12.7	1.5	6.95	
1050	22,09	553.10	0.27	6.80	-91.60	142	20	6.99	
1055	22.13	547.30	3.23	6.72	-8600	136	2.5	7.00	
1100	22.13	554.70	0.20	6.79	-90.80	729	30	7.02	
1105	2214	55610	6.13	6.80	-90.00	107	3.5	7.03	
1110	22.27	532.20	8.17	6.30	-89.30	40.6	4.0	7.04	
1115	22.25	555.10	0.16	6.80	-85.60	19.5	1.5	7.05	,
1120	22.45	551.00	6-15	6.60	-88.00	19.8	5.0	7.06	
1125	22.52	550.50	0.14	6.80	87.40	23.9	5.5	7.06	
1138	22.57	549.CO	0.13	6.80	-86.30	12.3	6.0	7.06	
1135	22.49	548.60	0.13	6.80	-26.30	11.9	6.5	7.06	
1140	22.61	544.90	0.12	6.80	-35.70	10.9	7.0	206	
1145	22.62	548.30	6.12	6.80	-85.60	10.7	7.5	7.06	
1150	12.67	543.50	0.12	6.81	-35.00	9.65	6.0	7.06	
1155	12.60	546.60	0-11	6.80	-85.40	10.0	8.5	7.07	
1200	22.43	593.10	0.11	6.80	-35.10	8.45	9.0	7.07	
	-		2207	Camp	- Hebh	10			
			7/1	D st	Mo. 31	Bruy			
			TOU	Meget -	46.54	L.			
Challing			+/- 10%	~ / /	+/- 10 mV				
Stabilizing Criteria <sup>e</sup>	+/- 1°C	+/- 3%	(see note below) <sup>g</sup>	+/- 0.1 unit	(see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>	

<sup>(</sup>a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 Jpm or less
(c) - Sampling rate to be 0.25 Jpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since ittial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Croundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

Gallons per foot 0.12 0.16 0.64 Casing Diameter



ERM	Client:	Attenda	ns & L	aff.		Project No.:	03666	60.11	Sampling Date: 2-22-17
	Site/Location;	Abl-Ma	con/ Mo	eon bea					Sampler's Name: Makastur Honus
	Well ID:	MW-300	50	. Pui	mp Type/Model:	Persfel s	he / Afex	15	Sample Collection Time:
	Total Depth (ft)a:				Tubing Material:	LAPE			Sample Purge Rate (L/min)°:
1	Depth to Water (ft):	1.49		Pump li	ntake Depth (ft):	33			Sample ID: MW-3007-20170222-0
	Well Diameter (in):	1			Purge Method:	Low-flo	w	80	QA/QC Collected? No
*Well Volum	e (gal) = $0.041d^2h$ :	6.32 ga	/			16251			QA/QC I.D.
Well Type:	Flush / Stick U	p		Purge Rate (L/n	nin) <sup>b</sup> :	50, & Total Pu	rge Volume (L):	33.5°	Laboratory Analyses: See COC
	ition: Good / Rep								ck all that apply) 🗹 pump head discharge
Well Lock:	Yes / No		Well Bolted: <			Bolts Needed:			☐ Bailer (only used if necessary)
Time <sup>d</sup>	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H <sub>2</sub> O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1630	23.64	0.00	802	10.03	52.10	1.61	.5	5.02	Santal real brocker
1635	23,01	156.50	7.93	9.08	-274.30	1.46	1.0	5.60	Gurtel to alel Volum proge netal
1640	21.20	245.60	0.14	7.96	-5940	2.29	HE GALT	7-6	4.506
1645 M	KT .								
1650 M	20.13	265.20	0.22	6.41	3.36	1.23	22	17.73	1st Well Vokus
							×	,	Rider rate to 200ml/hrm @ 1730
1735	20.71	52.60	0.94	6.31	65.80	3-81	30.5	18.90	Cheny Sover Toll bettere
1710	20.72	336.90	017	6.10	6.10	3.57	31.5	16.60	
1445	20.64	342.80	0.12	6.12	4.90	3.81	32.5	19.93	
1750	20.70	539.00	0-11	6.11	5.30	3.69	335	10.40	1
			/4	11 Peras	whose	apl			,
			61	of One	cat, his	Soul			,
			201	of Roll	11271				
		,	N	fund.	The same				
					).				
				2.7		10			
					lac				
						VF			
Stabilizing Criteria <sup>e</sup>	+/- 1°C	+/- 3%	+/- 10% (see note below) <sup>g</sup>	+/- 0.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>	

\* d = well diameter (inches); h = length of water column (feet)

asing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

1715

<sup>(</sup>a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 ipm or less
(c) - Sampling rate to be 0.5 ipm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Salabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since tittial reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterior for the "Groundwater sampling" SESID Standard Operating Procedure
(h) - ORP is not a stabilization criterior for the "Groundwater sampling" SESID Standard Operating Procedure.



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ERM	Client;	ACL				Project No.:	017671	40	Sampling Date: 02/21/2017
		MACON	, G A				, - , -	`	Sampler's Name: A. SHOREDATS
			<del>,                                      </del>	Pur	mp Type/Model:	ALFRI	S PERF	STALTIC	Sample Collection Time: 16:35
	Total Depth (ft) <sup>a</sup> :	MW-301 (48,5) 11.74	49.89 (	in 8 lock	ubing Material	LDPR.	0.17 "I	.D.	Sample Purge Rate (L/min) <sup>c</sup> :
De	epth to Water (ft):	11.74	×44.75	TOC Pump Ir	ntake Depth (ft):	Za 42	5 5700	=!	Sample ID: MW-301 D-20170221-01
W	/ell Diameter (in):	2.00			Purne Method:	LOW F	10w/1	01.5 VOL	MME QA/QC Collected? NO
*Well Volume	(gal) = 0.041d <sup>2</sup> h:	5.99/2	2.686)	Start/St	op Purge Time:			000	QA/QC I.D. NA
770117014110	(90.) 0.01.21		<del>- 0.</del> /	Purge Rate (L/m	in)b. O. 17	2.11 Total Bu	irae Valume (I ):	325	Laboratory Analyses: SEE COC
Well Type:	Flush / Stick Up	p		(=		- (1 1010110	igo volumo (E).	Sa	ampling Method: X soda straw
	on: Good / Rep	place / Other						(chec	ck all that apply) 💆 pump head discharge
Well Lock:	Yes / No			Yes / No		Bolts Needed:			☐ Bailer (only used if necessary)
Time <sup>d</sup>	Temp. (°C)	Spec. Cond.	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H <sub>2</sub> O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
16:08	7137	765.20	0.97	6-17	7-80	4.78	0.75	12.05	HCL odour
16:11	20.53	781.70	0-46	6.07	-6.30	0.52	51-Z	12.19	Lowered purge rate to 110 ml/awn
76:1b	20.44	779.80	6.33	6.06	-11-80	0.80	81.Z	12.30	L L
16:21	20.48	778.0	0.30	6.06	-15.30	1-21	2.80	12:35	
16:26	20.53	774.0	6.29	6.06	-17.00	0.50	3,35	12.39	Drandowin Slowing/stabliting.
		,							=1
PARAM	ETEL	ARE	STAR	CE, N	EU C	AN BO	E SAM	PLFD	
		,		1				•	
									:
Stabilizing Criteria <sup>e</sup>	+/-√ 1°C	+/- ✓ 3%	+/- 10% (see note below) <sup>8</sup>	+/- V 0.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>	
(a) - Do not massum de	onth to bottom of wall ur	ntil after purging and can	nling to reduce your	A continue the set that many	to porting on the well i	t diam		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	

Casing Diameter	Galions per foot
1 in	0.12
2 in	0.16
4 in	0.64

<sup>(</sup>a) - Do not measure depth to bottom or well until atter purging and sampling to reduce resuspending tines that may be resting on the well bottom
(b) - Purge rate to be 0.51 pm or less
(c) - Sampling rate to be 0.25 fpm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since tittal reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Croundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Croundwater sampling" SESD Standard Operating Procedure.



	Client:	1-6 t				Project No.:			Sampling Date:
	Site/Location:	Marin Go	24	1		, , , , , , , , , , , , , , , , , , ,			Sampler's Name: MRONACS
	Well ID:	MV-302D		_ Pu	mp Type/Model:	Alexas Pa	· s		Sample Collection Time:
	Total Depth (ft)a:	45 4	7.55		Tubing Material:	NDPE			Sample Purge Rate (L/min) <sup>c</sup> :
De	epth to Water (ft):	13.51	2	Pump I	ntake Depth (ft):	40			Sample ID: MW-302 D-20170724-61
	/ell Diameter (in):	2		_	Purge Method:	Lussen			QA/QC Collected?
*Well Volume	(gal) = 0.041d <sup>2</sup> h:			_ Start/S	Stop Purge Time:	1059			QA/QC I.D.
				Purge Rate (L/r	min) <sup>b</sup> :	Total Pu	rge Volume (L):		Laboratory Analyses: 80 60
'ell Type: 'ell Cap Conditio	Flush / Stick Up on: 600d / Rep								Impling Method: Soda straw ck all that apply) D pump head discharge
ell Cap Corluito 'ell Lock:	Yes / No	lace / Other	Well Bolted:	Yes / No		Bolts Needed:	Yes / No	(6/100	☐ Bailer (only used if necessary)
Time <sup>d</sup>	Temp.	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H <sub>2</sub> O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1104	2253	1024.6	68.0	2.79	36.4	121-5	,5	1457	
1169	33.33	1050,9	0.33	3.70	35.6	13.9	2.0	15.44	
1114	22.36	1048.0	626	5.69	32.9	13.71	>.5	16.17	
1119	22.48	1048	6.23	5.69	30.1	13.8	2.0	16.63	
1124	2264	10,28,0		5.69	38-0	13.0	2	17.15	
1129	35.65	10283	6.21	5,69	25.1	12.65	3,0	17.36	S
	-		-						
				+					
				-					
	-								*
	j.								
					7				~ .
Stabilizing Criteria <sup>e</sup>	+/- 1°C	+/- 3%	+/- 10% (see note below) <sup>g</sup>	+/- 0.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>	
) - Do not measure do	epth to bottom of well us 5 lpm or less	I ntil after purging and sa	mpling to reduce res	uspending fines that may	y be resting on the well	bottom			* d = well diameter (inches); h = length of water column (feet)
r) - Sampling rate to be d) - Field parameter m e) - Stabilization criteri	ne 0.25 Ipm or less neasurements to be recor ria based on three most r	ded every 3 to 5 minutes	s urements				0.3 ft before switching	z to three well volume	Casing Diameter Galions per foot 1 in 0.12

Casing Diameter	Gallons per fool
1 in	0.12
2 in	0.16
4 in	0.64



EKM	Client:	<u>AGU</u>				Project No.:			Sampling Date: 2-23-1	
	Site/Location:	Mac		<u>م</u>					Sampler's Name: MROGETS	
	Well ID:	MW-30		Pu	ump Type/Model:	Alexis	Perista	Hic	Sample Collection Time:	
	Total Depth (ft)a;	<del>-6-1</del>	00,(10	<b>a.</b> ()	Tubing Material:	LDPE			Sample Purge Rate (L/min) <sup>e</sup> :	
	Depth to Water (ft):	22.41	<u> २२ं.५)</u>	Pump	Intake Depth (ft):	-57	~85		MW-382D D-20170223-61	-
	Well Diameter (in):	2		_	Purge Method:	Low f	·0~/		QA/QC Collected? \( \int 6	_
*Well Volu	me (gal) = 0.041d <sup>2</sup> h:	_ <del>6-3 av</del>	124L	_ Start/S	Stop Purge Time:	1112			QA/QC I.D.	
		<i>y</i>		Purge Rate (L/r	min) <sup>b</sup> : • 2 • 1	Total Pu	rge Volume (L):	_3	Laboratory Analyses: Sap, COC	
Well Type:	Flush / Stick U	•		,	,				ampling Method: Soda straw	
Well Cap Con Well Lock:	dition: Good / Rep Yes / No	olace / Other	Well Bolted:	Yes / No		Bolts Needed:	Yes / No	(che	ck all that apply)	
Time <sup>d</sup>	Temp.	Spec. Cond.	DO	pН	ORP	Turbidity	Purge Volume		Notes (Purge method, water clarity, odor, purge rate, issues with	1
	(°C)	(mS/cm)	(mg/L)	(SU)	(mV)	(NTUs)	(L)	(ft)	pump/well/weather/etc.)	
1117	23.42	539.5	1.03	7.31	- 48.5	1.06	1	22.94	Began purging and realized this will is Dec PR to . 100 L/min	actually 302DD added
1120	21.72	558.5	0.35	7.42	-147.4	1.05	1.5	23,19	Dec Prito 100 L/min	+Uting and continued
1127	21.77	558.4	6,29	7.44	- 1573	3.25	2.0	23.10		, ·
1132	21.94	5593	C:22	7.45	-143.8		2.5	23.12	Parameters Stable waiting for WL to Stabal	`Z &
1137	22.27	557.3	021	746	-167.7	214	3.0	23.12		
										j
							<u> </u>			
					0.00	meters	Stable			
							Sam	plua @	1141	
Stabilizin		+/-	+/- 10% (see note	+/-	+/- 10 mV (see note	<10 NTUs OR	(see note	(see note		
Criteria <sup>e</sup>		3%	below) <sup>g</sup>	0.1 unit	below) <sup>h</sup>	+/- 10%	below) <sup>d</sup>	below) <sup>f</sup>		
(a) - Do not measu (b) - Purge rate to	re depth to bottom of well u be 0.5 lpm or less	ntil after purging and sa	impling to reduce resus	spending lines that ma	y be resting on the well	bottom			f d = well diameter (inches); h = length of water column (feet)	_

(a) - to not measure action to oction or well that after purging and sampling to reduce resuspending times that may be resing on the well oction

(b) - Purge rate to be 0.25 ipm or less

(c) - Sampling rate to be 0.25 ipm or less

(d) - Field parameter measurements to be recorded every 3 to 5 minutes

(e) - Stabilization criteria based on three most recent consecutive measurements

(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since fitting reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method

(g) - OO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure

(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

Cosing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64



ERM	Client:	AGL		12 100-000-000		Project No.:			Sampling Date: 2-23-11	···
	Site/Location:	Macon	Ga.						Sampler's Name: MRuk (5	-
	Well ID:	Mw-30	-IP	_ Pt	ump Type/Model:	Alexis Pa	rì		Sample Collection Time: 1610	
	Total Depth (ft)a:	6) (	59.0)	<del></del>	Tubing Material:	LOPE		*****	Sample Purge Rate (L/min) <sup>c</sup> : ししん	_
	Depth to Water (ft):	16.17		Pump	Intake Depth (ft):	~51			Sample 1D: MW-304D-20:70223-67	···
	Well Diameter (in):	€ (		_	Purge Method:				QA/QC Collected? \\\ \&	_
*Well Volur	me (gal) = 0.041d <sup>2</sup> h:			_ Start/S	Stop Purge Time:	1308			QA/QC I.D.	_
				Purge Rate (L/r	min) <sup>b</sup> : -1	.5, .1 Total Pi	urge Volume (L):	مردا	Laboratory Analyses:	_
Well Type:	Flush / Stick	_			, ,				ampling Method:	
Well Cap Con- Well Lock:	dition: Good / Rep (e) / No	olace / Other (	いっこ ベト Well Bolted:	Yes / No		Bolts Needed:	Yes / No	(che	ck all that apply)   pump head discharge  Bailer (only used if necessary)	
Time <sup>d</sup>	Temp.	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H <sub>2</sub> O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)	
1313	2101	6874	0.34	6.93	~25.9	116	1	16:34		
1318	20.39	692.5	6.24	6.13	-18.7	132	2	16.45		1
1323	20.30	6933	0.19	(2.61	-153	148	3	16.58		-
1318	20.31	692.7	0.16	6.57	-12.9	163	4	16.70		-
1333	2026	691.9	0.14	U.55	- 16.4	158	5	il, 81	Dec PR to a106 L/min	
1338	30.31	6920	0.18	454	7 4	1416	554	16.85	DEC 12 08 0106 Epmin	-
1343	20.31	C91.8	6.17	653	~5 5	110	6.6	16.90		-
7 2 . =	2 20.22	691.7	6.16	4.52	1-4,1	152	(,5/8)	16.91		1
1353	3 20.13	692.3	0.15	U.52	-2.90	143	7/9	16.96		
1328	3 2031	691.9	0.24	6.52	-230	143	75	16.98	· · · · · · · · · · · · · · · · · · ·	1
1-10	3 20.39	6967	0.13	(.5)	-2.80	139	8.0	17-98	Raising ours to ,500 L/min Atten	this crange part meterial
14108	20.12	C90.7	0.06	6.51	-330	171	10.5	17 48	The state of the s	this orange part
141		659.4	0.06	6.50	-2.40	11.7	12.0	17.63		material
1-11	8 20.22	686.1	0.0 %	6.57	-53	174	14.5	17.63		
142	3 2020	C87-8	0.00	6.51	-2.2	184	17.0	17.63		
1428		C.90.7	0.08	C.51	2.0	180	14.5	17.5		
18 155		C10.7	0.07	6.53	-0.77	116	22,5	17.56		
33 1368	20,30	490,8	0.07	6.53	-1.26	118	23.0	17.54		
8 1212	2026	4897	0.07	6.83	-1.3	118	27.5	17.55		
3 1603	2024	C & & 'S	0,07	<b>4.55</b>	70.2	1721	24.0	17.54		
								ρ	that Stable a lit	#
								1 04 4	Sampling @ 141	Γ
Stabilizin <sub>s</sub> Criteria <sup>e</sup>	5 +/- 1°C	+/- 3%	+/- 10% (see note below) <sup>8</sup>	+/- 0.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>		
(b) - Purge rate to b (c) - Sampling rate (d) - Field paramet (e) - Stabilization of (f) - Monitor DTW (g) - DO is not a sta	re depth to bottom of well use 0.5 lpm or less to be 0.25 lpm or less or measurements to be recorditeria based on three most revery 5 min. Well drawdow billization criterion for the "tabilization criterion for the tabilization criterion for the "tabilization criterion for the "tabilization criterion for the second programment of	ded every 3 to 5 minute ecent consecutive meas on to be 0.3 ft or less sin Groundwater sampling	ampling to reduce resus es surements to e litial reading. Purg	e/sampling rate to be le			v 0.3 ft before switching	g to three well volume	* d = well diameter (inches); h = length of water column (feet)    Casing Diameter   Gallons per foot     1 in	J

1.
Characteristics
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30 M CH CH
1- 6- C. /1

$\mathcal{L}\mathcal{J}$									
ERM	Client	AE	åL			Project No :	0300	660	Sampling Date: 2-27-17
	Site/Location:	Macon,	GA						Sampler's Name: C. Huvdle
		MW-30	51)	Pu	mp Type/Model.	Hexis	Peristo	altic	Sample Collection Time: #1344 1200
	Total Depth (ft)":	41.5			Tubing Material				Sample Purge Rate (L/min) <sup>4</sup> : O. /
	Depth to Water (h):	17.55			ntake Depth (It).				Sample 10: MW-305D-20170227-01
	Well Diameter (in):	/ 1			Purge Method;	200 A	ow		QA/QC Callected? NO
*Well Volum	ne (gal) = 0.041d <sup>2</sup> h;			Start/S	top Purge Time:	1130/11	53		QA/QC LD
				Purge Rate (L/m	ып) <sup>в</sup> . <i>() - 1</i>	Total Pu	rge Volume (L)	2.5	Laboratory Analyses See CCC
Well Type	Flush / Stick Up								ampling Method "Tsoda straw ck ail that apply). «Tpump head discharge
Well Cap Cond Well Lock	tition Good / Rep Yes / No	place / Omer	Well Bolted:	Yes / No		Balts Needed	Yes / No	, (cne	CK as that apply) E.1 pump nead discharge  [] Bailer (cnly used if necessary)
Time <sup>d</sup>	Temp. (°C)	Spec. Cond. (m5/cm)	DO (mg/L)	рН (SU)	OR(′ (mV)	Furbidity (NTUs)	Purge Volume (L)	H <sub>2</sub> O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1135	21.27	5124.0	4.11	12.09	-69.2	2.14	0.5	17.85	.>0.3 Hot drawdown, but already e min purge rate & 3 well whume method not feasible
1140	21.20	5113.4	3.87	12.20	-65.7	1.02	1,0	18.10	min Durac rate & BINELL WILLIAME
1145	21.11	5106.1	3.72	12.27	-59.0	1.88	1.5	18.35	method not feasible
1150	21.00	5093.1	3.43	12.33	-54.5	1.54	2.0	18.00	· also unusually high pH, but
1155	21.05	5070.3	3.50	12.36	-47.4	1.46	2.5	18.80	Consistant withistorical
							************************		
Pa	irameto	WS 8	table	TUY	pidity	<10.0	DUIU		
Wl	ed can	be E	amp	ied					
			<u> </u>						
						<b></b>			
								[	
				ļ		ļ			
				ļ					
					<u> </u>				
					<u> </u>	<b> </b>			
				ļ					
Stabilizin Criteria	g +/- 1°C	+/- 3%	+/- 10% (see note below) <sup>g</sup>	+/- 0.1 unit	→/- 10 mV (see note below) <sup>b</sup>	<10 NTUs OR +/- 10%	(see note below)"	(see note below)	

" is a well diameter (unches), has length of water column (feet).

Centry Diameter	Cultons pic foot
1 #1	5 12
2 m	5 16
-4 its	3.64

<sup>(</sup>a): Deport in assemble place between two level and a program and sampling to noise in engagement place due may be nesting on the well bettern

(b): Dange are two by Cyberne less.

(c): Sampling parts to be Cyberne less.

(d): Full parameter incomparity to be second of every Moderniants.

(d): Full parameter incomparity to be second of every Moderniants.

(e): Sampling parts to be Cyberne less.

(ii): Mall parameter incomparity to be second of every Moderniants.

(iii): Mall parameter incomparity to the parameter of the comparity of of the compari

nt:		AGL				Project No.:	0340	(0 (0.0)		Sampling Date: 2-24-17	
		Macor	1.GA		<del></del>	Location:		<u> </u>		-	
I ID:		MW-306	Ú.		 Pump Type/Model:	Alevis	Perista	106%	0	Sampler's Name: <u>C. Hurdle</u>	-
il Depth (ft)1:		51	(50,20	<b>7</b> .	Tubing Material:	LDPE		WI/C		00 1	-
th to Water (ft):		5.82		<b>≠</b> Pu	mp Intake Depth (ft):	41.75			Sample		-
Diameter (in):		6			art/Stop Purge Time:	1230/12				Sample ID: <u>MW-300D-20170224-01</u> .aboratory Analyses: 87.00 82.70C	
Volume (gal) = 0	0.041d <sup>2</sup> h:	1010.129	aul		Purge Rate (L/min) <sup>2</sup> :	2 7			L	aboratory Analyses: 02.00 8270C	-
Volume (L) = ga	il * 3.785;	252.411	1		al Purge Volume (L):						
well diameter (inc	thes) h = length of wa			_	Purge Method(		ll Volume Other			01/000 11 1 12 1/1	
Type:	Flush	Stick Up			Sampling Method:			ola-Strai		QA/QC Collected?	_
Lock:	(Ves	No			Sampling Method.	Purity Discharge	Other:	xxx-51100		QA/QC I.D.	4
Bolted:	(Yes)	No	Bolts Needed:	485							
Cap Condition:	Good	Replace	Other	10-	_		forther and earlies	ar Cadar Barriga (1)	erre viter i foreste exten		_
Tag Present:	$\sim$	No	Water in Vault:	Yes	(No)	•	All sample containe	ers requiring chemical	preservation prope	rly preserved prior to demob from well?	
	z Karaja talikus kabiy	Spec. Cond.	\$250.000 W.W. 4.24		M82.5/02/10 -00/5	ace material constant		1974/2019/08/15 19:44	edejoralja prej a 1944		4
Time	Temp. (°C)	(mS/cm) (µS/cm)	my DO /L <del>(%)</del>	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Rate (mL/mln)	Purged Volume (L)	H₂O Depth (ft btoc)	Notes (Purge method, water clarity, odor, purge rate, issue: with pump/well/weather/etc.)	s
1235	23.04	1500.6	5.32	11.26	-33,9	1.87	200	1.0	10.00		┪
1240	22.72	1570.8	5,39	11,32	-34.3	1.30	200	2.0	6.20		-
1245	22.92	1572.3	5.30	11.42	-34.9	1.00	200	3,0	(0.40	Exiescina decentra la la	hadrock
1250	22.95	1 Sec. 8	5.37	11.41	-31.0	0.82	700	4.0	6.95cm	Excessive drawdown, but	DECENDENCE I
1255	22.85	1574.6	5.42	11.42	-28.8	0.66	200	5.0	(0.65	method method	P171 1000
1	neters with 1 idity < can be		o'lume. NTU	ter lev		Stable,	but b	edrocku			
											1
									***************************************		-
											-
Stabilizing		+/- 5%	0.2 mg/L or 10% whichever is greater (9)	+/- 0.2 unit		<5 NTUs	>100 mL < 250 mL	>3L	<0.33 ft		
Criteria <sup>4, 6</sup>	te of 250 mL/min	250 mL/min					1	1		Purge Log QA/QC'd By:	1

(9) - DO 0.2 mg/L or 10% whichever is greater (no criteria apply if DO < 0.5 mg/L)



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X	IJ
ER	M

Client: AGL Site/Location: MACON, GA						Project No.:	017671	40	Sampling Date: 62/22/2017
									Sampler's Name: 1 SHOPEDITS
		MW-30		Pu	mp Type/Model:	ALEX	IS PE	RISTA	CTT Sample Collection Time: 16.20
	Total Depth (ft)a:	(58)5	7-63		Tubing Material:	LDPE	,0.1711	I.D.	Sample Purge Rate (L/min)°: 💪 . [
De	pth to Water (ft):	8.84		Pump li	ntake Depth (ft):	45.0			Sample ID: MW-307 D-20170222-01
w	ell Diameter (in):	6.00		_	Purge Method:	LOW F.	LOW/LO	W VOLU	ME QA/QC Collected? NO
*Well Volume (	(gal) = 0.041d <sup>2</sup> h:	78,01/30	ز.، <u>کج</u> کـ)	Start/S	top Purge Time:	1549/1	16:14		ONOCID NA
		15.01/30 (1-2	" dia.j	Purge Rate (L/n	nin)b: 0.15/0.	( Total Pu	rge Volume (L):	3-50	Laboratory Analyses: VOCS SVOLS
Well Type: (	Flush / Stick U	Р	· · · · · · · · · · · · · · · · · · ·		,		•	Sa	impling Method: Losoda straw
Well Cap Condition Well Lock:	on: Good / Rep Yes / No		Well Bolted:	Yes / No		Bolts Needed:	Yes / No	(chec	ck all that apply) Æpump head discharge ☐ Bailer (only used if necessary)
Time <sup>d</sup>	Temp.	Spec. Cond.	DO	pН	ORP	Turbidity	Purge Volume	H₂O Depth	Notes (Purge method, water clarity, odor, purge rate, issues with
, -	(°C)	100 (Con	(mg/L)	(SU)	(mV)	(NTUs)	(r)	(ft)	pump/well/weather/etc.)
15.54	22.26			12.20	91.20	7.68	0.75	8.92	While partocles in make.
15.59		8,527.70		12.28	48.20	4.94	1,50	9.01	v
16:04	21.38	8,570.00		12.30	-15.00	391	2.25	9.10	· · · · · · · · · · · · · · · · · · ·
16:09		8,559.10	1.61	12.31	-43.70	1.61	3.00	9.17	Lowered page rate to 100 million.
16:14	21.33	8,534.90	1.54	1232	-20.90	2.83	3.50	9.20	
PARAM	EVER	S ARI	2 50 19	BLE,	WELL	VOLU	ME M	ETHOR	
NOT	FEASS	BLE	WITH	DRA	MOONI	U,WF	ic (a)	くひに	
SAMF	1ED.								
					·				
Stabilizing Criteria <sup>e</sup>	+/- <b>✓</b> 1°C	256 <sub>+/-</sub> 3%	+/- 10% (see note below) <sup>g</sup>	+/- 🗸 0.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>	
(a) - Do not measure de (b) - Purge rate to be 0,5	pth to bottom of well u lpm or less	ntil alter purging and sam	pling to reduce resus	pending fines that may	be resting on the well b	ottom			<ul> <li>d = well diameter (inches);</li> <li>h = length of water column (feet)</li> </ul>

 Casing Diameter
 Gallons per foot

 1 in
 0.12

 2 in
 0.16

 4 in
 0.64

<sup>(</sup>a) - Do not measure depth to bottom of well until after purging and sampling to reduce resuspending fines that may be resting on the well bottom
(b) - Purge rate to be 0.5 pm or less
(c) - Sampling rate to be 0.25 pm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since ittails reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.



EKM	Client:	Atlanda	bas flow	26		Project No.:	B5666	60-11	Sampling Date: <u>1-22-17</u>
		AGL - May			aja				Sampler's Name: Markinger Thomas
	Well ID:	MW-308	D	Pu	mp Type/Model:	Perstelo	he / Alexi	5	Sample Collection Time:
	Total Depth (ft)a:	110		-	Tubing Material:	2 DPK	/ / /		Sample Purge Rate (L/min) <sup>c</sup> :
	Depth to Water (ft):	17.53		Pump	ntake Depth (ft):	91			Sample ID: MW-30&D-20140222-01
	Well Diameter (in):	6		-	Purge Method:	Low- A	lac		QA/QC Collected? No
*Well Volu	ne (gal) = 0.041d <sup>2</sup> h:	135,83	Bgal	Start/S	Stop Purge Time:	1205/1	230		QA/QC I.D.
	Flush / Stick U			Purge Rate (L/r	nin) <sup>b</sup> : 2, 1		urge Volume (L):	Sa (che	Laboratory Analyses: <u>Sec loc</u> ampling Method: Soda straw ck all that apply) pump head discharge
Well Lock:	Yes / No	C C1	Well Bolted:	Yes / No	OPP		Yes / No /		☐ Bailer (only used if necessary)
Time <sup>d</sup>	Temp. (°C)	Spec. Cond. (mS/cm)	DO (mg/L)	pH (SU)	ORP (mV)	Turbidity (NTUs)	Purge Volume (L)	H <sub>2</sub> O Depth (ft)	Notes (Purge method, water clarity, odor, purge rate, issues with pump/well/weather/etc.)
1210	12-31	427130	5.16	1222	-12.10	5.89	1.0	17-60	Refree prope only to 100ml from
1215	12.36	1233.30	2.70	12.24	25.50	3.38	1.5	17.76	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
1220	23.39	1234.70	2-6.3	1222	-21.90	190	2.0	17.89	
1225	23.07	4243.50	1.62	12.24	-9.30	509	2.5	17.90	
1230	23.21	4220.50	2.59	12.21	-4.00	5.62	3.0	17.95	
			All	Many	for Sh	ble			
			TOO	Clarky	al Word				
			Tota	Best	NW, 7/0	of			
			Mas	1	Trem				8
-									
									24
			ш						
							-		
									· · · · · · · · · · · · · · · · · · ·
							f		
			+/- 10%		+/ 10 37				
Stabilizing Criteria <sup>e</sup>	1°C	+/- 3%	(see note below) <sup>g</sup>	+/- 0.1 unit	+/- 10 mV (see note below) <sup>h</sup>	<10 NTUs OR +/- 10%	(see note below) <sup>d</sup>	(see note below) <sup>f</sup>	
( -, - Do not medsur	c acpui to tottom of well til	ance purging and san	apang to reduce resus	screamy rines that may	be resume on the well	DOLLOM			<ul><li>d = well diameter (inches);</li></ul>

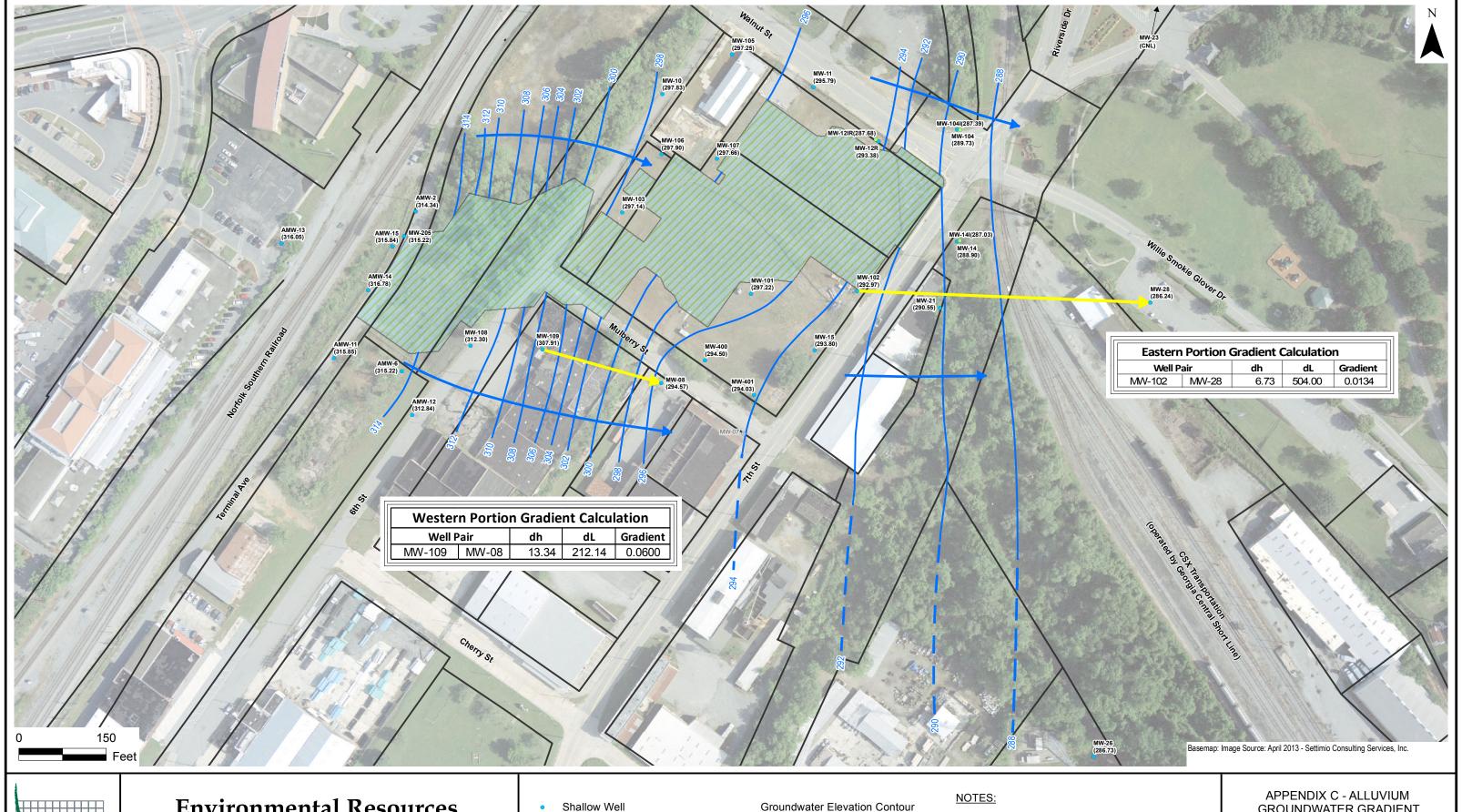
Casing Diameter	Gallons per foot
1 in	0.12
2 in	0.16
4 in	0.64

<sup>(</sup>a) - Do not measure deput to bottom or well until after purging and sampling to reduce resuspending times that may be resting on the well bottom
(b) - Purge rate to be 0.25 ipm or less
(c) - Sampling rate to be 0.25 ipm or less
(d) - Field parameter measurements to be recorded every 3 to 5 minutes
(e) - Stabilization criteria based on three most recent consecutive measurements
(f) - Monitor DTW every 5 min. Well drawdown to be 0.3 ft or less since lift reading. Purge/sampling rate to be lowered as necessary to keep drawdown below 0.3 ft before switching to three well volume method
(g) - DO is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure
(h) - ORP is not a stabilization criterion for the "Groundwater sampling" SESD Standard Operating Procedure.

## **Groundwater Gradient Estimation Figures**

Appendix C

Project No. 0366660 Atlanta Gas Light Company





# **Environmental Resources** Management

DESIGN:	H Sartain	DRAWN:	S Vizuete	CHKD.:	A Reimer
DATE:	4/17/2017	SCALE:	AS SHOWN	REVISION:	1
FU F 22222			ED14 0 4 4 151 1401 14	110/0100/3 04 40	

- Destroyed Shallow Well
- Intermediate Well
- Deep Bedrock Well
- Apparent Groundwater Flow **Used for Gradient Calculations**
- **Groundwater Elevation Contour** (ft AMSL)
- Inferred Groundwater Elevation Contour (ft AMSL)
- Groundwater Flow Direction
- Property Line

ISS Mass

(315.85) = Groundwater Elevation (ft AMSL)

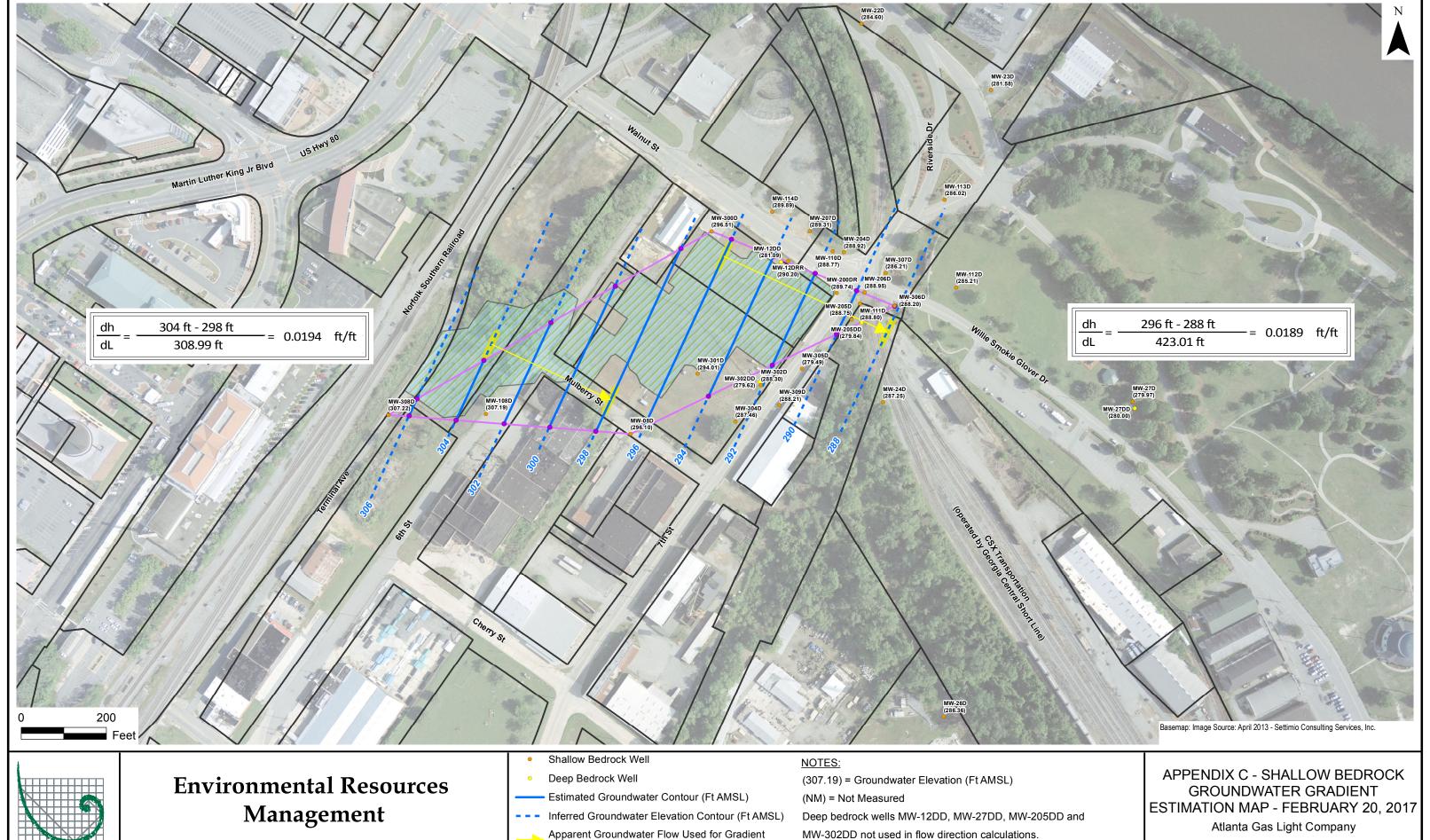
(NM) = Not Measured

(CNL) = Could Not Locate

FT AMSL = Feet Above Mean Sea Level Intermediate wells MW-14I and MW-12IR not used in contouring.

GROUNDWATER GRADIENT ESTIMATION MAP - FEBRUARY 20, 2017

Atlanta Gas Light Company Former Manufactured Gas Plant Macon, Bibb County, Georgia





I	DESIGN:	H Sartain	DRAWN:	S Vizuete	CHKD.:	A Reimer
I	DATE:	5/11/2017	SCALE:	AS SHOWN	REVISION:	0
	FILE: 036666	60 AGL Resources Macon GW P	athforward.AR\05	- ERM Outputs\Figures\AGL_Ma	acon\MXD\2017 04 4th	nVRPPrgRpt\AppB_Bed.mxd

Apparent Groundwater Flow Used for Gradient Calculations

Property Line

ISS Mass

FT AMSL = Feet Above Mean Sea Level

Yellow highlight indicates GW contour used in gradient estimation.

Former Manufactured Gas Plant

Macon, Bibb County, Georgia

## **Laboratory Analytical Reports (CD ONLY)**

Appendix D

Project No. 0366660 Atlanta Gas Light Company

## ANALYTICAL ENVIRONMENTAL SERVICES, INC.



March 03, 2017

Adria Reimer **ERM-Southeast** 3200 Windy Hill Rd Atlanta

30339 GA

TEL: (678) 486-2700 FAX: (404) 745-0103

RE: AGLC Macon

Order No: 1702K47 Dear Adria Reimer:

Analytical Environmental Services, Inc. received samples on 2/23/2017 1:16:00 PM 27 for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES's accreditations are as follows:

- -NELAC/Florida State Laboratory ID E87582 for analysis of Non-Potable Water, Solid & Chemical Materials, and Drinking Water Microbiology, effective 07/01/16-06/30/17.
- -NELAC/Louisiana Agency Interest No. 100818 for or analysis of Non-Potable Water and Solid & Chemical Materials, effective 07/01/16-06/30/17.
- -AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Metals, PCM Asbestos, Gravimetric), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 09/01/17.

These results relate only to the items tested. This report may only be reproduced in full.

Mirzeta Kararic

**Project Manager** 

1702 Kur Work Order:

3080 Presidential Drive, Atlanta GA 30340-3704

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

COMPA	ERM	ADDRESS	s: 200	W	ind.	H	ill				ANAL	YSIS RI	ANALYSIS REQUESTED						
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3080 Presidential Drive, Atlanta GA 30340-3704

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

Work Order: 1703K47

Date: 2/23/17 Page 2 of 2

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Client: ERM-Southeast Project: AGLC Macon

Lab ID:

Case Narrative

Date:

3-Mar-17

Sample Receiving Nonconformance:

1702K47

One of the Trip Blank vials were received broken "TB-05-20170223-01." Sufficient samples remains the lab proceed with the analysis.

Client:ERM-SoutheastClient Sample ID:AMW-2-20170221-01Project Name:AGLC MaconCollection Date:2/21/2017 10:10:00 AM

Date:

3-Mar-17

Lab ID:1702K47-001Matrix:Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS S	W8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238828	1	03/01/2017 01:34	NP
Carbon disulfide	BRL	5.0		ug/L	238828	1	03/01/2017 01:34	NP
Ethylbenzene	BRL	5.0		ug/L	238828	1	03/01/2017 01:34	NP
Toluene	BRL	5.0		ug/L	238828	1	03/01/2017 01:34	NP
Xylenes, Total	BRL	5.0		ug/L	238828	1	03/01/2017 01:34	NP
Surr: 4-Bromofluorobenzene	94.7	66.1-129		%REC	238828	1	03/01/2017 01:34	NP
Surr: Dibromofluoromethane	95.2	83.6-123		%REC	238828	1	03/01/2017 01:34	NP
Surr: Toluene-d8	91.6	81.8-118		%REC	238828	1	03/01/2017 01:34	NP
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	BRL	0.50		ug/L	238651	1	02/28/2017 13:18	YH
Acenaphthylene	BRL	1.0		ug/L	238651	1	02/28/2017 13:18	YH
Acenaphthene	BRL	0.50		ug/L	238651	1	02/28/2017 13:18	YH
Fluorene	BRL	0.10		ug/L	238651	1	02/28/2017 13:18	YH
Phenanthrene	BRL	0.050		ug/L	238651	1	02/28/2017 13:18	YH
Anthracene	BRL	0.050		ug/L	238651	1	02/28/2017 13:18	YH
Fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 13:18	YH
Pyrene	0.052	0.050		ug/L	238651	1	02/28/2017 13:18	YH
Benz(a)anthracene	0.19	0.050		ug/L	238651	1	02/28/2017 13:18	YH
Chrysene	0.20	0.050		ug/L	238651	1	02/28/2017 13:18	YH
Benzo(b)fluoranthene	0.12	0.10		ug/L	238651	1	02/28/2017 13:18	YH
Benzo(k)fluoranthene	0.14	0.050		ug/L	238651	1	02/28/2017 13:18	YH
Benzo(a)pyrene	0.12	0.050		ug/L	238651	1	02/28/2017 13:18	YH
Indeno(1,2,3-cd)pyrene	0.13	0.050		ug/L	238651	1	02/28/2017 13:18	YH
Dibenz(a,h)anthracene	0.11	0.10		ug/L	238651	1	02/28/2017 13:18	YH
Benzo(g,h,i)perylene	0.15	0.10		ug/L	238651	1	02/28/2017 13:18	YH
Surr: 4-Terphenyl-d14	99.2	58.5-125		%REC	238651	1	02/28/2017 13:18	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238499	1	02/24/2017 19:14	YH
2-Methylphenol	BRL	10		ug/L	238499	1	02/24/2017 19:14	YH
3,4-Methylphenol	BRL	10		ug/L	238499	1	02/24/2017 19:14	YH
Phenol	BRL	10		ug/L	238499	1	02/24/2017 19:14	YH
Surr: 2,4,6-Tribromophenol	78	50-142		%REC	238499	1	02/24/2017 19:14	YH
Surr: 2-Fluorobiphenyl	59.4	46-124		%REC	238499	1	02/24/2017 19:14	YH
Surr: 2-Fluorophenol	48.2	25.3-120		%REC	238499	1	02/24/2017 19:14	YH
Surr: 4-Terphenyl-d14	80.1	45.1-133		%REC	238499	1	02/24/2017 19:14	YH
Surr: Nitrobenzene-d5	59.6	40.1-121		%REC	238499	1	02/24/2017 19:14	YH
Surr: Phenol-d5	36	16.3-120		%REC	238499	1	02/24/2017 19:14	YH

Qualifiers:

BRL Below reporting limit

Narr See case narrative

NC Not confirmed

< Less than Result value

<sup>\*</sup> Value exceeds maximum contaminant level

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

J Estimated value detected below Reporting Limit

 Client:
 ERM-Southeast
 Client Sample ID:
 AMW-12-20170221-01

 Project Name:
 AGLC Macon
 Collection Date:
 2/21/2017 11:40:00 AM

 Lab ID:
 1702K47-002
 Matrix:
 Groundwater

Date:

3-Mar-17

Reporting Dilution Qual Units BatchID Analyses Result Date Analyzed Analyst Limit Factor Volatile Organic Compounds by GC/MS SW8260B (SW5030B) ug/L BRL 5.0 238828 02/28/2017 23:50 NP Benzene ug/L BRL 5.0 238828 02/28/2017 23:50 NP Carbon disulfide ug/L Ethylbenzene **BRL** 5.0 238828 02/28/2017 23:50 NP Toluene BRL 5.0 ug/L 238828 1 02/28/2017 23:50 NP ug/L Xylenes, Total **BRL** 5.0 238828 02/28/2017 23:50 NP 94.9 66.1-129 %REC 238828 02/28/2017 23:50 NP Surr: 4-Bromofluorobenzene %REC 96.2 83.6-123 238828 02/28/2017 23:50 NP Surr: Dibromofluoromethane %REC 92.7 81.8-118 238828 02/28/2017 23:50 Surr: Toluene-d8 NP **SIM Polynuclear Aromatic Hydrocarbons** SW8270D (SW3510C) BRL 0.50 ug/L 238651 02/28/2017 13:45 YH Naphthalene ug/L BRL ΥH Acenaphthylene 1.0 238651 02/28/2017 13:45 BRL 0.50 ug/L 238651 02/28/2017 13:45 YH Acenaphthene 1 ug/L Fluorene **BRL** 0.10 238651 02/28/2017 13:45 YH BRL 0.050 ug/L 238651 02/28/2017 13:45 YH Phenanthrene ug/L Anthracene 0.053 0.050 238651 02/28/2017 13:45 YH BRL 0.10 ug/L 238651 02/28/2017 13:45 YH Fluoranthene BRL 0.050 ug/L 238651 02/28/2017 13:45 YH Pyrene ug/L **BRL** 0.050238651 1 02/28/2017 13:45 ΥH Benz(a)anthracene BRL 0.050 ug/L 238651 02/28/2017 13:45 YH Chrysene ug/L YH **BRL** 0.10 238651 02/28/2017 13:45 Benzo(b)fluoranthene Benzo(k)fluoranthene BRL 0.050 ug/L 238651 02/28/2017 13:45 YH ug/L 238651 Benzo(a)pyrene **BRL** 0.05002/28/2017 13:45 YH ug/L Indeno(1,2,3-cd)pyrene BRL 0.050 238651 02/28/2017 13:45 YH ug/L Dibenz(a,h)anthracene **BRL** 0.10 238651 02/28/2017 13:45 YH BRL ug/L 238651 YH 0.10 1 02/28/2017 13:45 Benzo(g,h,i)perylene %REC Surr: 4-Terphenyl-d14 92.3 58.5-125 238651 02/28/2017 13:45 YH Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C) ug/L BRL 10 238499 02/24/2017 19:39 YH 2,4-Dimethylphenol BRL 10 ug/L 238499 02/24/2017 19:39 YH 2-Methylphenol ug/L 238499 **BRL** 10 02/24/2017 19:39 YH 3,4-Methylphenol Phenol BRL 10 ug/L 238499 02/24/2017 19:39 YH %REC Surr: 2,4,6-Tribromophenol 81.5 50-142 238499 02/24/2017 19:39 YH 61.6 46-124 %REC 238499 02/24/2017 19:39 YH Surr: 2-Fluorobiphenyl %REC Surr: 2-Fluorophenol 45.9 25.3-120 238499 02/24/2017 19:39 YH %REC 82.4 45.1-133 238499 02/24/2017 19:39 YH Surr: 4-Terphenyl-d14 %REC Surr: Nitrobenzene-d5 58.3 40.1-121 238499 02/24/2017 19:39 YH %REC 02/24/2017 19:39 Surr: Phenol-d5 34.5 16.3-120 238499 YH

Qualifiers:

Narr See case narrative

NC Not confirmed

< Less than Result value

Estimated value detected below Reporting Limit

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

<sup>2000</sup> than result value

Client:ERM-SoutheastClient Sample ID:AMW-6-20170221-01Project Name:AGLC MaconCollection Date:2/21/2017 2:10:00 PMLab ID:1702K47-003Matrix:Groundwater

Date:

3-Mar-17

Reporting Dilution Result Qual Units BatchID Analyses Date Analyzed Analyst Limit Factor Volatile Organic Compounds by GC/MS SW8260B (SW5030B) BRL ug/L 5.0 238828 03/01/2017 00:16 NP Benzene ug/L Carbon disulfide BRL 5.0 238828 03/01/2017 00:16 NP ug/L Ethylbenzene BRL 5.0 238828 03/01/2017 00:16 NP Toluene BRL 5.0 ug/L 238828 1 03/01/2017 00:16 NP ug/L Xylenes, Total **BRL** 5.0 238828 03/01/2017 00:16 NP 95 66.1-129 %REC 238828 03/01/2017 00:16 NP Surr: 4-Bromofluorobenzene %REC 96.8 83.6-123 238828 03/01/2017 00:16 NP Surr: Dibromofluoromethane %REC 93.3 81.8-118 238828 03/01/2017 00:16 Surr: Toluene-d8 NP **SIM Polynuclear Aromatic Hydrocarbons** SW8270D (SW3510C) Naphthalene BRL 0.50 ug/L 238651 02/28/2017 14:11 YH ug/L BRL ΥH Acenaphthylene 1.0 238651 02/28/2017 14:11 BRL 0.50 ug/L 238651 02/28/2017 14:11 YH Acenaphthene 1 ug/L Fluorene BRL 0.10 238651 02/28/2017 14:11 YH BRL 0.050 ug/L 238651 02/28/2017 14:11 YH Phenanthrene ug/L Anthracene **BRL** 0.050 238651 02/28/2017 14:11 YH BRL 0.10 ug/L 238651 02/28/2017 14:11 YH Fluoranthene BRL 0.050 ug/L 238651 02/28/2017 14:11 YH Pyrene ug/L BRL 0.050238651 1 02/28/2017 14:11 ΥH Benz(a)anthracene BRL 0.050 ug/L 238651 02/28/2017 14:11 YH Chrysene ug/L YH **BRL** 0.10 238651 02/28/2017 14:11 Benzo(b)fluoranthene Benzo(k)fluoranthene BRL 0.050 ug/L 238651 02/28/2017 14:11 YH ug/L 238651 Benzo(a)pyrene BRL 0.05002/28/2017 14:11 YH ug/L Indeno(1,2,3-cd)pyrene BRL 0.050 238651 02/28/2017 14:11 YH ug/L Dibenz(a,h)anthracene BRL 0.10 238651 02/28/2017 14:11 YH BRL ug/L 238651 02/28/2017 14:11 YH 0.10 1 Benzo(g,h,i)perylene %REC Surr: 4-Terphenyl-d14 98.9 58.5-125 238651 02/28/2017 14:11 YH Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C) ug/L BRL 10 238499 02/24/2017 20:04 YH 2,4-Dimethylphenol BRL 10 ug/L 238499 02/24/2017 20:04 YH 2-Methylphenol ug/L 238499 **BRL** 10 02/24/2017 20:04 YH 3,4-Methylphenol Phenol BRL 10 ug/L 238499 02/24/2017 20:04 YH %REC Surr: 2,4,6-Tribromophenol 77.9 50-142 238499 02/24/2017 20:04 YH 57.9 46-124 %REC 238499 02/24/2017 20:04 YH Surr: 2-Fluorobiphenyl %REC Surr: 2-Fluorophenol 46.1 25.3-120 238499 02/24/2017 20:04 YH %REC 81.7 45.1-133 238499 02/24/2017 20:04 YH Surr: 4-Terphenyl-d14 %REC Surr: Nitrobenzene-d5 57.1 40.1-121 238499 02/24/2017 20:04 YH %REC 02/24/2017 20:04 Surr: Phenol-d5 33.4 16.3-120 238499 YH

Qualifiers:

Narr See case narrative
NC Not confirmed

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

<sup>&</sup>lt; Less than Result value

J Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:AMW-14-20170221-01Project Name:AGLC MaconCollection Date:2/21/2017 4:30:00 PMLab ID:1702K47-004Matrix:Groundwater

Date:

3-Mar-17

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
Volatile Organic Compounds by GC/MS S	W8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238828	1	03/01/2017 00:42	NP
Carbon disulfide	BRL	5.0		ug/L	238828	1	03/01/2017 00:42	NP
Ethylbenzene	14	5.0		ug/L	238828	1	03/01/2017 00:42	NP
Toluene	BRL	5.0		ug/L	238828	1	03/01/2017 00:42	NP
Xylenes, Total	16	5.0		ug/L	238828	1	03/01/2017 00:42	NP
Surr: 4-Bromofluorobenzene	97.8	66.1-129		%REC	238828	1	03/01/2017 00:42	NP
Surr: Dibromofluoromethane	97.5	83.6-123		%REC	238828	1	03/01/2017 00:42	NP
Surr: Toluene-d8	94.3	81.8-118		%REC	238828	1	03/01/2017 00:42	NP
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	18	5.0		ug/L	238651	100	03/01/2017 16:35	YH
Acenaphthylene	BRL	1.0		ug/L	238651	1	02/28/2017 16:28	YH
Acenaphthene	0.71	0.50		ug/L	238651	1	02/28/2017 16:28	YH
Fluorene	0.28	0.10		ug/L	238651	1	02/28/2017 16:28	YH
Phenanthrene	0.30	0.050		ug/L	238651	1	02/28/2017 16:28	YH
Anthracene	BRL	0.050		ug/L	238651	1	02/28/2017 16:28	YH
Fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 16:28	YH
Pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 16:28	YH
Benz(a)anthracene	BRL	0.050		ug/L	238651	1	02/28/2017 16:28	YH
Chrysene	BRL	0.050		ug/L	238651	1	02/28/2017 16:28	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 16:28	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238651	1	02/28/2017 16:28	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 16:28	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 16:28	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238651	1	02/28/2017 16:28	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238651	1	02/28/2017 16:28	YH
Surr: 4-Terphenyl-d14	22.8	58.5-125	S	%REC	238651	1	02/28/2017 16:28	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238646	1	02/27/2017 17:58	YH
2-Methylphenol	BRL	10		ug/L	238646	1	02/27/2017 17:58	YH
3,4-Methylphenol	BRL	10		ug/L	238646	1	02/27/2017 17:58	YH
Phenol	BRL	10		ug/L	238646	1	02/27/2017 17:58	YH
Surr: 2,4,6-Tribromophenol	94.8	50-142		%REC	238646	1	02/27/2017 17:58	YH
Surr: 2-Fluorobiphenyl	71.7	46-124		%REC	238646	1	02/27/2017 17:58	YH
Surr: 2-Fluorophenol	47.1	25.3-120		%REC	238646	1	02/27/2017 17:58	YH
Surr: 4-Terphenyl-d14	80.6	45.1-133		%REC	238646	1	02/27/2017 17:58	YH
Surr: Nitrobenzene-d5	72.6	40.1-121		%REC	238646	1	02/27/2017 17:58	YH
Surr: Phenol-d5	32.8	16.3-120		%REC	238646	1	02/27/2017 17:58	YH

Qualifiers:

Narr See case narrative

NC Not confirmed

< Less than Result value

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

 Client:
 ERM-Southeast
 Client Sample ID:
 MW-27D-20170221-01

 Project Name:
 AGLC Macon
 Collection Date:
 2/21/2017 10:12:00 AM

 Lab ID:
 1702K47-005
 Matrix:
 Groundwater

Date:

3-Mar-17

b ID: 1702K47-005 Matrix: Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS S	SW8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238828	1	03/01/2017 01:08	NP
Carbon disulfide	BRL	5.0		ug/L	238828	1	03/01/2017 01:08	NP
Ethylbenzene	BRL	5.0		ug/L	238828	1	03/01/2017 01:08	NP
Toluene	BRL	5.0		ug/L	238828	1	03/01/2017 01:08	NP
Xylenes, Total	BRL	5.0		ug/L	238828	1	03/01/2017 01:08	NP
Surr: 4-Bromofluorobenzene	94.6	66.1-129		%REC	238828	1	03/01/2017 01:08	NP
Surr: Dibromofluoromethane	97.5	83.6-123		%REC	238828	1	03/01/2017 01:08	NP
Surr: Toluene-d8	94.3	81.8-118		%REC	238828	1	03/01/2017 01:08	NP
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	BRL	0.50		ug/L	238651	1	02/28/2017 16:52	YH
Acenaphthylene	BRL	1.0		ug/L	238651	1	02/28/2017 16:52	YH
Acenaphthene	BRL	0.50		ug/L	238651	1	02/28/2017 16:52	YH
Fluorene	BRL	0.10		ug/L	238651	1	02/28/2017 16:52	YH
Phenanthrene	BRL	0.050		ug/L	238651	1	02/28/2017 16:52	YH
Anthracene	BRL	0.050		ug/L	238651	1	02/28/2017 16:52	YH
Fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 16:52	YH
Pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 16:52	YH
Benz(a)anthracene	BRL	0.050		ug/L	238651	1	02/28/2017 16:52	YH
Chrysene	BRL	0.050		ug/L	238651	1	02/28/2017 16:52	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 16:52	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238651	1	02/28/2017 16:52	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 16:52	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 16:52	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238651	1	02/28/2017 16:52	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238651	1	02/28/2017 16:52	YH
Surr: 4-Terphenyl-d14	114	58.5-125		%REC	238651	1	02/28/2017 16:52	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238646	1	02/27/2017 16:37	YH
2-Methylphenol	BRL	10		ug/L	238646	1	02/27/2017 16:37	YH
3,4-Methylphenol	BRL	10		ug/L	238646	1	02/27/2017 16:37	YH
Phenol	BRL	10		ug/L	238646	1	02/27/2017 16:37	YH
Surr: 2,4,6-Tribromophenol	100	50-142		%REC	238646	1	02/27/2017 16:37	YH
Surr: 2-Fluorobiphenyl	79.6	46-124		%REC	238646	1	02/27/2017 16:37	YH
Surr: 2-Fluorophenol	54.7	25.3-120		%REC	238646	1	02/27/2017 16:37	YH
Surr: 4-Terphenyl-d14	84.4	45.1-133		%REC	238646	1	02/27/2017 16:37	YH
Surr: Nitrobenzene-d5	82.4	40.1-121		%REC	238646	1	02/27/2017 16:37	YH
Surr: Phenol-d5	38.9	16.3-120		%REC	238646	1	02/27/2017 16:37	YH

Qualifiers:

Narr See case narrative
NC Not confirmed

Less than Result value

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-22D-20170221-01Project Name:AGLC MaconCollection Date:2/21/2017 2:00:00 PMLab ID:1702K47-006Matrix:Groundwater

Date:

3-Mar-17

Naphthalene	Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Carbon disulfide	Volatile Organic Compounds by GC/MS S	W8260B			(SW	/5030B)			
Ethylbenzene BRL 5.0 ug/L 238828 I 02/28/2017 22:33 NP Toluene BRL 5.0 ug/L 238828 I 02/28/2017 22:33 NP Xylenes, Total BRL 5.0 ug/L 238828 I 02/28/2017 22:33 NP Surr: 4-Bromofluorobenzene 94.3 66.1-129 %REC 238828 I 02/28/2017 22:33 NP Surr: Dibromofluoromethane 98.7 83.6-123 %REC 238828 I 02/28/2017 22:33 NP Surr: Toluene-d8 94.4 81.8-118 %REC 238828 I 02/28/2017 22:33 NP Surr: Toluene-d8 94.4 81.8-118 %REC 238828 I 02/28/2017 22:33 NP Surr: Toluene-d8 94.4 81.8-118 %REC 238828 I 02/28/2017 22:33 NP SURD: Toluene-d8 94.4 81.8-118 %REC 238828 I 02/28/2017 22:33 NP SURD: Toluene-d8 94.4 81.8-118 %REC 238828 I 02/28/2017 22:33 NP SURD: Toluene-d8 95.7 MREC 238828 I 02/28/2017 22:33 NP SURD: Toluene-d8 95.7 MREC 238828 I 02/28/2017 22:33 NP SURD: Toluene-d8 95.7 MREC 238828 I 02/28/2017 22:33 NP SURD: Toluene-d8 95.7 MREC 238828 I 02/28/2017 22:33 NP SURD: Toluene-d8 95.7 MREC 238651 I 02/28/2017 22:33 NP SURD: Toluene-d8 95.7 MREC 238651 I 02/28/2017 17:19 YH Acenaphthene BRL 0.50 ug/L 238651 I 02/28/2017 17:19 YH PACENAPHENE-MARCE BRL 0.50 ug/L 238651 I 02/28/2017 17:19 YH PACENAPHENE-MARCE BRL 0.50 ug/L 238651 I 02/28/2017 17:19 YH PACENAPHENE-MARCE BRL 0.50 ug/L 238651 I 02/28/2017 17:19 YH PACENAPHENE-MARCE BRL 0.50 ug/L 238651 I 02/28/2017 17:19 YH PACENAPHENE-MARCE BRL 0.50 ug/L 238651 I 02/28/2017 17:19 YH PACENAPHENE-MARCE BRL 0.50 ug/L 238651 I 02/28/2017 17:19 YH BENZO(3)/MIORAITHENE BRL 0.50 ug/L 238651 I 02/28/2017 17:19 YH BENZO(3)/MIORAITHENE BRL 0.50 ug/L 238651 I 02/28/2017 17:19 YH BENZO(4)/MIORAITHENE BRL 0.50 ug/L 238651 I 02/28/2017 17:19 YH BENZO(4)/MIORAITHENE BRL 0.50 ug/L 238651 I 02/28/2017 17:19 YH BENZO(4)/MIORAITHENE BRL 0.50 ug/L 238651 I 02/28/2017 17:19 YH BENZO(4)/MIORAITHENE BRL 0.50 ug/L 238651 I 02/28/2017 17:19 YH BENZO(4)/MIORAITHENE BRL 0.50 ug/L 238651 I 02/28/2017 17:19 YH BENZO(4)/MIORAITHENE BRL 0.50 ug/L 238651 I 02/28/2017 17:19 YH BENZO(4)/MIORAITHENE BRL 0.50 ug/L 238661 I 02/28/2017 17:19 YH BENZO(4)/MIORAITHENE BRL 0.50 ug/L 238661 I 02/28/2017 17:19 YH BENZO(4)/MI	Benzene	BRL	5.0		ug/L	238828	1	02/28/2017 22:33	NP
Toluene BRL 5.0 ug/L 238828 1 02/28/2017 22:33 NP Xylenes, Total BRL 5.0 ug/L 238828 1 02/28/2017 22:33 NP Surr: 4-Bromofluorobenzene 94/3 66.1-129 MRC 238828 1 02/28/2017 22:33 NP Surr. Dibromofluoromethane 98.7 83.6-123 MRC 238828 1 02/28/2017 22:33 NP Surr. Dibromofluoromethane 98.7 83.6-123 MRC 238828 1 02/28/2017 22:33 NP SURT: Dibromofluoromethane 98.7 83.6-123 MRC 238828 1 02/28/2017 22:33 NP SURT: Dibromofluoromethane 98.7 83.6-123 MRC 238828 1 02/28/2017 22:33 NP SURT: Dibromofluoromethane 98.7 83.6-123 MRC 238828 1 02/28/2017 22:33 NP SURT: Dibromofluoromethane 98.7 83.6-123 MRC 238828 1 02/28/2017 22:33 NP SURT: Dibromofluoromethane 98.7 83.6-123 MRC 238828 1 02/28/2017 12:33 NP SURT: Dibromofluoromethane 98.7 83.6-123 MRC 238828 1 02/28/2017 12:33 NP SURT: Dibromofluoromethane 98.7 83.6-123 MRC 238828 1 02/28/2017 12:33 NP SURT: Dibromofluoromethane 98.7 83.6-123 MRC 238828 1 02/28/2017 17:19 YH Accenaphthylene BRL 0.50 ug/L 238651 1 02/28/2017 17:19 YH Accenaphthylene BRL 0.10 ug/L 238651 1 02/28/2017 17:19 YH Phenanthrene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Pyrene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Pyrene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Pyrene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Benz(b)fluoranthene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Benz(b)fluoranthene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Benz(b)fluoranthene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Benz(b)fluoranthene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Benz(b)fluoranthene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Benz(b)fluoranthene BRL 0.10 ug/L 238651 1 02/28/2017 17:19 YH Benz(b)fluoranthene BRL 0.10 ug/L 238651 1 02/28/2017 17:19 YH Benz(b)fluoranthene BRL 0.10 ug/L 238651 1 02/28/2017 17:19 YH Benz(b)fluoranthene BRL 0.10 ug/L 238651 1 02/28/2017 17:19 YH Benz(b)fluoranthene BRL 0.10 ug/L 238651 1 02/28/2017 17:19 YH Benz(b)fluoranthene BRL 0.10 ug/L 238661 1 02/28/2017 17:19 YH Benz(b)fluoranthene BRL 0.10 ug/L 238661 1 02/28/2017 17:19 YH Benz(b)fluoranthene BRL 0.10 ug/L 23	Carbon disulfide	BRL	5.0		ug/L	238828	1	02/28/2017 22:33	NP
Ny   Ny   Ny   Ny   Ny   Ny   Ny   Ny	Ethylbenzene	BRL	5.0		ug/L	238828	1	02/28/2017 22:33	NP
Surr: 4-Bromofluorobenzene   94.3   66.1-129   %REC   238828   1   02/28/2017 22:33   NP	Toluene	BRL	5.0		ug/L	238828	1	02/28/2017 22:33	NP
Surr: Dibromofluoromethane   98.7   83.6-123   94.8EC   238828   1   02/28/2017 22:33   NP	Xylenes, Total	BRL	5.0		ug/L	238828	1	02/28/2017 22:33	NP
Surr: Toluene-d8	Surr: 4-Bromofluorobenzene	94.3	66.1-129		%REC	238828	1	02/28/2017 22:33	NP
SIM Polynuclear Aromatic Hydrocarbons   SW8270D   SW82510C   SW3510C	Surr: Dibromofluoromethane	98.7	83.6-123		%REC	238828	1	02/28/2017 22:33	NP
Naphthalene	Surr: Toluene-d8	94.4	81.8-118		%REC	238828	1	02/28/2017 22:33	NP
Acenaphthylene BRL 1.0 ug/L 238651 1 0228/2017 17:19 YH Acenaphthene BRL 0.50 ug/L 238651 1 0228/2017 17:19 YH Fluorene BRL 0.10 ug/L 238651 1 0228/2017 17:19 YH Phenanthrene BRL 0.050 ug/L 238651 1 0228/2017 17:19 YH Anthracene BRL 0.050 ug/L 238651 1 0228/2017 17:19 YH Fluoranthene BRL 0.050 ug/L 238651 1 0228/2017 17:19 YH Fluoranthene BRL 0.050 ug/L 238651 1 0228/2017 17:19 YH Pyrene BRL 0.050 ug/L 238651 1 0228/2017 17:19 YH Chrysene BRL 0.050 ug/L 238651 1 0228/2017 17:19 YH Benza(a)anthracene BRL 0.050 ug/L 238651 1 0228/2017 17:19 YH Benzo(b)fluoranthene BRL 0.050 ug/L 238651 1 0228/2017 17:19 YH Benzo(b)fluoranthene BRL 0.050 ug/L 238651 1 0228/2017 17:19 YH Benzo(b)fluoranthene BRL 0.050 ug/L 238651 1 0228/2017 17:19 YH Benzo(b)fluoranthene BRL 0.050 ug/L 238651 1 0228/2017 17:19 YH Benzo(a)pyrene BRL 0.050 ug/L 238651 1 0228/2017 17:19 YH Benzo(a)pyrene BRL 0.050 ug/L 238651 1 0228/2017 17:19 YH Benzo(a)pyrene BRL 0.050 ug/L 238651 1 0228/2017 17:19 YH Benzo(a)pyrene BRL 0.050 ug/L 238651 1 0228/2017 17:19 YH Benzo(a)pyrene BRL 0.050 ug/L 238651 1 0228/2017 17:19 YH Benzo(g,h,i)perylene BRL 0.10 ug/L 238651 1 0228/2017 17:19 YH Benzo(g,h,i)perylene BRL 0.10 ug/L 238651 1 0228/2017 17:19 YH Surr: 4-Terphenyl-d14 101 58.5-125 %REC 238646 1 0227/2017 18:25 YH 3,4-Methylphenol BRL 10 ug/L 238646 1 0227/2017 18:25 YH 3,4-Methylphenol BRL 10 ug/L 238646 1 0227/2017 18:25 YH Surr: 2,4,6-Tribromophenol 95.3 50-142 %REC 238646 1 0227/2017 18:25 YH Surr: 2-Fluorobiphenyl 72.9 46-124 %REC 238646 1 0227/2017 18:25 YH Surr: 2-Fluorobiphenyl 72.9 46-124 %REC 238646 1 0227/2017 18:25 YH Surr: 4-Terphenyl-d14 88.6 45.1-133 %REC 238646 1 0227/2017 18:25 YH Surr: 4-Terphenyl-d14 88.6 45.1-133 %REC 238646 1 0227/2017 18:25 YH Surr: 4-Terphenyl-d14 88.6 45.1-133 %REC 238646 1 0227/2017 18:25 YH Surr: Tirrobenzene-d5 75.4 40.1-121 %REC 238646 1 0227/2017 18:25 YH	SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Acenaphthylene         BRL         1.0         ug/L         238651         1         02/28/2017 17:19         YH           Acenaphthene         BRL         0.50         ug/L         238651         1         02/28/2017 17:19         YH           Fluorene         BRL         0.10         ug/L         238651         1         02/28/2017 17:19         YH           Phenanthrene         BRL         0.050         ug/L         238651         1         02/28/2017 17:19         YH           Anthracene         BRL         0.050         ug/L         238651         1         02/28/2017 17:19         YH           Pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 17:19         YH           Pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 17:19         YH           Pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 17:19         YH           Chrysene         BRL         0.050         ug/L         238651         1         02/28/2017 17:19         YH           Benzo(b)fluoranthene         BRL         0.10         ug/L         238651         1 <td< td=""><td>Naphthalene</td><td>BRL</td><td>0.50</td><td></td><td>ug/L</td><td>238651</td><td>1</td><td>02/28/2017 17:19</td><td>YH</td></td<>	Naphthalene	BRL	0.50		ug/L	238651	1	02/28/2017 17:19	YH
Acenaphthene         BRL         0.50         ug/L         238651         1         02/28/2017 17:19         YH           Fluorene         BRL         0.10         ug/L         238651         1         02/28/2017 17:19         YH           Phenanthrene         BRL         0.050         ug/L         238651         1         02/28/2017 17:19         YH           Anthracene         BRL         0.050         ug/L         238651         1         02/28/2017 17:19         YH           Pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 17:19         YH           Pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 17:19         YH           Benz(a)anthracene         BRL         0.050         ug/L         238651         1         02/28/2017 17:19         YH           Chrysene         BRL         0.050         ug/L         238651         1         02/28/2017 17:19         YH           Benzo(b)fluoranthene         BRL         0.050         ug/L         238651         1         02/28/2017 17:19         YH           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1 <td>-</td> <td>BRL</td> <td>1.0</td> <td></td> <td>ug/L</td> <td>238651</td> <td>1</td> <td>02/28/2017 17:19</td> <td>YH</td>	-	BRL	1.0		ug/L	238651	1	02/28/2017 17:19	YH
Phenanthrene         BRL Anthracene         0.050 BRL BRL BRL 0.050         ug/L 0.238651 ug/L 0.228/2017 17:19         YH Anthracene           Fluoranthene         BRL 0.10         ug/L 238651 l 0.2/28/2017 17:19         YH PYTEN 238651		BRL	0.50		ug/L	238651	1	02/28/2017 17:19	YH
Anthracene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Fluoranthene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Pyrne BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Benz(a)anthracene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Benz(a)anthracene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Benz(b)hfluoranthene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Benzo(b)hfluoranthene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Benzo(b)hfluoranthene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Benzo(k)fluoranthene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Benzo(a)pyrene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Indeno(1,2,3-cd)pyrene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Dibenz(a,h)anthracene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Benzo(g,h,i)perylene BRL 0.10 ug/L 238651 1 02/28/2017 17:19 YH Benzo(g,h,i)perylene BRL 0.10 ug/L 238651 1 02/28/2017 17:19 YH Surr: 4-Terphenyl-d14 101 58.5-125 %REC 238651 1 02/28/2017 17:19 YH Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)  2,4-Dimethylphenol BRL 10 ug/L 238646 1 02/27/2017 18:25 YH 2-Methylphenol BRL 10 ug/L 238646 1 02/27/2017 18:25 YH Phenol BRL 10 ug/L 238646 1 02/27/2017 18:25 YH Surr: 2-f-Iuorobiphenyl 72.9 46-124 %REC 238646 1 02/27/2017 18:25 YH Surr: 2-f-Iuorobiphenyl 72.9 46-124 %REC 238646 1 02/27/2017 18:25 YH Surr: 2-f-Iuorobiphenyl 72.9 46-124 %REC 238646 1 02/27/2017 18:25 YH Surr: 2-f-Iuorobiphenyl 72.9 46-124 %REC 238646 1 02/27/2017 18:25 YH Surr: 2-f-Iuorobiphenyl 72.9 46-124 %REC 238646 1 02/27/2017 18:25 YH Surr: 2-f-Iuorobiphenyl 72.9 46-124 %REC 238646 1 02/27/2017 18:25 YH Surr: 2-f-Iuorobiphenyl 72.9 46-124 %REC 238646 1 02/27/2017 18:25 YH Surr: 2-f-Iuorobiphenyl 72.9 46-124 %REC 238646 1 02/27/2017 18:25 YH Surr: 2-f-Iuorobiphenyl 72.9 46-124 %REC 238646 1 02/27/2017 18:25 YH Surr: 4-Terphenyl-d14 80.6 45.1-133 %REC 238646 1 02/27/2017 18:25 YH Surr: 4-Terphenyl-d14 80.6 45.1-133 %REC 238646 1 02/27/2017 18:25 YH Surr: 4-Terphenyl-d14 80.6 45.1-133 %REC 238646 1 02/27/2017 18:25 YH	Fluorene	BRL	0.10		ug/L	238651	1	02/28/2017 17:19	YH
Fluoranthene	Phenanthrene	BRL	0.050		ug/L	238651	1	02/28/2017 17:19	YH
Pyrene	Anthracene	BRL	0.050		ug/L	238651	1	02/28/2017 17:19	YH
Benz(a)anthracene   BRL   0.050   ug/L   238651   1 02/28/2017 17:19   YH	Fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 17:19	YH
Chrysene         BRL         0.050         ug/L         238651         1         02/28/2017 17:19         YH           Benzo(b)fluoranthene         BRL         0.10         ug/L         238651         1         02/28/2017 17:19         YH           Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1         02/28/2017 17:19         YH           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 17:19         YH           Indeno(1,2,3-cd)pyrene         0.056         0.050         ug/L         238651         1         02/28/2017 17:19         YH           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1         02/28/2017 17:19         YH           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1         02/28/2017 17:19         YH           Surr: 4-Terphenyl-d14         101         58.5-125         %REC         238651         1         02/28/2017 17:19         YH           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         2386	Pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 17:19	YH
Benzo(b)fluoranthene         BRL         0.10         ug/L         238651         1         02/28/2017 17:19         YH           Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1         02/28/2017 17:19         YH           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 17:19         YH           Indeno(1,2,3-cd)pyrene         0.056         0.050         ug/L         238651         1         02/28/2017 17:19         YH           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1         02/28/2017 17:19         YH           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1         02/28/2017 17:19         YH           Surr: 4-Terphenyl-d14         101         58.5-125         %REC         238651         1         02/28/2017 17:19         YH           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)         V           2,4-Dimethylphenol         BRL         10         ug/L         238646         1         02/27/2017 18:25         YH           2-Methylphenol         BRL         10         ug/L	Benz(a)anthracene	BRL	0.050		ug/L	238651	1	02/28/2017 17:19	YH
Benzo(k)fluoranthene Benzo(k)fluoranthene Benzo(a)pyrene Benzo(a)pyrene Benzo(a)pyrene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Indeno(1,2,3-ed)pyrene 0.056 0.050 ug/L 238651 1 02/28/2017 17:19 YH Dibenz(a,h)anthracene BRL 0.10 ug/L 238651 1 02/28/2017 17:19 YH Benzo(g,h,i)perylene BRL 0.10 ug/L 238651 1 02/28/2017 17:19 YH Surr: 4-Terphenyl-d14 101 58.5-125 %REC 238651 1 02/28/2017 17:19 YH Semivolatile Org. Comp. by GC/MS SW8270D  (SW3510C)  2,4-Dimethylphenol BRL 10 ug/L 238646 1 02/27/2017 18:25 YH 2-Methylphenol BRL 10 ug/L 238646 1 02/27/2017 18:25 YH 3,4-Methylphenol BRL 10 ug/L 238646 1 02/27/2017 18:25 YH Phenol BRL 10 ug/L 238646 1 02/27/2017 18:25 YH Surr: 2,4,6-Tribromophenol 95.3 50-142 %REC 238646 1 02/27/2017 18:25 YH Surr: 2-Fluorobiphenyl 72.9 46-124 %REC 238646 1 02/27/2017 18:25 YH Surr: 2-Fluorophenol 34.8 25.3-120 %REC 238646 1 02/27/2017 18:25 YH Surr: 4-Terphenyl-d14 80.6 45.1-133 %REC 238646 1 02/27/2017 18:25 YH Surr: 4-Terphenyl-d14 80.6 45.1-133 %REC 238646 1 02/27/2017 18:25 YH Surr: Nitrobenzene-d5 75.4 40.1-121 %REC 238646 1 02/27/2017 18:25 YH	Chrysene	BRL	0.050		ug/L	238651	1	02/28/2017 17:19	YH
Benzo(a)pyrene BRL 0.050 ug/L 238651 1 02/28/2017 17:19 YH Indeno(1,2,3-cd)pyrene 0.056 0.050 ug/L 238651 1 02/28/2017 17:19 YH Dibenz(a,h)anthracene BRL 0.10 ug/L 238651 1 02/28/2017 17:19 YH Benzo(g,h,i)perylene BRL 0.10 ug/L 238651 1 02/28/2017 17:19 YH Surr: 4-Terphenyl-d14 101 58.5-125 %REC 238651 1 02/28/2017 17:19 YH Swith Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)  2,4-Dimethylphenol BRL 10 ug/L 238646 1 02/27/2017 18:25 YH 2-Methylphenol BRL 10 ug/L 238646 1 02/27/2017 18:25 YH 3,4-Methylphenol BRL 10 ug/L 238646 1 02/27/2017 18:25 YH BRL 10 ug/L 238646 1 02/27/2017 18:25 YH BRL 10 ug/L 238646 1 02/27/2017 18:25 YH Swith Sw	Benzo(b)fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 17:19	YH
Indeno(1,2,3-cd)pyrene   0.056   0.050   ug/L   238651   1 02/28/2017 17:19   YH	Benzo(k)fluoranthene	BRL	0.050		ug/L	238651	1	02/28/2017 17:19	YH
Dibenz(a,h)anthracene   BRL   0.10   ug/L   238651   1   02/28/2017 17:19   YH	Benzo(a)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 17:19	YH
Benzo(g,h,i)perylene BRL 0.10 ug/L 238651 1 02/28/2017 17:19 YH Surr: 4-Terphenyl-d14 101 58.5-125 %REC 238651 1 02/28/2017 17:19 YH  Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)  2,4-Dimethylphenol BRL 10 ug/L 238646 1 02/27/2017 18:25 YH 2-Methylphenol BRL 10 ug/L 238646 1 02/27/2017 18:25 YH 3,4-Methylphenol BRL 10 ug/L 238646 1 02/27/2017 18:25 YH Phenol BRL 10 ug/L 238646 1 02/27/2017 18:25 YH Surr: 2,4,6-Tribromophenol 95.3 50-142 %REC 238646 1 02/27/2017 18:25 YH Surr: 2-Fluorobiphenyl 72.9 46-124 %REC 238646 1 02/27/2017 18:25 YH Surr: 2-Fluorophenol 34.8 25.3-120 %REC 238646 1 02/27/2017 18:25 YH Surr: 4-Terphenyl-d14 80.6 45.1-133 %REC 238646 1 02/27/2017 18:25 YH Surr: Nitrobenzene-d5 75.4 40.1-121 %REC 238646 1 02/27/2017 18:25 YH	Indeno(1,2,3-cd)pyrene	0.056	0.050		ug/L	238651	1	02/28/2017 17:19	YH
Surr: 4-Terphenyl-d14         101         58.5-125         %REC         238651         1         02/28/2017 17:19         YH           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238646         1         02/27/2017 18:25         YH           2-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 18:25         YH           3,4-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 18:25         YH           Phenol         BRL         10         ug/L         238646         1         02/27/2017 18:25         YH           Surr: 2,4,6-Tribromophenol         95.3         50-142         %REC         238646         1         02/27/2017 18:25         YH           Surr: 2-Fluorobiphenyl         72.9         46-124         %REC         238646         1         02/27/2017 18:25         YH           Surr: 2-Fluorophenol         34.8         25.3-120         %REC         238646         1         02/27/2017 18:25         YH           Surr: 4-Terphenyl-d14         80.6         45.1-133         %REC         238646         1 </td <td>Dibenz(a,h)anthracene</td> <td>BRL</td> <td>0.10</td> <td></td> <td>ug/L</td> <td>238651</td> <td>1</td> <td>02/28/2017 17:19</td> <td>YH</td>	Dibenz(a,h)anthracene	BRL	0.10		ug/L	238651	1	02/28/2017 17:19	YH
Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238646         1         02/27/2017 18:25         YH           2-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 18:25         YH           3,4-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 18:25         YH           Phenol         BRL         10         ug/L         238646         1         02/27/2017 18:25         YH           Surr: 2,4,6-Tribromophenol         95.3         50-142         %REC         238646         1         02/27/2017 18:25         YH           Surr: 2-Fluorobiphenyl         72.9         46-124         %REC         238646         1         02/27/2017 18:25         YH           Surr: 2-Fluorophenol         34.8         25.3-120         %REC         238646         1         02/27/2017 18:25         YH           Surr: 4-Terphenyl-d14         80.6         45.1-133         %REC         238646         1         02/27/2017 18:25         YH           Surr: Nitrobenzene-d5         75.4         40.1-121         %REC         238646         1         02/27/2	Benzo(g,h,i)perylene	BRL	0.10		ug/L	238651	1	02/28/2017 17:19	YH
2,4-Dimethylphenol       BRL       10       ug/L       238646       1       02/27/2017 18:25       YH         2-Methylphenol       BRL       10       ug/L       238646       1       02/27/2017 18:25       YH         3,4-Methylphenol       BRL       10       ug/L       238646       1       02/27/2017 18:25       YH         Phenol       BRL       10       ug/L       238646       1       02/27/2017 18:25       YH         Surr: 2,4,6-Tribromophenol       95.3       50-142       %REC       238646       1       02/27/2017 18:25       YH         Surr: 2-Fluorobiphenyl       72.9       46-124       %REC       238646       1       02/27/2017 18:25       YH         Surr: 2-Fluorophenol       34.8       25.3-120       %REC       238646       1       02/27/2017 18:25       YH         Surr: 4-Terphenyl-d14       80.6       45.1-133       %REC       238646       1       02/27/2017 18:25       YH         Surr: Nitrobenzene-d5       75.4       40.1-121       %REC       238646       1       02/27/2017 18:25       YH	Surr: 4-Terphenyl-d14	101	58.5-125		%REC	238651	1	02/28/2017 17:19	YH
2-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 18:25         YH           3,4-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 18:25         YH           Phenol         BRL         10         ug/L         238646         1         02/27/2017 18:25         YH           Surr: 2,4,6-Tribromophenol         95.3         50-142         %REC         238646         1         02/27/2017 18:25         YH           Surr: 2-Fluorobiphenyl         72.9         46-124         %REC         238646         1         02/27/2017 18:25         YH           Surr: 2-Fluorophenol         34.8         25.3-120         %REC         238646         1         02/27/2017 18:25         YH           Surr: 4-Terphenyl-d14         80.6         45.1-133         %REC         238646         1         02/27/2017 18:25         YH           Surr: Nitrobenzene-d5         75.4         40.1-121         %REC         238646         1         02/27/2017 18:25         YH	Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 18:25         YH           3,4-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 18:25         YH           Phenol         BRL         10         ug/L         238646         1         02/27/2017 18:25         YH           Surr: 2,4,6-Tribromophenol         95.3         50-142         %REC         238646         1         02/27/2017 18:25         YH           Surr: 2-Fluorobiphenyl         72.9         46-124         %REC         238646         1         02/27/2017 18:25         YH           Surr: 2-Fluorophenol         34.8         25.3-120         %REC         238646         1         02/27/2017 18:25         YH           Surr: 4-Terphenyl-d14         80.6         45.1-133         %REC         238646         1         02/27/2017 18:25         YH           Surr: Nitrobenzene-d5         75.4         40.1-121         %REC         238646         1         02/27/2017 18:25         YH	2,4-Dimethylphenol	BRL	10		ug/L	238646	1	02/27/2017 18:25	YH
3,4-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 18:25         YH           Phenol         BRL         10         ug/L         238646         1         02/27/2017 18:25         YH           Surr: 2,4,6-Tribromophenol         95.3         50-142         %REC         238646         1         02/27/2017 18:25         YH           Surr: 2-Fluorobiphenyl         72.9         46-124         %REC         238646         1         02/27/2017 18:25         YH           Surr: 2-Fluorophenol         34.8         25.3-120         %REC         238646         1         02/27/2017 18:25         YH           Surr: 4-Terphenyl-d14         80.6         45.1-133         %REC         238646         1         02/27/2017 18:25         YH           Surr: Nitrobenzene-d5         75.4         40.1-121         %REC         238646         1         02/27/2017 18:25         YH		BRL	10		ug/L	238646	1	02/27/2017 18:25	YH
Phenol         BRL         10         ug/L         238646         1         02/27/2017 18:25         YH           Surr: 2,4,6-Tribromophenol         95.3         50-142         %REC         238646         1         02/27/2017 18:25         YH           Surr: 2-Fluorobiphenyl         72.9         46-124         %REC         238646         1         02/27/2017 18:25         YH           Surr: 2-Fluorophenol         34.8         25.3-120         %REC         238646         1         02/27/2017 18:25         YH           Surr: 4-Terphenyl-d14         80.6         45.1-133         %REC         238646         1         02/27/2017 18:25         YH           Surr: Nitrobenzene-d5         75.4         40.1-121         %REC         238646         1         02/27/2017 18:25         YH	3,4-Methylphenol	BRL	10		ug/L	238646	1	02/27/2017 18:25	YH
Surr: 2-Fluorobiphenyl       72.9       46-124       %REC       238646       1       02/27/2017 18:25       YH         Surr: 2-Fluorophenol       34.8       25.3-120       %REC       238646       1       02/27/2017 18:25       YH         Surr: 4-Terphenyl-d14       80.6       45.1-133       %REC       238646       1       02/27/2017 18:25       YH         Surr: Nitrobenzene-d5       75.4       40.1-121       %REC       238646       1       02/27/2017 18:25       YH	Phenol	BRL	10		ug/L	238646	1	02/27/2017 18:25	YH
Surr: 2-Fluorophenol       34.8       25.3-120       %REC       238646       1       02/27/2017 18:25       YH         Surr: 4-Terphenyl-d14       80.6       45.1-133       %REC       238646       1       02/27/2017 18:25       YH         Surr: Nitrobenzene-d5       75.4       40.1-121       %REC       238646       1       02/27/2017 18:25       YH	Surr: 2,4,6-Tribromophenol	95.3	50-142		%REC	238646	1	02/27/2017 18:25	YH
Surr: 4-Terphenyl-d14       80.6       45.1-133       %REC       238646       1       02/27/2017 18:25       YH         Surr: Nitrobenzene-d5       75.4       40.1-121       %REC       238646       1       02/27/2017 18:25       YH	Surr: 2-Fluorobiphenyl	72.9	46-124		%REC	238646	1	02/27/2017 18:25	YH
Surr: Nitrobenzene-d5 75.4 40.1-121 %REC 238646 1 02/27/2017 18:25 YH	Surr: 2-Fluorophenol	34.8	25.3-120		%REC	238646	1	02/27/2017 18:25	YH
		80.6	45.1-133		%REC	238646	1	02/27/2017 18:25	YH
Surr: Phenol-d5 20.8 16.3-120 %REC 238646 1 02/27/2017 18:25 YH	Surr: Nitrobenzene-d5	75.4	40.1-121		%REC	238646	1	02/27/2017 18:25	YH
	Surr: Phenol-d5	20.8	16.3-120		%REC	238646	1	02/27/2017 18:25	YH

Qualifiers:

BRL Below reporting limit

Narr See case narrative

NC Not confirmed

< Less than Result value

<sup>\*</sup> Value exceeds maximum contaminant level

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

**Client Sample ID:** MW-301D-20170221-01 **Client: ERM-Southeast Collection Date:** 2/21/2017 4:35:00 PM Project Name: AGLC Macon Lab ID:

Date:

3-Mar-17

1702K47-007 Matrix: Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS S	SW8260B			(SW	(5030B)			
Benzene	9.3	5.0		ug/L	238828	1	03/01/2017 01:59	NP
Carbon disulfide	BRL	5.0		ug/L	238828	1	03/01/2017 01:59	NP
Ethylbenzene	BRL	5.0		ug/L	238828	1	03/01/2017 01:59	NP
Toluene	BRL	5.0		ug/L	238828	1	03/01/2017 01:59	NP
Xylenes, Total	BRL	5.0		ug/L	238828	1	03/01/2017 01:59	NP
Surr: 4-Bromofluorobenzene	96.2	66.1-129		%REC	238828	1	03/01/2017 01:59	NP
Surr: Dibromofluoromethane	96.2	83.6-123		%REC	238828	1	03/01/2017 01:59	NP
Surr: Toluene-d8	92.9	81.8-118		%REC	238828	1	03/01/2017 01:59	NP
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	3510C)			
Naphthalene	430	50		ug/L	238651	100	03/01/2017 17:03	YH
Acenaphthylene	BRL	1.0		ug/L	238651	1	02/28/2017 17:46	YH
Acenaphthene	0.75	0.50		ug/L	238651	1	02/28/2017 17:46	YH
Fluorene	3.8	0.10		ug/L	238651	1	02/28/2017 17:46	YH
Phenanthrene	1.3	0.050		ug/L	238651	1	02/28/2017 17:46	YH
Anthracene	0.25	0.050		ug/L	238651	1	02/28/2017 17:46	YH
Fluoranthene	0.16	0.10		ug/L	238651	1	02/28/2017 17:46	YH
Pyrene	0.11	0.050		ug/L	238651	1	02/28/2017 17:46	YH
Benz(a)anthracene	BRL	0.050		ug/L	238651	1	02/28/2017 17:46	YH
Chrysene	BRL	0.050		ug/L	238651	1	02/28/2017 17:46	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 17:46	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238651	1	02/28/2017 17:46	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 17:46	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 17:46	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238651	1	02/28/2017 17:46	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238651	1	02/28/2017 17:46	YH
Surr: 4-Terphenyl-d14	114	58.5-125		%REC	238651	1	02/28/2017 17:46	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238646	1	02/27/2017 19:18	YH
2-Methylphenol	BRL	10		ug/L	238646	1	02/27/2017 19:18	YH
3,4-Methylphenol	BRL	10		ug/L	238646	1	02/27/2017 19:18	YH
Phenol	BRL	10		ug/L	238646	1	02/27/2017 19:18	YH
Surr: 2,4,6-Tribromophenol	92.6	50-142		%REC	238646	1	02/27/2017 19:18	YH
Surr: 2-Fluorobiphenyl	70.3	46-124		%REC	238646	1	02/27/2017 19:18	YH
Surr: 2-Fluorophenol	50.7	25.3-120		%REC	238646	1	02/27/2017 19:18	YH
Surr: 4-Terphenyl-d14	80.4	45.1-133		%REC	238646	1	02/27/2017 19:18	YH
Surr: Nitrobenzene-d5	74.2	40.1-121		%REC	238646	1	02/27/2017 19:18	YH
Surr: Phenol-d5	36.9	16.3-120		%REC	238646	1	02/27/2017 19:18	YH

Qualifiers:

BRL Below reporting limit

Value exceeds maximum contaminant level

Н Holding times for preparation or analysis exceeded

Analyte not NELAC certified

Analyte detected in the associated method blank

Greater than Result value

E Estimated (value above quantitation range)

Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

**Client Sample ID:** MW-109-20170222-01 **Client: ERM-Southeast Collection Date:** 2/22/2017 10:40:00 AM Project Name: AGLC Macon Lab ID:

Date:

3-Mar-17

1702K47-008 Matrix: Groundwater

Surray   S	Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
Carbon disulfide	Volatile Organic Compounds by GC/MS S	W8260B			(SW	/5030B)			
Ethylbenzene	Benzene	BRL	5.0		ug/L	238828	1	03/01/2017 02:25	NP
Toluene BRL 5.0 ug/L 238828 1 03/01/2017 02:25 Xylenes, Total BRL 5.0 ug/L 238828 1 03/01/2017 02:25 Surr: 4-Bromofluorobenzene 95.6 66.1-129 %REC 238828 1 03/01/2017 02:25 Surr: Dibromofluoromethane 96.4 83.6-123 %REC 238828 1 03/01/2017 02:25 Surr: Dibromofluoromethane 96.4 83.6-123 %REC 238828 1 03/01/2017 02:25 Surr: Toluene-d8 93 81.8-118 %REC 238828 1 03/01/2017 02:25 SIM Polynuclear Aromatic Hydrocarbons SW8270D	Carbon disulfide	BRL	5.0		ug/L	238828	1	03/01/2017 02:25	NP
Toluene	Ethylbenzene	BRL	5.0		ug/L	238828	1	03/01/2017 02:25	NP
Surr: 4-Bromofluorobenzene   95.6   66.1-129   %REC   238828   1   03/01/2017 02.25	-	BRL	5.0		ug/L	238828	1	03/01/2017 02:25	NP
Surr: 4-Bromofluorobenzene         95.6         66.1-129         %REC         238828         1         03/01/2017 02:25           Surr: Dibromofluoromethane         96.4         83.6-123         %REC         238828         1         03/01/2017 02:25           SIM Polynuclear Aromatic Hydrocarbon         SW8270D         (SW3510C)           Naphthalene         BRL         0.50         ug/L         238651         1         02/28/2017 18:10           Acenaphthylene         BRL         1.0         ug/L         238651         1         02/28/2017 18:10           Acenaphthylene         BRL         0.50         ug/L         238651         1         02/28/2017 18:10           Acenaphthene         BRL         0.50         ug/L         238651         1         02/28/2017 18:10           Fluorene         0.17         0.10         ug/L         238651         1         02/28/2017 18:10           Phenanthrene         0.10         0.050         ug/L         238651         1         02/28/2017 18:10           Fluoranthene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Pyrene         BRL         0.10         ug/L         238651         1	Xylenes, Total	BRL	5.0		ug/L	238828	1	03/01/2017 02:25	NP
Surr: Toluene-d8   93   81.8-118   %REC   238828   1   03/01/2017 02:25	-	95.6	66.1-129		%REC	238828	1	03/01/2017 02:25	NP
SIM Polynuclear Aromatic Hydrocarbons   SW8270D   SW82510C   SW3510C	Surr: Dibromofluoromethane	96.4	83.6-123		%REC	238828	1	03/01/2017 02:25	NP
Naphthalene	Surr: Toluene-d8	93	81.8-118		%REC	238828	1	03/01/2017 02:25	NP
Acenaphthylene         BRL         1.0         ug/L         238651         1         02/28/2017 18:10           Acenaphthene         BRL         0.50         ug/L         238651         1         02/28/2017 18:10           Fluorene         0.17         0.10         ug/L         238651         1         02/28/2017 18:10           Phenanthrene         0.10         0.050         ug/L         238651         1         02/28/2017 18:10           Anthracene         0.099         0.050         ug/L         238651         1         02/28/2017 18:10           Pluoranthene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Benza(a)anthracene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Chrysene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Benzo(b)fluoranthene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Benzo(a)pyrene         BRL         0.050         ug/L         238651	SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Acenaphthylene         BRL         1.0         ug/L         238651         1         02/28/2017 18:10           Acenaphthene         BRL         0.50         ug/L         238651         1         02/28/2017 18:10           Fluorene         0.17         0.10         ug/L         238651         1         02/28/2017 18:10           Phenanthrene         0.10         0.050         ug/L         238651         1         02/28/2017 18:10           Anthracene         0.099         0.050         ug/L         238651         1         02/28/2017 18:10           Fluoranthene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Benz(a)anthracene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Chrysene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Benzo(b)fluoranthene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Benzo(b)fluoranthene         BRL         0.050         ug/L	Naphthalene	BRL	0.50		ug/L	238651	1	02/28/2017 18:10	YH
Acenaphthene         BRL         0.50         ug/L         238651         1         02/28/2017 18:10           Fluorene         0.17         0.10         ug/L         238651         1         02/28/2017 18:10           Phenanthrene         0.10         0.050         ug/L         238651         1         02/28/2017 18:10           Anthracene         0.099         0.050         ug/L         238651         1         02/28/2017 18:10           Pluoranthene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Benzo(a)anthracene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Chrysene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Benzo(b)fluoranthene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Benzo(s)fluoranthene         BRL         0.050         ug/L         238651	-	BRL	1.0		ug/L	238651	1	02/28/2017 18:10	YH
Fluorene		BRL	0.50		ug/L	238651	1	02/28/2017 18:10	YH
Anthracene 0.099 0.050 ug/L 238651 1 02/28/2017 18:10   Fluoranthene BRL 0.10 ug/L 238651 1 02/28/2017 18:10   Pyrene BRL 0.050 ug/L 238651 1 02/28/2017 18:10   Benz(a)anthracene BRL 0.050 ug/L 238651 1 02/28/2017 18:10   Benz(a)anthracene BRL 0.050 ug/L 238651 1 02/28/2017 18:10   Chrysene BRL 0.050 ug/L 238651 1 02/28/2017 18:10   Benzo(b)fluoranthene BRL 0.050 ug/L 238651 1 02/28/2017 18:10   Benzo(b)fluoranthene BRL 0.050 ug/L 238651 1 02/28/2017 18:10   Benzo(a)pyrene BRL 0.050 ug/L 238651 1 02/28/2017 18:10   Benzo(a)pyrene BRL 0.050 ug/L 238651 1 02/28/2017 18:10   Benzo(a)pyrene BRL 0.050 ug/L 238651 1 02/28/2017 18:10   Indeno(1,2,3-cd)pyrene BRL 0.050 ug/L 238651 1 02/28/2017 18:10   Benzo(g,h,i)perylene BRL 0.050 ug/L 238651 1 02/28/2017 18:10   Dibenz(a,h)anthracene BRL 0.10 ug/L 238651 1 02/28/2017 18:10   Benzo(g,h,i)perylene BRL 0.10 ug/L 238651 1 02/28/2017 18:10   Surr: 4-Terphenyl-d14 96.6 58.5-125 %REC 238651 1 02/28/2017 18:10   Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)  2,4-Dimethylphenol BRL 10 ug/L 238646 1 02/27/2017 19:21   2,4-Dimethylphenol BRL 10 ug/L 238646 1 02/27/2017 19:21   3,4-Methylphenol BRL 10 ug/L 238646 1 02/27/2017 19:21   Surr: 2-Fluorobiphenol 85.9 50-142 %REC 238646 1 02/27/2017 19:21   Surr: 2-Fluorobiphenol 53.2 25.3-120 %REC 238646 1 02/27/2017 19:21   Surr: 2-Fluorobiphenol 53.2 25.3-120 %REC 238646 1 02/27/2017 19:21   Surr: 2-Fluorobiphenol 53.2 25.3-120 %REC 238646 1 02/27/2017 19:21   Surr: 2-Fluorobiphenol 53.2 25.3-120 %REC 238646 1 02/27/2017 19:21   Surr: 2-Fluorobiphenol 53.2 25.3-120 %REC 238646 1 02/27/2017 19:21   Surr: 2-Fluorobiphenol 53.2 25.3-120 %REC 238646 1 02/27/2017 19:21   Surr: 2-Fluorobiphenol 53.2 25.3-120 %REC 238646 1 02/27/2017 19:21   Surr: 4-Terphenyl-d14 90.4 45.1-133 %REC 238646 1 02/27/2017 19:21   Surr: Nitrobenzene-d5 72.6 40.1-121 %REC 238646 1 02/27/2017 19:21	-	0.17	0.10		ug/L	238651	1	02/28/2017 18:10	YH
Fluoranthene   BRL   0.10   ug/L   238651   1   02/28/2017 18:10	Phenanthrene	0.10	0.050		ug/L	238651	1	02/28/2017 18:10	YH
Pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Benz(a)anthracene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Chrysene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Benzo(b)fluoranthene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Surr: 4-Terphenyl-d14         96.6         58.5-125         %REC         238651         1         02/28/2017 18:10           Semivolatile Org. Comp. by GC/MS         SW8270D </td <td>Anthracene</td> <td>0.099</td> <td>0.050</td> <td></td> <td>ug/L</td> <td>238651</td> <td>1</td> <td>02/28/2017 18:10</td> <td>YH</td>	Anthracene	0.099	0.050		ug/L	238651	1	02/28/2017 18:10	YH
Benz(a)anthracene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Chrysene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Benzo(b)fluoranthene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Surr: 4-Terphenyl-d14         96.6         58.5-125         %REC         238651         1         02/28/2017 18:10           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)           2,4-Dimethylphenol         BRL         10	Fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 18:10	YH
Benz(a)anthracene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Chrysene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Benzo(b)fluoranthene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Surr: 4-Terphenyl-d14         96.6         58.5-125         %REC         238651         1         02/28/2017 18:10           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)           2,4-Dimethylphenol         BRL         10	Pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 18:10	YH
Chrysene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Benzo(b)fluoranthene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Surr: 4-Terphenyl-d14         96.6         58.5-125         %REC         238651         1         02/28/2017 18:10           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           2-Methylphenol         BRL         10	-	BRL	0.050		ug/L	238651	1	02/28/2017 18:10	YH
Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Surr: 4-Terphenyl-d14         96.6         58.5-125         %REC         238651         1         02/28/2017 18:10           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           2-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           3,4-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           Surr: 2,4,6-Tribromophenol         85.9         50-	Chrysene	BRL	0.050		ug/L	238651	1	02/28/2017 18:10	YH
Benzo(a)pyrene BRL 0.050 ug/L 238651 1 02/28/2017 18:10 Indeno(1,2,3-cd)pyrene BRL 0.050 ug/L 238651 1 02/28/2017 18:10 Dibenz(a,h)anthracene BRL 0.10 ug/L 238651 1 02/28/2017 18:10 Benzo(g,h,i)perylene BRL 0.10 ug/L 238651 1 02/28/2017 18:10 Surr: 4-Terphenyl-d14 96.6 58.5-125 %REC 238651 1 02/28/2017 18:10 Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)  2,4-Dimethylphenol BRL 10 ug/L 238646 1 02/27/2017 19:21 2-Methylphenol BRL 10 ug/L 238646 1 02/27/2017 19:21 3,4-Methylphenol BRL 10 ug/L 238646 1 02/27/2017 19:21 Phenol BRL 10 ug/L 238646 1 02/27/2017 19:21 Surr: 2,4,6-Tribromophenol 85.9 50-142 %REC 238646 1 02/27/2017 19:21 Surr: 2-Fluorobiphenyl 67.9 46-124 %REC 238646 1 02/27/2017 19:21 Surr: 2-Fluorophenol 53.2 25.3-120 %REC 238646 1 02/27/2017 19:21 Surr: 4-Terphenyl-d14 90.4 45.1-133 %REC 238646 1 02/27/2017 19:21 Surr: Nitrobenzene-d5 72.6 40.1-121 %REC 238646 1 02/27/2017 19:21	Benzo(b)fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 18:10	YH
Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 18:10           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Surr: 4-Terphenyl-d14         96.6         58.5-125         %REC         238651         1         02/28/2017 18:10           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)         Ug/L         238646         1         02/27/2017 19:21           2,4-Dimethylphenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           2-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           3,4-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           Surr: 2,4,6-Tribromophenol         85.9         50-142         %REC         238646         1         02/27/2017 19:21	Benzo(k)fluoranthene	BRL	0.050		ug/L	238651	1	02/28/2017 18:10	YH
Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1         02/28/2017 18:10           Surr: 4-Terphenyl-d14         96.6         58.5-125         %REC         238651         1         02/28/2017 18:10           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           2-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           3,4-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           Phenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           Surr: 2,4,6-Tribromophenol         85.9         50-142         %REC         238646         1         02/27/2017 19:21           Surr: 2-Fluorobiphenyl         67.9         46-124         %REC         238646         1         02/27/2017 19:21           Surr: 4-Terphenyl-d14         90.4         45.1-133         %REC	Benzo(a)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 18:10	YH
Benzo(g,h,i)perylene BRL 0.10 ug/L 238651 1 02/28/2017 18:10 Surr: 4-Terphenyl-d14 96.6 58.5-125 %REC 238651 1 02/28/2017 18:10 Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)  2,4-Dimethylphenol BRL 10 ug/L 238646 1 02/27/2017 19:21 2-Methylphenol BRL 10 ug/L 238646 1 02/27/2017 19:21 3,4-Methylphenol BRL 10 ug/L 238646 1 02/27/2017 19:21 Phenol BRL 10 ug/L 238646 1 02/27/2017 19:21 Surr: 2,4,6-Tribromophenol 85.9 50-142 %REC 238646 1 02/27/2017 19:21 Surr: 2-Fluorobiphenyl 67.9 46-124 %REC 238646 1 02/27/2017 19:21 Surr: 2-Fluorophenol 53.2 25.3-120 %REC 238646 1 02/27/2017 19:21 Surr: 4-Terphenyl-d14 90.4 45.1-133 %REC 238646 1 02/27/2017 19:21 Surr: Nitrobenzene-d5 72.6 40.1-121 %REC 238646 1 02/27/2017 19:21	Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 18:10	YH
Surr: 4-Terphenyl-d14         96.6         58.5-125         %REC         238651         1         02/28/2017 18:10           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           2-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           3,4-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           Phenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           Surr: 2,4,6-Tribromophenol         85.9         50-142         %REC         238646         1         02/27/2017 19:21           Surr: 2-Fluorobiphenyl         67.9         46-124         %REC         238646         1         02/27/2017 19:21           Surr: 2-Fluorophenol         53.2         25.3-120         %REC         238646         1         02/27/2017 19:21           Surr: 4-Terphenyl-d14         90.4         45.1-133         %REC         238646         1         02/27/2017 19:21           Surr: Nitrobenzene-d5         72.6         40.1-121         %REC         23864	Dibenz(a,h)anthracene	BRL	0.10		ug/L	238651	1	02/28/2017 18:10	YH
Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           2-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           3,4-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           Phenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           Surr: 2,4,6-Tribromophenol         85.9         50-142         %REC         238646         1         02/27/2017 19:21           Surr: 2-Fluorobiphenyl         67.9         46-124         %REC         238646         1         02/27/2017 19:21           Surr: 2-Fluorophenol         53.2         25.3-120         %REC         238646         1         02/27/2017 19:21           Surr: 4-Terphenyl-d14         90.4         45.1-133         %REC         238646         1         02/27/2017 19:21           Surr: Nitrobenzene-d5         72.6         40.1-121         %REC         238646         1         02/27/2017 19:21	Benzo(g,h,i)perylene	BRL	0.10		ug/L	238651	1	02/28/2017 18:10	YH
2,4-Dimethylphenol       BRL       10       ug/L       238646       1       02/27/2017 19:21         2-Methylphenol       BRL       10       ug/L       238646       1       02/27/2017 19:21         3,4-Methylphenol       BRL       10       ug/L       238646       1       02/27/2017 19:21         Phenol       BRL       10       ug/L       238646       1       02/27/2017 19:21         Surr: 2,4,6-Tribromophenol       85.9       50-142       %REC       238646       1       02/27/2017 19:21         Surr: 2-Fluorobiphenyl       67.9       46-124       %REC       238646       1       02/27/2017 19:21         Surr: 2-Fluorophenol       53.2       25.3-120       %REC       238646       1       02/27/2017 19:21         Surr: 4-Terphenyl-d14       90.4       45.1-133       %REC       238646       1       02/27/2017 19:21         Surr: Nitrobenzene-d5       72.6       40.1-121       %REC       238646       1       02/27/2017 19:21	Surr: 4-Terphenyl-d14	96.6	58.5-125		%REC	238651	1	02/28/2017 18:10	YH
2-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           3,4-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           Phenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           Surr: 2,4,6-Tribromophenol         85.9         50-142         %REC         238646         1         02/27/2017 19:21           Surr: 2-Fluorobiphenyl         67.9         46-124         %REC         238646         1         02/27/2017 19:21           Surr: 2-Fluorophenol         53.2         25.3-120         %REC         238646         1         02/27/2017 19:21           Surr: 4-Terphenyl-d14         90.4         45.1-133         %REC         238646         1         02/27/2017 19:21           Surr: Nitrobenzene-d5         72.6         40.1-121         %REC         238646         1         02/27/2017 19:21	Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           3,4-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           Phenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           Surr: 2,4,6-Tribromophenol         85.9         50-142         %REC         238646         1         02/27/2017 19:21           Surr: 2-Fluorobiphenyl         67.9         46-124         %REC         238646         1         02/27/2017 19:21           Surr: 2-Fluorophenol         53.2         25.3-120         %REC         238646         1         02/27/2017 19:21           Surr: 4-Terphenyl-d14         90.4         45.1-133         %REC         238646         1         02/27/2017 19:21           Surr: Nitrobenzene-d5         72.6         40.1-121         %REC         238646         1         02/27/2017 19:21	2,4-Dimethylphenol	BRL	10		ug/L	238646	1	02/27/2017 19:21	YH
3,4-Methylphenol       BRL       10       ug/L       238646       1       02/27/2017 19:21         Phenol       BRL       10       ug/L       238646       1       02/27/2017 19:21         Surr: 2,4,6-Tribromophenol       85.9       50-142       %REC       238646       1       02/27/2017 19:21         Surr: 2-Fluorobiphenyl       67.9       46-124       %REC       238646       1       02/27/2017 19:21         Surr: 2-Fluorophenol       53.2       25.3-120       %REC       238646       1       02/27/2017 19:21         Surr: 4-Terphenyl-d14       90.4       45.1-133       %REC       238646       1       02/27/2017 19:21         Surr: Nitrobenzene-d5       72.6       40.1-121       %REC       238646       1       02/27/2017 19:21		BRL	10		ug/L	238646	1	02/27/2017 19:21	YH
Phenol         BRL         10         ug/L         238646         1         02/27/2017 19:21           Surr: 2,4,6-Tribromophenol         85.9         50-142         %REC         238646         1         02/27/2017 19:21           Surr: 2-Fluorobiphenyl         67.9         46-124         %REC         238646         1         02/27/2017 19:21           Surr: 2-Fluorophenol         53.2         25.3-120         %REC         238646         1         02/27/2017 19:21           Surr: 4-Terphenyl-d14         90.4         45.1-133         %REC         238646         1         02/27/2017 19:21           Surr: Nitrobenzene-d5         72.6         40.1-121         %REC         238646         1         02/27/2017 19:21		BRL	10		ug/L	238646	1	02/27/2017 19:21	YH
Surr: 2-Fluorobiphenyl       67.9       46-124       %REC       238646       1       02/27/2017 19:21         Surr: 2-Fluorophenol       53.2       25.3-120       %REC       238646       1       02/27/2017 19:21         Surr: 4-Terphenyl-d14       90.4       45.1-133       %REC       238646       1       02/27/2017 19:21         Surr: Nitrobenzene-d5       72.6       40.1-121       %REC       238646       1       02/27/2017 19:21		BRL	10		ug/L	238646	1	02/27/2017 19:21	YH
Surr: 2-Fluorobiphenyl       67.9       46-124       %REC       238646       1       02/27/2017 19:21         Surr: 2-Fluorophenol       53.2       25.3-120       %REC       238646       1       02/27/2017 19:21         Surr: 4-Terphenyl-d14       90.4       45.1-133       %REC       238646       1       02/27/2017 19:21         Surr: Nitrobenzene-d5       72.6       40.1-121       %REC       238646       1       02/27/2017 19:21	Surr: 2,4,6-Tribromophenol	85.9	50-142		%REC	238646	1	02/27/2017 19:21	YH
Surr: 2-Fluorophenol       53.2       25.3-120       %REC       238646       1       02/27/2017 19:21         Surr: 4-Terphenyl-d14       90.4       45.1-133       %REC       238646       1       02/27/2017 19:21         Surr: Nitrobenzene-d5       72.6       40.1-121       %REC       238646       1       02/27/2017 19:21	* *				%REC		1		YH
Surr: 4-Terphenyl-d14       90.4       45.1-133       %REC       238646       1       02/27/2017 19:21         Surr: Nitrobenzene-d5       72.6       40.1-121       %REC       238646       1       02/27/2017 19:21	* *				%REC		1		YH
Surr: Nitrobenzene-d5 72.6 40.1-121 %REC 238646 1 02/27/2017 19:21					%REC		1		YH
	* -				%REC				YH
Suii. Filchor-u.5 33.4 10.3-120 /order 238040 1 02/2//2017 19.21	Surr: Phenol-d5	35.4	16.3-120		%REC	238646	1	02/27/2017 19:21	YH

Qualifiers:

Value exceeds maximum contaminant level

BRL Below reporting limit

Н Holding times for preparation or analysis exceeded

Analyte not NELAC certified

Analyte detected in the associated method blank

Greater than Result value

E Estimated (value above quantitation range)

Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

**Client Sample ID: Client: ERM-Southeast** MW-205-20170222-01 **Collection Date:** 2/22/2017 12:25:00 PM Project Name: AGLC Macon Lab ID:

Date:

3-Mar-17

1702K47-009 Matrix: Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
Volatile Organic Compounds by GC/MS	SW8260B			(SW	/5030B)			
Benzene	35	5.0		ug/L	238828	1	03/01/2017 02:51	NP
Carbon disulfide	BRL	5.0		ug/L	238828	1	03/01/2017 02:51	NP
Ethylbenzene	50	5.0		ug/L	238828	1	03/01/2017 02:51	NP
Toluene	5.5	5.0		ug/L	238828	1	03/01/2017 02:51	NP
Xylenes, Total	36	5.0		ug/L	238828	1	03/01/2017 02:51	NP
Surr: 4-Bromofluorobenzene	98	66.1-129		%REC	238828	1	03/01/2017 02:51	NP
Surr: Dibromofluoromethane	97.8	83.6-123		%REC	238828	1	03/01/2017 02:51	NP
Surr: Toluene-d8	93.6	81.8-118		%REC	238828	1	03/01/2017 02:51	NP
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	46	5.0		ug/L	238651	100	03/01/2017 17:31	YH
Acenaphthylene	3.0	1.0		ug/L	238651	1	02/28/2017 18:36	YH
Acenaphthene	25	5.0		ug/L	238651	100	03/01/2017 17:31	YH
Fluorene	10	10		ug/L	238651	100	03/01/2017 17:31	YH
Phenanthrene	5.9	0.050		ug/L	238651	1	02/28/2017 18:36	YH
Anthracene	1.3	0.050		ug/L	238651	1	02/28/2017 18:36	YH
Fluoranthene	1.7	0.10		ug/L	238651	1	02/28/2017 18:36	YH
Pyrene	1.8	0.050		ug/L	238651	1	02/28/2017 18:36	YH
Benz(a)anthracene	0.11	0.050		ug/L	238651	1	02/28/2017 18:36	YH
Chrysene	0.12	0.050		ug/L	238651	1	02/28/2017 18:36	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 18:36	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238651	1	02/28/2017 18:36	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 18:36	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 18:36	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238651	1	02/28/2017 18:36	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238651	1	02/28/2017 18:36	YH
Surr: 4-Terphenyl-d14	109	58.5-125		%REC	238651	1	02/28/2017 18:36	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238646	1	02/27/2017 19:47	YH
2-Methylphenol	BRL	10		ug/L	238646	1	02/27/2017 19:47	YH
3,4-Methylphenol	BRL	10		ug/L	238646	1	02/27/2017 19:47	YH
Phenol	BRL	10		ug/L	238646	1	02/27/2017 19:47	YH
Surr: 2,4,6-Tribromophenol	83.3	50-142		%REC	238646	1	02/27/2017 19:47	YH
Surr: 2-Fluorobiphenyl	65.8	46-124		%REC	238646	1	02/27/2017 19:47	YH
Surr: 2-Fluorophenol	42.8	25.3-120		%REC	238646	1	02/27/2017 19:47	YH
Surr: 4-Terphenyl-d14	86	45.1-133		%REC	238646	1	02/27/2017 19:47	YH
Surr: Nitrobenzene-d5	66.5	40.1-121		%REC	238646	1	02/27/2017 19:47	YH
Surr: Phenol-d5	29.4	16.3-120		%REC	238646	1	02/27/2017 19:47	YH

Qualifiers:

Value exceeds maximum contaminant level

BRL Below reporting limit

Н Holding times for preparation or analysis exceeded

Analyte not NELAC certified

Analyte detected in the associated method blank

Greater than Result value

E Estimated (value above quantitation range)

Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

 Client:
 ERM-Southeast
 Client Sample ID:
 MW-108-20170222-01

 Project Name:
 AGLC Macon
 Collection Date:
 2/22/2017 10:55:00 AM

 Lab ID:
 1702K47-010
 Matrix:
 Groundwater

Date:

3-Mar-17

Reporting Dilution Result Qual Units BatchID Analyses Date Analyzed Analyst Limit Factor Volatile Organic Compounds by GC/MS SW8260B (SW5030B) BRL ug/L NP 5.0 238828 03/01/2017 03:17 Benzene ug/L Carbon disulfide BRL 5.0 238828 03/01/2017 03:17 NP ug/L Ethylbenzene BRL 5.0 238828 03/01/2017 03:17 NP Toluene BRL 5.0 ug/L 238828 1 03/01/2017 03:17 NP ug/L Xylenes, Total **BRL** 5.0 238828 03/01/2017 03:17 NP 95.4 66.1-129 %REC 238828 03/01/2017 03:17 NP Surr: 4-Bromofluorobenzene %REC 96.7 83.6-123 238828 03/01/2017 03:17 NP Surr: Dibromofluoromethane %REC 93.5 81.8-118 238828 03/01/2017 03:17 NP Surr: Toluene-d8 **SIM Polynuclear Aromatic Hydrocarbons** SW8270D (SW3510C) Naphthalene BRL 0.50 ug/L 238651 02/28/2017 19:00 YH ug/L BRL 02/28/2017 19:00 YΗ Acenaphthylene 1.0 238651 BRL 0.50 ug/L 238651 02/28/2017 19:00 YH Acenaphthene 1 ug/L Fluorene BRL 0.10 238651 02/28/2017 19:00 YH BRL 0.050 ug/L 238651 02/28/2017 19:00 YH Phenanthrene ug/L Anthracene 0.29 0.050 238651 02/28/2017 19:00 YH BRL 0.10 ug/L 238651 02/28/2017 19:00 YH Fluoranthene 0.27 0.050 ug/L 238651 02/28/2017 19:00 YH Pyrene ug/L BRL 0.050238651 1 02/28/2017 19:00 YΗ Benz(a)anthracene BRL 0.050 ug/L 238651 02/28/2017 19:00 YH Chrysene ug/L YH **BRL** 0.10 238651 02/28/2017 19:00 Benzo(b)fluoranthene Benzo(k)fluoranthene BRL 0.050 ug/L 238651 02/28/2017 19:00 YH ug/L BRL 238651 Benzo(a)pyrene 0.05002/28/2017 19:00 YH ug/L Indeno(1,2,3-cd)pyrene BRL 0.050 238651 02/28/2017 19:00 YH ug/L Dibenz(a,h)anthracene BRL 0.10 238651 02/28/2017 19:00 YH BRL ug/L 238651 YH 0.10 1 02/28/2017 19:00 Benzo(g,h,i)perylene %REC Surr: 4-Terphenyl-d14 88.2 58.5-125 238651 02/28/2017 19:00 YH Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C) 238646 BRL 10 ug/L 02/27/2017 20:12 YH 2,4-Dimethylphenol BRL 10 ug/L 238646 02/27/2017 20:12 YH 2-Methylphenol ug/L **BRL** 10 238646 02/27/2017 20:12 YH 3,4-Methylphenol Phenol BRL 10 ug/L 238646 1 02/27/2017 20:12 YH %REC Surr: 2,4,6-Tribromophenol 87.2 50-142 238646 1 02/27/2017 20:12 YΗ 67.8 46-124 %REC 238646 02/27/2017 20:12 YH Surr: 2-Fluorobiphenyl %REC Surr: 2-Fluorophenol 50.4 25.3-120 238646 02/27/2017 20:12 YH %REC 02/27/2017 20:12 45.1-133 238646 YH Surr: 4-Terphenyl-d14 86.1 %REC Surr: Nitrobenzene-d5 68.1 40.1-121 238646 02/27/2017 20:12 YH %REC Surr: Phenol-d5 34 16.3-120 238646 02/27/2017 20:12 YH

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

**Client Sample ID: Client: ERM-Southeast** AMW-11-20170222-01 **Collection Date:** 2/22/2017 12:35:00 PM Project Name: AGLC Macon Lab ID:

Date:

3-Mar-17

1702K47-011 Matrix: Groundwater

Carbon disulfide         BRL         5.0         ug/L         238828         1         03/L           Ethylbenzene         BRL         5.0         ug/L         238828         1         03/L           Toluene         BRL         5.0         ug/L         238828         1         03/L           Xylenes, Total         BRL         5.0         ug/L         238828         1         03/L           Surr: 4-Bromofluorobenzene         94.4         66.1-129         %REC         238828         1         03/L           Surr: Dibromofluoromethane         97.8         83.6-123         %REC         238828         1         03/L           Surr: Toluene-d8         92.6         81.8-118         %REC         238828         1         03/L           Surr: Toluene-d8         92.6         81.8-118         %REC         238828         1         03/L           Surr: Toluene-d8         92.6         81.8-118         %REC         238828         1         03/L           SURD         William         0.0         0.50         ug/L         238651         1         02/L           Acenaphthene         BRL         0.50         ug/L         238651         1         02/L </th <th>Date Analyzed</th> <th>Analyst</th>	Date Analyzed	Analyst
Carbon disulfide         BRL         5.0         ug/L         238828         1         03/L           Ethylbenzene         BRL         5.0         ug/L         238828         1         03/L           Toluene         BRL         5.0         ug/L         238828         1         03/L           Xylenes, Total         BRL         5.0         ug/L         238828         1         03/L           Surr: A-Bromofluorobenzene         94.4         66.1-129         %REC         238828         1         03/L           Surr: Dibromofluoromethane         97.8         83.6-123         %REC         238828         1         03/L           Surr: Toluene-d8         92.6         81.8-118         %REC         238828         1         03/L           Surr: Toluene-d8         BRL         0.50         ug/L         238651         1         02/L		
Ethylbenzene	/01/2017 03:43	NP
Toluene	/01/2017 03:43	NP
Toluene	/01/2017 03:43	NP
Surr: 4-Bromofluorobenzene   94.4   66.1-129   %REC   238828   1   03/6   Surr: Dibromofluoromethane   97.8   83.6-123   %REC   238828   1   03/6   Surr: Toluene-d8   92.6   81.8-118   %REC   238828   1   03/6   Surr: Toluene-d8   81.8-118   %REC   238828   1   03/6   Surrival Surriv	/01/2017 03:43	NP
Surr: Dibromofluoromethane         97.8         83.6-123         %REC         238828         1         03/6           Surr: Toluene-d8         92.6         81.8-118         %REC         238828         1         03/6           SIM Polynuclear Aromatic Hydrocarbons         SW8270D         (SW3510C)           Naphthalene         BRL         0.50         ug/L         238651         1         02/7           Acenaphthylene         BRL         1.0         ug/L         238651         1         02/7           Acenaphthene         BRL         0.50         ug/L         238651         1         02/7           Acenaphthene         BRL         0.50         ug/L         238651         1         02/7           Acenaphthene         BRL         0.10         ug/L         238651         1         02/7           Phenanthrene         BRL         0.050         ug/L         238651         1         02/7           Phenanthrene         BRL         0.050         ug/L         238651         1         02/7           Phenanthrene         BRL         0.050         ug/L         238651         1         02/7           Pyrene         BRL<	/01/2017 03:43	NP
Surr: Toluene-d8   92.6   81.8-118   %REC   238828   1   03/d	/01/2017 03:43	NP
Naphthalene	/01/2017 03:43	NP
Naphthalene	/01/2017 03:43	NP
Acenaphthylene BRL 1.0 ug/L 238651 1 02/2 Acenaphthene BRL 0.50 ug/L 238651 1 02/2 Fluorene BRL 0.10 ug/L 238651 1 02/2 Phenanthrene BRL 0.050 ug/L 238651 1 02/2 Anthracene 0.066 0.050 ug/L 238651 1 02/2 Fluoranthene BRL 0.10 ug/L 238651 1 02/2 Fluoranthene BRL 0.10 ug/L 238651 1 02/2 Fluoranthene BRL 0.050 ug/L 238651 1 02/2 Pyrene BRL 0.050 ug/L 238651 1 02/2 Benz(a)anthracene BRL 0.050 ug/L 238651 1 02/2 Benz(a)anthracene BRL 0.050 ug/L 238651 1 02/2 Benz(b)fluoranthene BRL 0.050 ug/L 238651 1 02/2 Benzo(b)fluoranthene BRL 0.050 ug/L 238651 1 02/2 Benzo(k)fluoranthene BRL 0.050 ug/L 238651 1 02/2 Benzo(k)fluoranthene BRL 0.050 ug/L 238651 1 02/2 Benzo(a)pyrene BRL 0.050 ug/L 238651 1 02/2 Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)  Semivolatile Org. Comp. by GC/MS SW8270D  (SW3510C)		
Acenaphthene         BRL         0.50         ug/L         238651         1         02/L           Fluorene         BRL         0.10         ug/L         238651         1         02/L           Phenanthrene         BRL         0.050         ug/L         238651         1         02/L           Anthracene         0.066         0.050         ug/L         238651         1         02/L           Fluoranthene         BRL         0.10         ug/L         238651         1         02/L           Pyrene         BRL         0.050         ug/L         238651         1         02/L           Benz(a)anthracene         BRL         0.050         ug/L         238651         1         02/L           Benz(b)fluoranthene         BRL         0.050         ug/L         238651         1         02/L           Benzo(b)fluoranthene         BRL         0.050         ug/L         238651         1         02/L           Benzo(b)fluoranthene         BRL         0.050         ug/L         238651         1         02/L           Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1         02/L           Benzo(a)pyrene	/28/2017 19:26	YH
Acenaphthene         BRL         0.50         ug/L         238651         1         02/L           Fluorene         BRL         0.10         ug/L         238651         1         02/L           Phenanthrene         BRL         0.050         ug/L         238651         1         02/L           Anthracene         0.066         0.050         ug/L         238651         1         02/L           Fluoranthene         BRL         0.10         ug/L         238651         1         02/L           Pyrene         BRL         0.050         ug/L         238651         1         02/L           Benz(a)anthracene         BRL         0.050         ug/L         238651         1         02/L           Benz(b)fluoranthene         BRL         0.050         ug/L         238651         1         02/L           Benzo(b)fluoranthene         BRL         0.050         ug/L         238651         1         02/L           Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1         02/L           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/L           Indeno(1,2,3-cd)pyrene <td>/28/2017 19:26</td> <td>YH</td>	/28/2017 19:26	YH
Fluorene	/28/2017 19:26	YH
Anthracene 0.066 0.050 ug/L 238651 1 02/2 Fluoranthene BRL 0.10 ug/L 238651 1 02/2 Pyrene BRL 0.050 ug/L 238651 1 02/2 Benz(a)anthracene BRL 0.050 ug/L 238651 1 02/2 Chrysene BRL 0.050 ug/L 238651 1 02/2 Benzo(b)fluoranthene BRL 0.050 ug/L 238651 1 02/2 Benzo(b)fluoranthene BRL 0.050 ug/L 238651 1 02/2 Benzo(k)fluoranthene BRL 0.050 ug/L 238651 1 02/2 Benzo(a)pyrene BRL 0.050 ug/L 238651 1 02/2 Benzo(a)pyrene BRL 0.050 ug/L 238651 1 02/2 Indeno(1,2,3-cd)pyrene BRL 0.050 ug/L 238651 1 02/2 Dibenz(a,h)anthracene BRL 0.050 ug/L 238651 1 02/2 Benzo(g,h,i)perylene BRL 0.10 ug/L 238651 1 02/2 Benzo(g,h,i)perylene BRL 0.10 ug/L 238651 1 02/2 Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)  2,4-Dimethylphenol BRL 10 ug/L 238646 1 02/2 2-Methylphenol BRL 10 ug/L 238646 1 02/2	/28/2017 19:26	YH
Fluoranthene BRL 0.10 ug/L 238651 1 02/2 Pyrene BRL 0.050 ug/L 238651 1 02/2 Benz(a)anthracene BRL 0.050 ug/L 238651 1 02/2 Chrysene BRL 0.050 ug/L 238651 1 02/2 Benzo(b)fluoranthene BRL 0.050 ug/L 238651 1 02/2 Benzo(b)fluoranthene BRL 0.10 ug/L 238651 1 02/2 Benzo(k)fluoranthene BRL 0.050 ug/L 238651 1 02/2 Benzo(a)pyrene BRL 0.050 ug/L 238651 1 02/2 Benzo(a)pyrene BRL 0.050 ug/L 238651 1 02/2 Indeno(1,2,3-cd)pyrene BRL 0.050 ug/L 238651 1 02/2 Dibenz(a,h)anthracene BRL 0.10 ug/L 238651 1 02/2 Benzo(g,h,i)perylene BRL 0.10 ug/L 238651 1 02/2 Benzo(g,h,i)perylene BRL 0.10 ug/L 238651 1 02/2 Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)  2,4-Dimethylphenol BRL 10 ug/L 238646 1 02/2 2-Methylphenol BRL 10 ug/L 238646 1 02/2	/28/2017 19:26	YH
Pyrene         BRL         0.050         ug/L         238651         1         02/Z           Benz(a)anthracene         BRL         0.050         ug/L         238651         1         02/Z           Chrysene         BRL         0.050         ug/L         238651         1         02/Z           Benzo(b)fluoranthene         BRL         0.10         ug/L         238651         1         02/Z           Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1         02/Z           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/Z           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1         02/Z           Benzo(g,h)anthracene         BRL         0.10         ug/L         238651         1         02/Z           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1         02/Z           Surr: 4-Terphenyl-d14         87.2         58.5-125         %REC         238651         1         02/Z           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         Ug/L         238646         1         02/Z <td>/28/2017 19:26</td> <td>YH</td>	/28/2017 19:26	YH
Benz(a)anthracene       BRL       0.050       ug/L       238651       1       02/2         Chrysene       BRL       0.050       ug/L       238651       1       02/2         Benzo(b)fluoranthene       BRL       0.10       ug/L       238651       1       02/2         Benzo(k)fluoranthene       BRL       0.050       ug/L       238651       1       02/2         Benzo(a)pyrene       BRL       0.050       ug/L       238651       1       02/2         Indeno(1,2,3-cd)pyrene       BRL       0.050       ug/L       238651       1       02/2         Dibenz(a,h)anthracene       BRL       0.10       ug/L       238651       1       02/2         Benzo(g,h,i)perylene       BRL       0.10       ug/L       238651       1       02/2         Surr: 4-Terphenyl-d14       87.2       58.5-125       %REC       238651       1       02/2         Semivolatile Org. Comp. by GC/MS       SW8270D       (SW3510C)       (SW3510C)         2,4-Dimethylphenol       BRL       10       ug/L       238646       1       02/2         2-Methylphenol       BRL       10       ug/L       238646       1       02/2	/28/2017 19:26	YH
Benz(a)anthracene         BRL         0.050         ug/L         238651         1         02/Z           Chrysene         BRL         0.050         ug/L         238651         1         02/Z           Benzo(b)fluoranthene         BRL         0.10         ug/L         238651         1         02/Z           Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1         02/Z           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/Z           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1         02/Z           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1         02/Z           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1         02/Z           Surr: 4-Terphenyl-d14         87.2         58.5-125         %REC         238651         1         02/Z           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)         2/Z   2-Methylphenol  BRL 10 ug/L 238646 1 02/Z	/28/2017 19:26	YH
Chrysene         BRL         0.050         ug/L         238651         1         02/Z           Benzo(b)fluoranthene         BRL         0.10         ug/L         238651         1         02/Z           Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1         02/Z           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/Z           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1         02/Z           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1         02/Z           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1         02/Z           Surr: 4-Terphenyl-d14         87.2         58.5-125         %REC         238651         1         02/Z           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)         2,4-Dimethylphenol         BRL         10         ug/L         238646         1         02/Z           2-Methylphenol         BRL         10         ug/L         238646         1         02/Z	/28/2017 19:26	YH
Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1         02/2           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/2           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1         02/2           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1         02/2           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1         02/2           Surr: 4-Terphenyl-d14         87.2         58.5-125         %REC         238651         1         02/2           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)         2,4-Dimethylphenol         BRL         10         ug/L         238646         1         02/2           2-Methylphenol         BRL         10         ug/L         238646         1         02/2	/28/2017 19:26	YH
Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/2           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1         02/2           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1         02/2           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1         02/2           Surr: 4-Terphenyl-d14         87.2         58.5-125         %REC         238651         1         02/2           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)         2,4-Dimethylphenol         BRL         10         ug/L         238646         1         02/2           2-Methylphenol         BRL         10         ug/L         238646         1         02/2	/28/2017 19:26	YH
Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/2           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1         02/2           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1         02/2           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1         02/2           Surr: 4-Terphenyl-d14         87.2         58.5-125         %REC         238651         1         02/2           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)         2,4-Dimethylphenol         BRL         10         ug/L         238646         1         02/2           2-Methylphenol         BRL         10         ug/L         238646         1         02/2	/28/2017 19:26	YH
Dibenz(a,h)anthracene       BRL       0.10       ug/L       238651       1       02/2         Benzo(g,h,i)perylene       BRL       0.10       ug/L       238651       1       02/2         Surr: 4-Terphenyl-d14       87.2       58.5-125       %REC       238651       1       02/2         Semivolatile Org. Comp. by GC/MS       SW8270D       (SW3510C)         2,4-Dimethylphenol       BRL       10       ug/L       238646       1       02/2         2-Methylphenol       BRL       10       ug/L       238646       1       02/2	/28/2017 19:26	YH
Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1         02/2           Surr: 4-Terphenyl-d14         87.2         58.5-125         %REC         238651         1         02/2           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238646         1         02/2           2-Methylphenol         BRL         10         ug/L         238646         1         02/2	/28/2017 19:26	YH
Surr: 4-Terphenyl-d14       87.2       58.5-125       %REC       238651       1       02/2         Semivolatile Org. Comp. by GC/MS       SW8270D       (SW3510C)         2,4-Dimethylphenol       BRL       10       ug/L       238646       1       02/2         2-Methylphenol       BRL       10       ug/L       238646       1       02/2	/28/2017 19:26	YH
Semivolatile Org. Comp. by GC/MS       SW8270D       (SW3510C)         2,4-Dimethylphenol       BRL       10       ug/L       238646       1       02/2         2-Methylphenol       BRL       10       ug/L       238646       1       02/2	/28/2017 19:26	YH
2,4-Dimethylphenol BRL 10 ug/L 238646 1 02/2 2-Methylphenol BRL 10 ug/L 238646 1 02/2	/28/2017 19:26	YH
2-Methylphenol BRL 10 ug/L 238646 1 02/2		
2.1	/27/2017 20:37	YH
• •	/27/2017 20:37	YH
5, <del>1</del> -ivicity ipinchol	/27/2017 20:37	YH
	/27/2017 20:37	YH
Surr: 2,4,6-Tribromophenol 79.9 50-142 %REC 238646 1 02/2	/27/2017 20:37	YH
·	/27/2017 20:37	YH
	/27/2017 20:37	YH

Qualifiers:

Value exceeds maximum contaminant level

BRL Below reporting limit

Н Holding times for preparation or analysis exceeded

Analyte not NELAC certified

Analyte detected in the associated method blank

Greater than Result value

E Estimated (value above quantitation range)

Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:AMW-13-20170222-01Project Name:AGLC MaconCollection Date:2/22/2017 3:15:00 PMLab ID:1702K47-012Matrix:Groundwater

Date:

3-Mar-17

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
Volatile Organic Compounds by GC/MS S	W8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238828	1	03/01/2017 04:09	NP
Carbon disulfide	BRL	5.0		ug/L	238828	1	03/01/2017 04:09	NP
Ethylbenzene	BRL	5.0		ug/L	238828	1	03/01/2017 04:09	NP
Toluene	BRL	5.0		ug/L	238828	1	03/01/2017 04:09	NP
Xylenes, Total	BRL	5.0		ug/L	238828	1	03/01/2017 04:09	NP
Surr: 4-Bromofluorobenzene	95.3	66.1-129		%REC	238828	1	03/01/2017 04:09	NP
Surr: Dibromofluoromethane	96.7	83.6-123		%REC	238828	1	03/01/2017 04:09	NP
Surr: Toluene-d8	93.1	81.8-118		%REC	238828	1	03/01/2017 04:09	NP
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	BRL	0.50		ug/L	238651	1	02/28/2017 19:51	YH
Acenaphthylene	BRL	1.0		ug/L	238651	1	02/28/2017 19:51	YH
Acenaphthene	BRL	0.50		ug/L	238651	1	02/28/2017 19:51	YH
Fluorene	BRL	0.10		ug/L	238651	1	02/28/2017 19:51	YH
Phenanthrene	BRL	0.050		ug/L	238651	1	02/28/2017 19:51	YH
Anthracene	BRL	0.050		ug/L	238651	1	02/28/2017 19:51	YH
Fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 19:51	YH
Pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 19:51	YH
Benz(a)anthracene	BRL	0.050		ug/L	238651	1	02/28/2017 19:51	YH
Chrysene	BRL	0.050		ug/L	238651	1	02/28/2017 19:51	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 19:51	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238651	1	02/28/2017 19:51	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 19:51	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 19:51	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238651	1	02/28/2017 19:51	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238651	1	02/28/2017 19:51	YH
Surr: 4-Terphenyl-d14	91.9	58.5-125		%REC	238651	1	02/28/2017 19:51	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238646	1	02/27/2017 21:03	YH
2-Methylphenol	BRL	10		ug/L	238646	1	02/27/2017 21:03	YH
3,4-Methylphenol	BRL	10		ug/L	238646	1	02/27/2017 21:03	YH
Phenol	BRL	10		ug/L	238646	1	02/27/2017 21:03	YH
Surr: 2,4,6-Tribromophenol	80.5	50-142		%REC	238646	1	02/27/2017 21:03	YH
Surr: 2-Fluorobiphenyl	69.5	46-124		%REC	238646	1	02/27/2017 21:03	YH
Surr: 2-Fluorophenol	52.5	25.3-120		%REC	238646	1	02/27/2017 21:03	YH
Surr: 4-Terphenyl-d14	87.7	45.1-133		%REC	238646	1	02/27/2017 21:03	YH
Surr: Nitrobenzene-d5	72.2	40.1-121		%REC	238646	1	02/27/2017 21:03	YH
Surr: Phenol-d5	37.2	16.3-120		%REC	238646	1	02/27/2017 21:03	YH

Qualifiers:

BRL Below reporting limit

<sup>\*</sup> Value exceeds maximum contaminant level

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

**Client Sample ID: Client: ERM-Southeast** MW-108D-20170222-01 **Collection Date:** 2/22/2017 10:55:00 AM Project Name: AGLC Macon Lab ID:

Date:

3-Mar-17

1702K47-013 Matrix: Groundwater

Carbon disulfide	Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Carbon disulfide	Volatile Organic Compounds by GC/MS S	W8260B			(SW	(5030B)			
Ethylbenzene	Benzene	BRL	5.0		ug/L	238828	1	03/01/2017 04:35	NP
Toluene BRL 5.0 ug/L 238828 1 03/01/2017 04:35 NI Xylenes, Total BRL 5.0 ug/L 238828 1 03/01/2017 04:35 NI Xylenes, Total BRL 5.0 ug/L 238828 1 03/01/2017 04:35 NI Surr: 4-Bromofluorobenzene 95.3 66.1-129 %REC 238828 1 03/01/2017 04:35 NI Surr: Dibromofluoromethane 96.3 83.6-123 %REC 238828 1 03/01/2017 04:35 NI Surr: Dibromofluoromethane 96.3 83.6-123 %REC 238828 1 03/01/2017 04:35 NI Surr: Toluene-d8 92.6 81.8-118 %REC 238828 1 03/01/2017 04:35 NI SURT: Toluene-d8 92.6 81.8-118 %REC 238828 1 03/01/2017 04:35 NI SURT: Toluene-d8 92.6 81.8-118 %REC 238828 1 03/01/2017 04:35 NI SURT: Toluene-d8 92.6 81.8-118 %REC 238861 1 03/01/2017 04:35 NI SURT: Toluene-d8 92.6 81.8-118 %REC 238861 1 03/01/2017 04:35 NI SURT: Toluene-d8 92.6 81.8-118 %REC 238861 1 03/01/2017 04:35 NI SURT: Toluene-d8 92.6 81.8-118 %REC 238861 1 03/01/2017 04:35 NI SURT: Toluene-d8 92.6 81.8-118 %REC 238861 1 03/01/2017 04:35 NI SURT: Toluene-d8 92.6 81.8-118 %REC 238861 1 03/01/2017 04:35 NI SURT: Toluene-d8 92.6 81.8-118 %REC 238861 1 03/01/2017 04:35 NI SURT: Toluene-d8 92.6 81.8-118 %REC 238861 1 02/28/2017 20:15 YI SURT: Toluene-d8 92.6 81.8-118 %REC 238861 1 02/28/2017 20:15 YI SURT: Toluene-d8 92.6 81.8-118 %REC 238861 1 02/28/2017 20:15 YI SURT: Toluene-d8 92.6 81.8-118 %REC 238861 1 02/28/2017 20:15 YI SURT: Toluene-d8 92.6 82.8 92.8 92.8 92.8 92.8 92.8 92.8 92.8	Carbon disulfide	BRL	5.0		ug/L	238828	1	03/01/2017 04:35	NP
Xylenes, Total   BRL   5.0   wg/L   238828   1   03.01/2017 04:35   NI	Ethylbenzene	BRL	5.0		ug/L	238828	1	03/01/2017 04:35	NP
Surr: 4-Bromofluorobenzene	Toluene	BRL	5.0		ug/L	238828	1	03/01/2017 04:35	NP
Surr: Dibromofluoromethane   96.3   83.6-123   %REC   238828   1   03/01/2017 04:35   NI	Xylenes, Total	BRL	5.0		ug/L	238828	1	03/01/2017 04:35	NP
Surr: Toluene-d8	Surr: 4-Bromofluorobenzene	95.3	66.1-129		%REC	238828	1	03/01/2017 04:35	NP
SIM Polynuclear Aromatic Hydrocarbons   SW8270D	Surr: Dibromofluoromethane	96.3	83.6-123		%REC	238828	1	03/01/2017 04:35	NP
Naphthalene	Surr: Toluene-d8	92.6	81.8-118		%REC	238828	1	03/01/2017 04:35	NP
Acenaphthylene	SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	3510C)			
Acenaphthene         BRL         0.50         ug/L         238651         1         02/28/2017 20:15         YI           Fluorene         BRL         0.10         ug/L         238651         1         02/28/2017 20:15         YI           Phenanthrene         BRL         0.050         ug/L         238651         1         02/28/2017 20:15         YI           Anthracene         BRL         0.050         ug/L         238651         1         02/28/2017 20:15         YI           Fluoranthene         BRL         0.050         ug/L         238651         1         02/28/2017 20:15         YI           Pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 20:15         YI           Benz(a)anthracene         0.085         0.050         ug/L         238651         1         02/28/2017 20:15         YI           Benzo(b)fluoranthene         BRL         0.10         ug/L         238651         1         02/28/2017 20:15         YI           Benzo(b)fluoranthene         BRL         0.10         ug/L         238651         1         02/28/2017 20:15         YI           Benzo(b)fluoranthene         BRL         0.052         0.052         ug/	Naphthalene	BRL	0.50		ug/L	238651	1	02/28/2017 20:15	YH
Fluorene	Acenaphthylene	BRL	1.0		ug/L	238651	1	02/28/2017 20:15	YH
Phenanthrene	Acenaphthene	BRL	0.50		ug/L	238651	1	02/28/2017 20:15	YH
Anthracene BRL 0.050 ug/L 238651 1 02/28/2017 20:15 YI Fluoranthene BRL 0.10 ug/L 238651 1 02/28/2017 20:15 YI Pyrene BRL 0.050 ug/L 238651 1 02/28/2017 20:15 YI Benz(a)anthracene 0.085 0.050 ug/L 238651 1 02/28/2017 20:15 YI Benz(a)anthracene 0.081 0.050 ug/L 238651 1 02/28/2017 20:15 YI Benzo(b)fluoranthene BRL 0.10 ug/L 238651 1 02/28/2017 20:15 YI Benzo(b)fluoranthene 0.052 0.050 ug/L 238651 1 02/28/2017 20:15 YI Benzo(b)fluoranthene 0.052 0.050 ug/L 238651 1 02/28/2017 20:15 YI Benzo(a)pyrene BRL 0.050 ug/L 238651 1 02/28/2017 20:15 YI Indeno(1,2,3-cd)pyrene BRL 0.050 ug/L 238651 1 02/28/2017 20:15 YI Indeno(1,2,3-cd)pyrene BRL 0.050 ug/L 238651 1 02/28/2017 20:15 YI Indeno(1,2,3-cd)pyrene BRL 0.050 ug/L 238651 1 02/28/2017 20:15 YI Indeno(1,2,3-cd)pyrene BRL 0.050 ug/L 238651 1 02/28/2017 20:15 YI Indeno(1,2,3-cd)pyrene BRL 0.10 ug/L 238651 1 02/28/2017 20:15 YI Benzo(g,h,i)perylene BRL 0.10 ug/L 238651 1 02/28/2017 20:15 YI Surr: 4-Terphenyl-d14 98.2 58.5-125 %REC 238651 1 02/28/2017 20:15 YI Surr: 4-Terphenyl-d14 BRL 10 ug/L 238666 1 02/27/2017 21:28 YI 2-Methylphenol BRL 10 ug/L 238666 1 02/27/2017 21:28 YI 2-Methylphenol BRL 10 ug/L 238666 1 02/27/2017 21:28 YI Surr: 2-Fluorobiphenyl 66.5 46-124 %REC 238646 1 02/27/2017 21:28 YI Surr: 2-Fluorobiphenyl 66.5 46-124 %REC 238646 1 02/27/2017 21:28 YI Surr: 2-Fluorobiphenyl 68.5 46-124 %REC 238646 1 02/27/2017 21:28 YI Surr: 2-Fluorobiphenyl 68.5 46-124 %REC 238646 1 02/27/2017 21:28 YI Surr: 2-Fluorobiphenyl 48.25.3-120 %REC 238646 1 02/27/2017 21:28 YI Surr: 2-Fluorobiphenyl 48.25.3-120 %REC 238646 1 02/27/2017 21:28 YI Surr: 2-Fluorobiphenyl 48.25.3-120 %REC 238646 1 02/27/2017 21:28 YI Surr: 2-Fluorobiphenyl 48.25.3-120 %REC 238646 1 02/27/2017 21:28 YI Surr: 2-Fluorobiphenyl 48.25.3-120 %REC 238646 1 02/27/2017 21:28 YI Surr: 2-Fluorobiphenyl 48.25.3-120 %REC 238646 1 02/27/2017 21:28 YI Surr: 2-Fluorobiphenyl 48.25.3-120 %REC 238646 1 02/27/2017 21:28 YI Surr: 2-Fluorobiphenyl 48.25.3-120 %REC 238646 1 02/27/2017 21:28 YI Surr: 2-Fluorobiphenyl 48.25	Fluorene	BRL	0.10		ug/L	238651	1	02/28/2017 20:15	YH
Fluoranthene	Phenanthrene	BRL	0.050		ug/L	238651	1	02/28/2017 20:15	YH
Pyrene	Anthracene	BRL	0.050		ug/L	238651	1	02/28/2017 20:15	YH
Benz(a)anthracene	Fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 20:15	YH
Chrysene         0.081         0.050         ug/L         238651         1         02/28/2017 20:15         YI           Benzo(b)fluoranthene         BRL         0.10         ug/L         238651         1         02/28/2017 20:15         YI           Benzo(k)fluoranthene         0.052         0.050         ug/L         238651         1         02/28/2017 20:15         YI           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 20:15         YI           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 20:15         YI           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1         02/28/2017 20:15         YI           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1         02/28/2017 20:15         YI           Surr: 4-Terphenyl-d14         98.2         58.5-125         %REC         238651         1         02/28/2017 20:15         YI           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238646	Pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 20:15	YH
Benzo(b)fluoranthene         BRL         0.10         ug/L         238651         1         02/28/2017 20:15         YI           Benzo(k)fluoranthene         0.052         0.050         ug/L         238651         1         02/28/2017 20:15         YI           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 20:15         YI           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 20:15         YI           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1         02/28/2017 20:15         YI           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1         02/28/2017 20:15         YI           Surr: 4-Terphenyl-d14         98.2         58.5-125         %REC         238651         1         02/28/2017 20:15         YI           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           2-Methylphenol         BRL         10         ug/L         238646	Benz(a)anthracene	0.085	0.050		ug/L	238651	1	02/28/2017 20:15	YH
Benzo(k)fluoranthene         0.052         0.050         ug/L         238651         1         02/28/2017 20:15         YI           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 20:15         YI           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 20:15         YI           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1         02/28/2017 20:15         YI           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1         02/28/2017 20:15         YI           Surr: 4-Terphenyl-d14         98.2         58.5-125         %REC         238651         1         02/28/2017 20:15         YI           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)           (SW3510C)         (SW3510C)         (SW3510C)         YI           2,4-Dimethylphenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           2-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI	Chrysene	0.081	0.050		ug/L	238651	1	02/28/2017 20:15	YH
Benzo(a)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 20:15         YI           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1         02/28/2017 20:15         YI           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1         02/28/2017 20:15         YI           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1         02/28/2017 20:15         YI           Surr: 4-Terphenyl-d14         98.2         58.5-125         %REC         238651         1         02/28/2017 20:15         YI           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)         YI           2,4-Dimethylphenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           2-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           3,4-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           Surr: 2,4,6-Tribromophenol         81.4         50-142         %REC         2386	Benzo(b)fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 20:15	YH
Indeno(1,2,3-cd)pyrene	Benzo(k)fluoranthene	0.052	0.050		ug/L	238651	1	02/28/2017 20:15	YH
Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1         02/28/2017 20:15         YI           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1         02/28/2017 20:15         YI           Surr: 4-Terphenyl-d14         98.2         58.5-125         %REC         238651         1         02/28/2017 20:15         YI           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)         SW8270D         (SW3510C)         YI           2,4-Dimethylphenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           2-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           3,4-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           Phenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           Surr: 2,4,6-Tribromophenol         81.4         50-142         %REC         238646         1         02/27/2017 21:28         YI           Surr: 2-Fluorophenol         48         25.3-120 <td>Benzo(a)pyrene</td> <td>BRL</td> <td>0.050</td> <td></td> <td>ug/L</td> <td>238651</td> <td>1</td> <td>02/28/2017 20:15</td> <td>YH</td>	Benzo(a)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 20:15	YH
Benzo(g,h,i)perylene BRL 0.10 ug/L 238651 1 02/28/2017 20:15 Y1 Surr: 4-Terphenyl-d14 98.2 58.5-125 %REC 238651 1 02/28/2017 20:15 Y1 Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)  2,4-Dimethylphenol BRL 10 ug/L 238646 1 02/27/2017 21:28 Y1 2-Methylphenol BRL 10 ug/L 238646 1 02/27/2017 21:28 Y1 3,4-Methylphenol BRL 10 ug/L 238646 1 02/27/2017 21:28 Y1 Phenol BRL 10 ug/L 238646 1 02/27/2017 21:28 Y1 Surr: 2,4,6-Tribromophenol 81.4 50-142 %REC 238646 1 02/27/2017 21:28 Y1 Surr: 2-Fluorobiphenyl 66.5 46-124 %REC 238646 1 02/27/2017 21:28 Y1 Surr: 2-Fluorophenol 48 25.3-120 %REC 238646 1 02/27/2017 21:28 Y1 Surr: 4-Terphenyl-d14 84.3 45.1-133 %REC 238646 1 02/27/2017 21:28 Y1 Surr: Nitrobenzene-d5 67.9 40.1-121 %REC 238646 1 02/27/2017 21:28 Y1 Surr: Nitrobenzene-d5	Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 20:15	YH
Surr: 4-Terphenyl-d14         98.2         58.5-125         %REC         238651         1         02/28/2017 20:15         YI           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           2-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           3,4-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           Phenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           Surr: 2,4,6-Tribromophenol         81.4         50-142         %REC         238646         1         02/27/2017 21:28         YI           Surr: 2-Fluorobiphenyl         66.5         46-124         %REC         238646         1         02/27/2017 21:28         YI           Surr: 4-Terphenyl-d14         84.3         45.1-133         %REC         238646         1         02/27/2017 21:28         YI           Surr: Nitrobenzene-d5         67.9         40.1-121         %REC         238646         1	Dibenz(a,h)anthracene	BRL	0.10		ug/L	238651	1	02/28/2017 20:15	YH
Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           2-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           3,4-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           Phenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           Surr: 2,4,6-Tribromophenol         81.4         50-142         %REC         238646         1         02/27/2017 21:28         YI           Surr: 2-Fluorobiphenyl         66.5         46-124         %REC         238646         1         02/27/2017 21:28         YI           Surr: 2-Fluorophenol         48         25.3-120         %REC         238646         1         02/27/2017 21:28         YI           Surr: 4-Terphenyl-d14         84.3         45.1-133         %REC         238646         1         02/27/2017 21:28         YI           Surr: Nitrobenzene-d5         67.9         40.1-121         %REC         238646         1         02/27/201	Benzo(g,h,i)perylene	BRL	0.10		ug/L	238651	1	02/28/2017 20:15	YH
2,4-Dimethylphenol       BRL       10       ug/L       238646       1       02/27/2017 21:28       YI         2-Methylphenol       BRL       10       ug/L       238646       1       02/27/2017 21:28       YI         3,4-Methylphenol       BRL       10       ug/L       238646       1       02/27/2017 21:28       YI         Phenol       BRL       10       ug/L       238646       1       02/27/2017 21:28       YI         Surr: 2,4,6-Tribromophenol       81.4       50-142       %REC       238646       1       02/27/2017 21:28       YI         Surr: 2-Fluorobiphenyl       66.5       46-124       %REC       238646       1       02/27/2017 21:28       YI         Surr: 2-Fluorophenol       48       25.3-120       %REC       238646       1       02/27/2017 21:28       YI         Surr: 4-Terphenyl-d14       84.3       45.1-133       %REC       238646       1       02/27/2017 21:28       YI         Surr: Nitrobenzene-d5       67.9       40.1-121       %REC       238646       1       02/27/2017 21:28       YI	Surr: 4-Terphenyl-d14	98.2	58.5-125		%REC	238651	1	02/28/2017 20:15	YH
2-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           3,4-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           Phenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           Surr: 2,4,6-Tribromophenol         81.4         50-142         %REC         238646         1         02/27/2017 21:28         YI           Surr: 2-Fluorobiphenyl         66.5         46-124         %REC         238646         1         02/27/2017 21:28         YI           Surr: 2-Fluorophenol         48         25.3-120         %REC         238646         1         02/27/2017 21:28         YI           Surr: 4-Terphenyl-d14         84.3         45.1-133         %REC         238646         1         02/27/2017 21:28         YI           Surr: Nitrobenzene-d5         67.9         40.1-121         %REC         238646         1         02/27/2017 21:28         YI	Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	3510C)			
2-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           3,4-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           Phenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           Surr: 2,4,6-Tribromophenol         81.4         50-142         %REC         238646         1         02/27/2017 21:28         YI           Surr: 2-Fluorobiphenyl         66.5         46-124         %REC         238646         1         02/27/2017 21:28         YI           Surr: 2-Fluorophenol         48         25.3-120         %REC         238646         1         02/27/2017 21:28         YI           Surr: 4-Terphenyl-d14         84.3         45.1-133         %REC         238646         1         02/27/2017 21:28         YI           Surr: Nitrobenzene-d5         67.9         40.1-121         %REC         238646         1         02/27/2017 21:28         YI	2,4-Dimethylphenol	BRL	10		ug/L	238646	1	02/27/2017 21:28	YH
3,4-Methylphenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           Phenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           Surr: 2,4,6-Tribromophenol         81.4         50-142         %REC         238646         1         02/27/2017 21:28         YI           Surr: 2-Fluorobiphenyl         66.5         46-124         %REC         238646         1         02/27/2017 21:28         YI           Surr: 2-Fluorophenol         48         25.3-120         %REC         238646         1         02/27/2017 21:28         YI           Surr: 4-Terphenyl-d14         84.3         45.1-133         %REC         238646         1         02/27/2017 21:28         YI           Surr: Nitrobenzene-d5         67.9         40.1-121         %REC         238646         1         02/27/2017 21:28         YI		BRL	10		ug/L	238646	1	02/27/2017 21:28	YH
Phenol         BRL         10         ug/L         238646         1         02/27/2017 21:28         YI           Surr: 2,4,6-Tribromophenol         81.4         50-142         %REC         238646         1         02/27/2017 21:28         YI           Surr: 2-Fluorobiphenyl         66.5         46-124         %REC         238646         1         02/27/2017 21:28         YI           Surr: 2-Fluorophenol         48         25.3-120         %REC         238646         1         02/27/2017 21:28         YI           Surr: 4-Terphenyl-d14         84.3         45.1-133         %REC         238646         1         02/27/2017 21:28         YI           Surr: Nitrobenzene-d5         67.9         40.1-121         %REC         238646         1         02/27/2017 21:28         YI		BRL	10		ug/L	238646	1	02/27/2017 21:28	YH
Surr: 2-Fluorobiphenyl       66.5       46-124       %REC       238646       1       02/27/2017 21:28       YI         Surr: 2-Fluorophenol       48       25.3-120       %REC       238646       1       02/27/2017 21:28       YI         Surr: 4-Terphenyl-d14       84.3       45.1-133       %REC       238646       1       02/27/2017 21:28       YI         Surr: Nitrobenzene-d5       67.9       40.1-121       %REC       238646       1       02/27/2017 21:28       YI	Phenol	BRL	10		ug/L	238646	1	02/27/2017 21:28	YH
Surr: 2-Fluorobiphenyl       66.5       46-124       %REC       238646       1       02/27/2017 21:28       YI         Surr: 2-Fluorophenol       48       25.3-120       %REC       238646       1       02/27/2017 21:28       YI         Surr: 4-Terphenyl-d14       84.3       45.1-133       %REC       238646       1       02/27/2017 21:28       YI         Surr: Nitrobenzene-d5       67.9       40.1-121       %REC       238646       1       02/27/2017 21:28       YI	Surr: 2,4,6-Tribromophenol	81.4	50-142		%REC	238646	1	02/27/2017 21:28	YH
Surr: 2-Fluorophenol       48       25.3-120       %REC       238646       1       02/27/2017 21:28       YI         Surr: 4-Terphenyl-d14       84.3       45.1-133       %REC       238646       1       02/27/2017 21:28       YI         Surr: Nitrobenzene-d5       67.9       40.1-121       %REC       238646       1       02/27/2017 21:28       YI	*	66.5	46-124		%REC	238646	1	02/27/2017 21:28	YH
Surr: 4-Terphenyl-d14       84.3       45.1-133       %REC       238646       1       02/27/2017 21:28       Y1         Surr: Nitrobenzene-d5       67.9       40.1-121       %REC       238646       1       02/27/2017 21:28       Y1		48	25.3-120		%REC	238646	1	02/27/2017 21:28	YH
Surr: Nitrobenzene-d5 67.9 40.1-121 %REC 238646 1 02/27/2017 21:28 YI	-	84.3	45.1-133		%REC	238646	1	02/27/2017 21:28	YH
		67.9	40.1-121		%REC	238646	1	02/27/2017 21:28	YH
	Surr: Phenol-d5	30.6	16.3-120		%REC	238646	1	02/27/2017 21:28	YH

Qualifiers:

Value exceeds maximum contaminant level

BRL Below reporting limit

Н Holding times for preparation or analysis exceeded

Analyte not NELAC certified

Analyte detected in the associated method blank

Greater than Result value

E Estimated (value above quantitation range)

Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

**Client Sample ID: Client: ERM-Southeast** MW-23D-20170222-01 **Collection Date:** 2/22/2017 10:40:00 AM Project Name: AGLC Macon Lab ID:

Date:

3-Mar-17

1702K47-014 Matrix: Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
Volatile Organic Compounds by GC/MS S	W8260B			(SW	V5030B)			
Benzene	BRL	5.0		ug/L	238828	1	03/01/2017 05:01	NP
Carbon disulfide	BRL	5.0		ug/L	238828	1	03/01/2017 05:01	NP
Ethylbenzene	BRL	5.0		ug/L	238828	1	03/01/2017 05:01	NP
Toluene	BRL	5.0		ug/L	238828	1	03/01/2017 05:01	NP
Xylenes, Total	BRL	5.0		ug/L	238828	1	03/01/2017 05:01	NP
Surr: 4-Bromofluorobenzene	96	66.1-129		%REC	238828	1	03/01/2017 05:01	NP
Surr: Dibromofluoromethane	95.4	83.6-123		%REC	238828	1	03/01/2017 05:01	NP
Surr: Toluene-d8	94.3	81.8-118		%REC	238828	1	03/01/2017 05:01	NP
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	BRL	0.50		ug/L	238651	1	02/28/2017 20:41	YH
Acenaphthylene	BRL	1.0		ug/L	238651	1	02/28/2017 20:41	YH
Acenaphthene	BRL	0.50		ug/L	238651	1	02/28/2017 20:41	YH
Fluorene	BRL	0.10		ug/L	238651	1	02/28/2017 20:41	YH
Phenanthrene	BRL	0.050		ug/L	238651	1	02/28/2017 20:41	YH
Anthracene	BRL	0.050		ug/L	238651	1	02/28/2017 20:41	YH
Fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 20:41	YH
Pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 20:41	YH
Benz(a)anthracene	BRL	0.050		ug/L	238651	1	02/28/2017 20:41	YH
Chrysene	BRL	0.050		ug/L	238651	1	02/28/2017 20:41	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 20:41	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238651	1	02/28/2017 20:41	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 20:41	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 20:41	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238651	1	02/28/2017 20:41	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238651	1	02/28/2017 20:41	YH
Surr: 4-Terphenyl-d14	91.1	58.5-125		%REC	238651	1	02/28/2017 20:41	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238646	1	02/27/2017 21:54	YH
2-Methylphenol	BRL	10		ug/L	238646	1	02/27/2017 21:54	YH
3,4-Methylphenol	BRL	10		ug/L	238646	1	02/27/2017 21:54	YH
Phenol	BRL	10		ug/L	238646	1	02/27/2017 21:54	YH
Surr: 2,4,6-Tribromophenol	81.2	50-142		%REC	238646	1	02/27/2017 21:54	YH
Surr: 2-Fluorobiphenyl	69.3	46-124		%REC	238646	1	02/27/2017 21:54	YH
Surr: 2-Fluorophenol	48.8	25.3-120		%REC	238646	1	02/27/2017 21:54	YH
Surr: 4-Terphenyl-d14	84.7	45.1-133		%REC	238646	1	02/27/2017 21:54	YH
Surr: Nitrobenzene-d5	70.2	40.1-121		%REC	238646	1	02/27/2017 21:54	YH
Surr: Phenol-d5	32.8	16.3-120		%REC	238646	1	02/27/2017 21:54	YH

Qualifiers:

Value exceeds maximum contaminant level

BRL Below reporting limit

Н Holding times for preparation or analysis exceeded

Analyte not NELAC certified

Analyte detected in the associated method blank

Greater than Result value

E Estimated (value above quantitation range)

Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-113D-20170222-01Project Name:AGLC MaconCollection Date:2/22/2017 12:20:00 PM

Date:

3-Mar-17

Lab ID:1702K47-015Matrix:Groundwater

Senzene		Analyst
Carbon disulfide         BRL         5.0         ug/L         238828         1           Ethylbenzene         BRL         5.0         ug/L         238828         1           Toluene         BRL         5.0         ug/L         238828         1           Xylenes, Total         BRL         5.0         ug/L         238828         1           Surr: Dibromofluorobenzene         94.8         66.1-129         %REC         238828         1           Surr: Dibromofluoromethane         97.3         83.6-123         %REC         238828         1           Surr: Toluene-d8         92.7         81.8-118         %REC         238828         1           SUR Polynuclear Aromatic Hydrocarbons         SW8270D         (SW3510C)         (SW3510C)           Naphthalene         BRL         0.50         ug/L         238651         1           Acenaphthene         BRL         0.50         ug/L         238651         1           Acenaphthene         BRL         0.50         ug/L         238651         1           Fluorene         BRL         0.10         ug/L         238651         1           Anthracene         0.060         0.050         ug/L         238651 </td <td></td> <td></td>		
Ethylbenzene         BRL         5.0         ug/L         238828         1           Toluene         BRL         5.0         ug/L         238828         1           Xylenes, Total         BRL         5.0         ug/L         238828         1           Surr: 4-Bromofluorobenzene         94.8         66.1-129         %REC         238828         1           Surr: Dibromofluoromethane         97.3         83.6-123         %REC         238828         1           Surr: Toluene-d8         92.7         81.8-118         %REC         238828         1           Surr: Toluene-d8         92.7         81.8-118         %REC         238828         1           SURPolynuclear Aromatic Hydrocarbons         SW8270D         (SW3510C)         (SW3510C)         0	03/01/2017 05:26	NP
Toluene BRL 5.0 ug/L 238828 1 Xylenes, Total BRL 5.0 ug/L 238828 1 Surr: 4-Bromofluorobenzene 94.8 66.1-129 %REC 238828 1 Surr: Dibromofluoromethane 97.3 83.6-123 %REC 238828 1 Surr: Toluene-d8 92.7 81.8-118 %REC 238828 1 Surr: Toluene-d8 92.7 81.8-118 %REC 238828 1 SIM Polynuclear Aromatic Hydrocarbons SW8270D (SW3510C)  Naphthalene BRL 0.50 ug/L 238651 1 Acenaphthylene BRL 1.0 ug/L 238651 1 Acenaphthene BRL 0.50 ug/L 238651 1 Fluorene BRL 0.10 ug/L 238651 1 Phenanthrene BRL 0.050 ug/L 238651 1 Phenanthrene BRL 0.050 ug/L 238651 1 Phenanthrene BRL 0.050 ug/L 238651 1 Phyrene BRL 0.050 ug/L 238651 1 Fluoranthene BRL 0.050 ug/L 238651 1 Fluoranthene BRL 0.050 ug/L 238651 1 Chrysene BRL 0.050 ug/L 238651 1 Benza(a)anthracene BRL 0.050 ug/L 238651 1 Benzo(b)fluoranthene BRL 0.050 ug/L 238651 1 Benzo(b)fluoranthene BRL 0.050 ug/L 238651 1 Benzo(b)fluoranthene BRL 0.050 ug/L 238651 1 Benzo(a)pyrene BRL 0.050 ug/L 238651 1 Benzo(a)hjanthracene BRL 0.050 ug/L 238651 1	03/01/2017 05:26	NP
Xylenes, Total   BRL   5.0   ug/L   238828   1	03/01/2017 05:26	NP
Surr: 4-Bromofluorobenzene         94.8         66.1-129         %REC         238828         1           Surr: Dibromofluoromethane         97.3         83.6-123         %REC         238828         1           Surr: Toluene-d8         92.7         81.8-118         %REC         238828         1           SIM Polynuclear Aromatic Hydrocarbons         SW8270D         (SW3510C)         (SW3510C)           Naphthalene         BRL         0.50         ug/L         238651         1           Acenaphthylene         BRL         1.0         ug/L         238651         1           Acenaphthene         BRL         0.50         ug/L         238651         1           Fluorene         BRL         0.10         ug/L         238651         1           Phenanthrene         BRL         0.050         ug/L         238651         1           Anthracene         0.060         0.050         ug/L         238651         1           Fluoranthene         BRL         0.050         ug/L         238651         1           Pyrene         BRL         0.050         ug/L         238651         1           Benzo(a)anthracene         BRL         0.050         ug/L	03/01/2017 05:26	NP
Surr: 4-Bromofluorobenzene         94.8         66.1-129         %REC         238828         1           Surr: Dibromofluoromethane         97.3         83.6-123         %REC         238828         1           Surr: Toluene-d8         92.7         81.8-118         %REC         238828         1           SIM Polynuclear Aromatic Hydrocarbons         SW8270D         (SW3510C)         (SW3510C)           SIM Polynuclear Aromatic Hydrocarbons         SW8270D         (gV         238651         1           Maphthalene         BRL         0.50         ug/L         238651         1           Acenaphthylene         BRL         1.0         ug/L         238651         1           Acenaphthene         BRL         0.50         ug/L         238651         1           Fluorene         BRL         0.10         ug/L         238651         1           Phenanthrene         BRL         0.050         ug/L         238651         1           Anthracene         0.060         0.050         ug/L         238651         1           Fluoranthene         BRL         0.050         ug/L         238651         1           Benza(a)anthracene         BRL         0.050         ug/L	03/01/2017 05:26	NP
Surr: Toluene-d8         92.7         81.8-118         %REC         238828         1           SIM Polynuclear Aromatic Hydrocarbons         SW8270D         (SW3510C)           Naphthalene         BRL         0.50         ug/L         238651         1           Acenaphthylene         BRL         1.0         ug/L         238651         1           Acenaphthene         BRL         0.50         ug/L         238651         1           Fluorene         BRL         0.10         ug/L         238651         1           Phenanthrene         BRL         0.050         ug/L         238651         1           Anthracene         0.060         0.050         ug/L         238651         1           Fluoranthene         BRL         0.10         ug/L         238651         1           Pyrene         BRL         0.050         ug/L         238651         1           Pyrene         BRL         0.050         ug/L         238651         1           Benzo(a)anthracene         BRL         0.050         ug/L         238651         1           Benzo(b)fluoranthene         BRL         0.050         ug/L         238651         1	03/01/2017 05:26	NP
SIM Polynuclear Aromatic Hydrocarbons   SW8270D   SW82	03/01/2017 05:26	NP
Naphthalene         BRL         0.50         ug/L         238651         1           Acenaphthylene         BRL         1.0         ug/L         238651         1           Acenaphthene         BRL         0.50         ug/L         238651         1           Fluorene         BRL         0.10         ug/L         238651         1           Phenanthrene         BRL         0.050         ug/L         238651         1           Anthracene         0.060         0.050         ug/L         238651         1           Fluoranthene         BRL         0.10         ug/L         238651         1           Pyrene         BRL         0.050         ug/L         238651         1           Benz(a)anthracene         BRL         0.050         ug/L         238651         1           Chrysene         BRL         0.050         ug/L         238651         1           Benzo(b)fluoranthene         BRL         0.050         ug/L         238651         1           Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1 </td <td>03/01/2017 05:26</td> <td>NP</td>	03/01/2017 05:26	NP
Acenaphthylene         BRL         1.0         ug/L         238651         1           Acenaphthene         BRL         0.50         ug/L         238651         1           Fluorene         BRL         0.10         ug/L         238651         1           Phenanthrene         BRL         0.050         ug/L         238651         1           Anthracene         0.060         0.050         ug/L         238651         1           Fluoranthene         BRL         0.10         ug/L         238651         1           Pyrene         BRL         0.050         ug/L         238651         1           Benz(a)anthracene         BRL         0.050         ug/L         238651         1           Chrysene         BRL         0.050         ug/L         238651         1           Benzo(b)fluoranthene         BRL         0.050         ug/L         238651         1           Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651		
Acenaphthylene         BRL         1.0         ug/L         238651         1           Acenaphthene         BRL         0.50         ug/L         238651         1           Fluorene         BRL         0.10         ug/L         238651         1           Phenanthrene         BRL         0.050         ug/L         238651         1           Anthracene         0.060         0.050         ug/L         238651         1           Fluoranthene         BRL         0.10         ug/L         238651         1           Pyrene         BRL         0.050         ug/L         238651         1           Benz(a)anthracene         BRL         0.050         ug/L         238651         1           Chrysene         BRL         0.050         ug/L         238651         1           Benzo(b)fluoranthene         BRL         0.050         ug/L         238651         1           Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651	02/28/2017 21:06	YH
Acenaphthene         BRL         0.50         ug/L         238651         1           Fluorene         BRL         0.10         ug/L         238651         1           Phenanthrene         BRL         0.050         ug/L         238651         1           Anthracene         0.060         0.050         ug/L         238651         1           Fluoranthene         BRL         0.10         ug/L         238651         1           Pyrene         BRL         0.050         ug/L         238651         1           Benz(a)anthracene         BRL         0.050         ug/L         238651         1           Chrysene         BRL         0.050         ug/L         238651         1           Benzo(b)fluoranthene         BRL         0.050         ug/L         238651         1           Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651<	02/28/2017 21:06	YH
Fluorene         BRL         0.10         ug/L         238651         1           Phenanthrene         BRL         0.050         ug/L         238651         1           Anthracene         0.060         0.050         ug/L         238651         1           Fluoranthene         BRL         0.10         ug/L         238651         1           Pyrene         BRL         0.050         ug/L         238651         1           Benz(a)anthracene         BRL         0.050         ug/L         238651         1           Chrysene         BRL         0.050         ug/L         238651         1           Benzo(b)fluoranthene         BRL         0.10         ug/L         238651         1           Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1           Benzo(g,h,i)perylene         BRL         0.10         ug/L	02/28/2017 21:06	YH
Anthracene         0.060         0.050         ug/L         238651         1           Fluoranthene         BRL         0.10         ug/L         238651         1           Pyrene         BRL         0.050         ug/L         238651         1           Benz(a)anthracene         BRL         0.050         ug/L         238651         1           Chrysene         BRL         0.050         ug/L         238651         1           Benzo(b)fluoranthene         BRL         0.10         ug/L         238651         1           Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1           Surr: 4-Terphenyl-d14         89.1         58.5-125         %REC         238651         1	02/28/2017 21:06	YH
Fluoranthene         BRL         0.10         ug/L         238651         1           Pyrene         BRL         0.050         ug/L         238651         1           Benz(a)anthracene         BRL         0.050         ug/L         238651         1           Chrysene         BRL         0.050         ug/L         238651         1           Benzo(b)fluoranthene         BRL         0.10         ug/L         238651         1           Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1           Surr: 4-Terphenyl-d14         89.1         58.5-125         %REC         238651         1	02/28/2017 21:06	YH
Pyrene         BRL         0.050         ug/L         238651         1           Benz(a)anthracene         BRL         0.050         ug/L         238651         1           Chrysene         BRL         0.050         ug/L         238651         1           Benzo(b)fluoranthene         BRL         0.10         ug/L         238651         1           Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1           Surr: 4-Terphenyl-d14         89.1         58.5-125         %REC         238651         1	02/28/2017 21:06	YH
Benz(a)anthracene         BRL         0.050         ug/L         238651         1           Chrysene         BRL         0.050         ug/L         238651         1           Benzo(b)fluoranthene         BRL         0.10         ug/L         238651         1           Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1           Surr: 4-Terphenyl-d14         89.1         58.5-125         %REC         238651         1	02/28/2017 21:06	YH
Benz(a)anthracene         BRL         0.050         ug/L         238651         1           Chrysene         BRL         0.050         ug/L         238651         1           Benzo(b)fluoranthene         BRL         0.10         ug/L         238651         1           Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1           Surr: 4-Terphenyl-d14         89.1         58.5-125         %REC         238651         1	02/28/2017 21:06	YH
Chrysene         BRL         0.050         ug/L         238651         1           Benzo(b)fluoranthene         BRL         0.10         ug/L         238651         1           Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1           Surr: 4-Terphenyl-d14         89.1         58.5-125         %REC         238651         1	02/28/2017 21:06	YH
Benzo(k)fluoranthene         BRL         0.050         ug/L         238651         1           Benzo(a)pyrene         BRL         0.050         ug/L         238651         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1           Surr: 4-Terphenyl-d14         89.1         58.5-125         %REC         238651         1	02/28/2017 21:06	YH
Benzo(a)pyrene         BRL         0.050         ug/L         238651         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1           Surr: 4-Terphenyl-d14         89.1         58.5-125         %REC         238651         1	02/28/2017 21:06	YH
Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238651         1           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238651         1           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1           Surr: 4-Terphenyl-d14         89.1         58.5-125         %REC         238651         1	02/28/2017 21:06	YH
Dibenz(a,h)anthracene       BRL       0.10       ug/L       238651       1         Benzo(g,h,i)perylene       BRL       0.10       ug/L       238651       1         Surr: 4-Terphenyl-d14       89.1       58.5-125       %REC       238651       1	02/28/2017 21:06	YH
Benzo(g,h,i)perylene         BRL         0.10         ug/L         238651         1           Surr: 4-Terphenyl-d14         89.1         58.5-125         %REC         238651         1	02/28/2017 21:06	YH
Surr: 4-Terphenyl-d14 89.1 58.5-125 %REC 238651 1	02/28/2017 21:06	YH
Suit. 1 Telphenyl ut 1	02/28/2017 21:06	YH
Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)	02/28/2017 21:06	YH
2,4-Dimethylphenol BRL 10 ug/L 238646 1	02/27/2017 22:19	YH
2-Methylphenol BRL 10 ug/L 238646 1	02/27/2017 22:19	YH
3,4-Methylphenol BRL 10 ug/L 238646 1	02/27/2017 22:19	YH
Phenol BRL 10 ug/L 238646 1	02/27/2017 22:19	YH
Surr: 2,4,6-Tribromophenol 85.6 50-142 %REC 238646 1	02/27/2017 22:19	YH
Surr: 2-Fluorobiphenyl 67 46-124 %REC 238646 1	02/27/2017 22:19	YH
Surr: 2-Fluorophenol 51.1 25.3-120 %REC 238646 1	02/27/2017 22:19	YH
Surr: 4-Terphenyl-d14 83.4 45.1-133 %REC 238646 1	02/27/2017 22:19	YH
Surr: Nitrobenzene-d5 68 40.1-121 %REC 238646 1	02/27/2017 22:19	YH
Surr: Phenol-d5 34 16.3-120 %REC 238646 1	02/27/2017 22:19	YH

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

J Estimated value detected below Reporting Limit

**Client Sample ID: Client: ERM-Southeast** MW-308D-20170222-01 **Collection Date:** Project Name: AGLC Macon 2/22/2017 12:35:00 PM Lab ID:

Date:

3-Mar-17

1702K47-016 Matrix: Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS	SW8260B			(SW	(5030B)			
Benzene	11	5.0		ug/L	238828	1	03/01/2017 05:52	NP
Carbon disulfide	BRL	5.0		ug/L	238828	1	03/01/2017 05:52	NP
Ethylbenzene	BRL	5.0		ug/L	238828	1	03/01/2017 05:52	NP
Toluene	BRL	5.0		ug/L	238828	1	03/01/2017 05:52	NP
Xylenes, Total	BRL	5.0		ug/L	238828	1	03/01/2017 05:52	NP
Surr: 4-Bromofluorobenzene	95.1	66.1-129		%REC	238828	1	03/01/2017 05:52	NP
Surr: Dibromofluoromethane	95.9	83.6-123		%REC	238828	1	03/01/2017 05:52	NP
Surr: Toluene-d8	92.5	81.8-118		%REC	238828	1	03/01/2017 05:52	NP
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	BRL	0.50		ug/L	238651	1	02/28/2017 21:32	YH
Acenaphthylene	BRL	1.0		ug/L	238651	1	02/28/2017 21:32	YH
Acenaphthene	BRL	0.50		ug/L	238651	1	02/28/2017 21:32	YH
Fluorene	BRL	0.10		ug/L	238651	1	02/28/2017 21:32	YH
Phenanthrene	0.060	0.050		ug/L	238651	1	02/28/2017 21:32	YH
Anthracene	0.078	0.050		ug/L	238651	1	02/28/2017 21:32	YH
Fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 21:32	YH
Pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 21:32	YH
Benz(a)anthracene	BRL	0.050		ug/L	238651	1	02/28/2017 21:32	YH
Chrysene	BRL	0.050		ug/L	238651	1	02/28/2017 21:32	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 21:32	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238651	1	02/28/2017 21:32	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 21:32	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 21:32	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238651	1	02/28/2017 21:32	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238651	1	02/28/2017 21:32	YH
Surr: 4-Terphenyl-d14	88.1	58.5-125		%REC	238651	1	02/28/2017 21:32	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238646	1	02/27/2017 22:46	YH
2-Methylphenol	BRL	10		ug/L	238646	1	02/27/2017 22:46	YH
3,4-Methylphenol	BRL	10		ug/L	238646	1	02/27/2017 22:46	YH
Phenol	BRL	10		ug/L	238646	1	02/27/2017 22:46	YH
Surr: 2,4,6-Tribromophenol	109	50-142		%REC	238646	1	02/27/2017 22:46	YH
Surr: 2-Fluorobiphenyl	86.8	46-124		%REC	238646	1	02/27/2017 22:46	YH
Surr: 2-Fluorophenol	55.1	25.3-120		%REC	238646	1	02/27/2017 22:46	YH
Surr: 4-Terphenyl-d14	108	45.1-133		%REC	238646	1	02/27/2017 22:46	YH
Surr: Nitrobenzene-d5	86.3	40.1-121		%REC	238646	1	02/27/2017 22:46	YH
Surr: Phenol-d5	35.3	16.3-120		%REC	238646	1	02/27/2017 22:46	YH

Qualifiers:

Value exceeds maximum contaminant level

BRL Below reporting limit

Н Holding times for preparation or analysis exceeded

Analyte not NELAC certified

Analyte detected in the associated method blank

Greater than Result value

E Estimated (value above quantitation range)

Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-112D-20170222-01Project Name:AGLC MaconCollection Date:2/22/2017 2:40:00 PM

Date:

3-Mar-17

Lab ID: 1702K47-017 Matrix: Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS S	SW8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238828	1	03/01/2017 06:18	NP
Carbon disulfide	BRL	5.0		ug/L	238828	1	03/01/2017 06:18	NP
Ethylbenzene	BRL	5.0		ug/L	238828	1	03/01/2017 06:18	NP
Toluene	BRL	5.0		ug/L	238828	1	03/01/2017 06:18	NP
Xylenes, Total	BRL	5.0		ug/L	238828	1	03/01/2017 06:18	NP
Surr: 4-Bromofluorobenzene	95.6	66.1-129		%REC	238828	1	03/01/2017 06:18	NP
Surr: Dibromofluoromethane	96.4	83.6-123		%REC	238828	1	03/01/2017 06:18	NP
Surr: Toluene-d8	93.5	81.8-118		%REC	238828	1	03/01/2017 06:18	NP
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	BRL	0.50		ug/L	238651	1	02/28/2017 21:59	YH
Acenaphthylene	BRL	1.0		ug/L	238651	1	02/28/2017 21:59	YH
Acenaphthene	BRL	0.50		ug/L	238651	1	02/28/2017 21:59	YH
Fluorene	BRL	0.10		ug/L	238651	1	02/28/2017 21:59	YH
Phenanthrene	BRL	0.050		ug/L	238651	1	02/28/2017 21:59	YH
Anthracene	BRL	0.050		ug/L	238651	1	02/28/2017 21:59	YH
Fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 21:59	YH
Pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 21:59	YH
Benz(a)anthracene	BRL	0.050		ug/L	238651	1	02/28/2017 21:59	YH
Chrysene	BRL	0.050		ug/L	238651	1	02/28/2017 21:59	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 21:59	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238651	1	02/28/2017 21:59	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 21:59	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 21:59	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238651	1	02/28/2017 21:59	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238651	1	02/28/2017 21:59	YH
Surr: 4-Terphenyl-d14	96.3	58.5-125		%REC	238651	1	02/28/2017 21:59	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238646	1	02/27/2017 23:12	YH
2-Methylphenol	BRL	10		ug/L	238646	1	02/27/2017 23:12	YH
3,4-Methylphenol	BRL	10		ug/L	238646	1	02/27/2017 23:12	YH
Phenol	BRL	10		ug/L	238646	1	02/27/2017 23:12	YH
Surr: 2,4,6-Tribromophenol	93.6	50-142		%REC	238646	1	02/27/2017 23:12	YH
Surr: 2-Fluorobiphenyl	75.4	46-124		%REC	238646	1	02/27/2017 23:12	YH
Surr: 2-Fluorophenol	56.7	25.3-120		%REC	238646	1	02/27/2017 23:12	YH
Surr: 4-Terphenyl-d14	93.3	45.1-133		%REC	238646	1	02/27/2017 23:12	YH
Surr: Nitrobenzene-d5	72.3	40.1-121		%REC	238646	1	02/27/2017 23:12	YH
Surr: Phenol-d5	38.5	16.3-120		%REC	238646	1	02/27/2017 23:12	YH

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-8-20170222-01Project Name:AGLC MaconCollection Date:2/22/2017 4:40:00 PMLab ID:1702K47-018Matrix:Groundwater

Reporting Dilution Result Qual Units BatchID Analyses Date Analyzed Analyst Limit Factor Volatile Organic Compounds by GC/MS SW8260B (SW5030B) ug/L BRL 5.0 238828 03/01/2017 06:44 NP Benzene ug/L BRL 5.0 238828 03/01/2017 06:44 NP Carbon disulfide ug/L Ethylbenzene BRL 5.0 238828 03/01/2017 06:44 NP Toluene BRL 5.0 ug/L 238828 1 03/01/2017 06:44 NP ug/L Xylenes, Total **BRL** 5.0 238828 03/01/2017 06:44 NP 94.5 66.1-129 %REC 238828 03/01/2017 06:44 NP Surr: 4-Bromofluorobenzene %REC 95.8 83.6-123 238828 03/01/2017 06:44 NP Surr: Dibromofluoromethane %REC 93.9 81.8-118 238828 03/01/2017 06:44 NP Surr: Toluene-d8 **SIM Polynuclear Aromatic Hydrocarbons** SW8270D (SW3510C) Naphthalene BRL 0.50 ug/L 238651 02/28/2017 22:25 YH ug/L BRL 02/28/2017 22:25 YΗ Acenaphthylene 1.0 238651 BRL 0.50 ug/L 238651 02/28/2017 22:25 YH Acenaphthene 1 ug/L Fluorene BRL 0.10 238651 02/28/2017 22:25 YH BRL 0.050 ug/L 238651 02/28/2017 22:25 YH Phenanthrene ug/L Anthracene **BRL** 0.050 238651 02/28/2017 22:25 YH BRL 0.10 ug/L 238651 02/28/2017 22:25 YH Fluoranthene BRL 0.050 ug/L 238651 02/28/2017 22:25 YH Pyrene ug/L BRL 0.050238651 1 02/28/2017 22:25 YΗ Benz(a)anthracene BRL 0.050 ug/L 238651 02/28/2017 22:25 YH Chrysene ug/L YH **BRL** 0.10 238651 02/28/2017 22:25 Benzo(b)fluoranthene Benzo(k)fluoranthene BRL 0.050 ug/L 238651 02/28/2017 22:25 YH ug/L 238651 Benzo(a)pyrene BRL 0.05002/28/2017 22:25 YH ug/L Indeno(1,2,3-cd)pyrene BRL 0.050 238651 02/28/2017 22:25 YH ug/L Dibenz(a,h)anthracene BRL 0.10 238651 02/28/2017 22:25 YH BRL ug/L 238651 02/28/2017 22:25 YH 0.10 1 Benzo(g,h,i)perylene %REC Surr: 4-Terphenyl-d14 88.3 58.5-125 238651 02/28/2017 22:25 YH Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C) 238646 BRL 10 ug/L 02/27/2017 23:37 YH 2,4-Dimethylphenol BRL 10 ug/L 238646 02/27/2017 23:37 YH 2-Methylphenol ug/L **BRL** 10 238646 02/27/2017 23:37 YH 3,4-Methylphenol Phenol BRL 10 ug/L 238646 1 02/27/2017 23:37 YH %REC Surr: 2,4,6-Tribromophenol 110 50-142 238646 1 02/27/2017 23:37 YΗ 85 46-124 %REC 238646 02/27/2017 23:37 YH Surr: 2-Fluorobiphenyl %REC Surr: 2-Fluorophenol 62.7 25.3-120 238646 02/27/2017 23:37 YH %REC 113 45.1-133 238646 02/27/2017 23:37 YH Surr: 4-Terphenyl-d14 %REC Surr: Nitrobenzene-d5 83.8 40.1-121 238646 02/27/2017 23:37 YH %REC Surr: Phenol-d5 43.1 16.3-120 238646 02/27/2017 23:37 YH

Qualifiers:

Date:

3-Mar-17

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

 Client:
 ERM-Southeast
 Client Sample ID:
 MW-26D-20170222-01

 Project Name:
 AGLC Macon
 Collection Date:
 2/22/2017 3:05:00 PM

 Lab ID:
 1702K47-019
 Matrix:
 Groundwater

Date:

3-Mar-17

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS S	W8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238828	1	03/01/2017 07:10	NP
Carbon disulfide	BRL	5.0		ug/L	238828	1	03/01/2017 07:10	NP
Ethylbenzene	BRL	5.0		ug/L	238828	1	03/01/2017 07:10	NP
Toluene	BRL	5.0		ug/L	238828	1	03/01/2017 07:10	NP
Xylenes, Total	BRL	5.0		ug/L	238828	1	03/01/2017 07:10	NP
Surr: 4-Bromofluorobenzene	93.6	66.1-129		%REC	238828	1	03/01/2017 07:10	NP
Surr: Dibromofluoromethane	97	83.6-123		%REC	238828	1	03/01/2017 07:10	NP
Surr: Toluene-d8	94.3	81.8-118		%REC	238828	1	03/01/2017 07:10	NP
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	BRL	0.50		ug/L	238651	1	02/28/2017 22:50	YH
Acenaphthylene	BRL	1.0		ug/L	238651	1	02/28/2017 22:50	YH
Acenaphthene	BRL	0.50		ug/L	238651	1	02/28/2017 22:50	YH
Fluorene	BRL	0.10		ug/L	238651	1	02/28/2017 22:50	YH
Phenanthrene	BRL	0.050		ug/L	238651	1	02/28/2017 22:50	YH
Anthracene	BRL	0.050		ug/L	238651	1	02/28/2017 22:50	YH
Fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 22:50	YH
Pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 22:50	YH
Benz(a)anthracene	BRL	0.050		ug/L	238651	1	02/28/2017 22:50	YH
Chrysene	BRL	0.050		ug/L	238651	1	02/28/2017 22:50	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238651	1	02/28/2017 22:50	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238651	1	02/28/2017 22:50	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 22:50	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238651	1	02/28/2017 22:50	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238651	1	02/28/2017 22:50	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238651	1	02/28/2017 22:50	YH
Surr: 4-Terphenyl-d14	84.1	58.5-125		%REC	238651	1	02/28/2017 22:50	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238646	1	02/28/2017 00:03	YH
2-Methylphenol	BRL	10		ug/L	238646	1	02/28/2017 00:03	YH
3,4-Methylphenol	BRL	10		ug/L	238646	1	02/28/2017 00:03	YH
Phenol	BRL	10		ug/L	238646	1	02/28/2017 00:03	YH
Surr: 2,4,6-Tribromophenol	102	50-142		%REC	238646	1	02/28/2017 00:03	YH
Surr: 2-Fluorobiphenyl	81.9	46-124		%REC	238646	1	02/28/2017 00:03	YH
Surr: 2-Fluorophenol	66.4	25.3-120		%REC	238646	1	02/28/2017 00:03	YH
Surr: 4-Terphenyl-d14	101	45.1-133		%REC	238646	1	02/28/2017 00:03	YH
Surr: Nitrobenzene-d5	82.4	40.1-121		%REC	238646	1	02/28/2017 00:03	YH
Surr: Phenol-d5	46.2	16.3-120		%REC	238646	1	02/28/2017 00:03	YH

Qualifiers:

BRL Below reporting limit

<sup>\*</sup> Value exceeds maximum contaminant level

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

J Estimated value detected below Reporting Limit

MW-307D-20170222-01 **Client Sample ID: Client: ERM-Southeast Collection Date:** 2/22/2017 4:20:00 PM Project Name: AGLC Macon Lab ID:

Date:

3-Mar-17

1702K47-020 Matrix: Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS	SW8260B			(SW	(5030B)			
Benzene	BRL	5.0		ug/L	238828	1	03/01/2017 07:36	NP
Carbon disulfide	BRL	5.0		ug/L	238828	1	03/01/2017 07:36	NP
Ethylbenzene	BRL	5.0		ug/L	238828	1	03/01/2017 07:36	NP
Toluene	BRL	5.0		ug/L	238828	1	03/01/2017 07:36	NP
Xylenes, Total	BRL	5.0		ug/L	238828	1	03/01/2017 07:36	NP
Surr: 4-Bromofluorobenzene	95.5	66.1-129		%REC	238828	1	03/01/2017 07:36	NP
Surr: Dibromofluoromethane	94.9	83.6-123		%REC	238828	1	03/01/2017 07:36	NP
Surr: Toluene-d8	94.3	81.8-118		%REC	238828	1	03/01/2017 07:36	NP
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	3510C)			
Naphthalene	1.7	0.50		ug/L	238651	1	03/01/2017 17:32	YH
Acenaphthylene	BRL	1.0		ug/L	238651	1	03/01/2017 17:32	YH
Acenaphthene	1.3	0.50		ug/L	238651	1	03/01/2017 17:32	YH
Fluorene	0.42	0.10		ug/L	238651	1	03/01/2017 17:32	YH
Phenanthrene	2.6	0.050		ug/L	238651	1	03/01/2017 17:32	YH
Anthracene	0.29	0.050		ug/L	238651	1	03/01/2017 17:32	YH
Fluoranthene	0.27	0.10		ug/L	238651	1	03/01/2017 17:32	YH
Pyrene	0.30	0.050		ug/L	238651	1	03/01/2017 17:32	YH
Benz(a)anthracene	BRL	0.050		ug/L	238651	1	03/01/2017 17:32	YH
Chrysene	BRL	0.050		ug/L	238651	1	03/01/2017 17:32	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238651	1	03/01/2017 17:32	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238651	1	03/01/2017 17:32	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238651	1	03/01/2017 17:32	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238651	1	03/01/2017 17:32	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238651	1	03/01/2017 17:32	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238651	1	03/01/2017 17:32	YH
Surr: 4-Terphenyl-d14	87.2	58.5-125		%REC	238651	1	03/01/2017 17:32	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238646	1	02/28/2017 12:47	YH
2-Methylphenol	BRL	10		ug/L	238646	1	02/28/2017 12:47	YH
3,4-Methylphenol	BRL	10		ug/L	238646	1	02/28/2017 12:47	YH
Phenol	BRL	10		ug/L	238646	1	02/28/2017 12:47	YH
Surr: 2,4,6-Tribromophenol	124	50-142		%REC	238646	1	02/28/2017 12:47	YH
Surr: 2-Fluorobiphenyl	91.4	46-124		%REC	238646	1	02/28/2017 12:47	YH
Surr: 2-Fluorophenol	63.5	25.3-120		%REC	238646	1	02/28/2017 12:47	YH
Surr: 4-Terphenyl-d14	99.8	45.1-133		%REC	238646	1	02/28/2017 12:47	YH
Surr: Nitrobenzene-d5	90.4	40.1-121		%REC	238646	1	02/28/2017 12:47	YH
Surr: Phenol-d5	48	16.3-120		%REC	238646	1	02/28/2017 12:47	YH

Qualifiers:

Value exceeds maximum contaminant level

BRL Below reporting limit

Н Holding times for preparation or analysis exceeded

Analyte not NELAC certified

Analyte detected in the associated method blank

Greater than Result value

E Estimated (value above quantitation range)

Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

**Client Sample ID: Client: ERM-Southeast** MW-300D-20170222-01 **Collection Date:** Project Name: AGLC Macon 2/22/2017 5:55:00 PM Lab ID:

Date:

3-Mar-17

1702K47-021 Matrix: Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS S	SW8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238687	1	02/25/2017 22:02	JE
Carbon disulfide	BRL	5.0		ug/L	238687	1	02/25/2017 22:02	JE
Ethylbenzene	BRL	5.0		ug/L	238687	1	02/25/2017 22:02	JE
Toluene	BRL	5.0		ug/L	238687	1	02/25/2017 22:02	JE
Xylenes, Total	BRL	5.0		ug/L	238687	1	02/25/2017 22:02	JE
Surr: 4-Bromofluorobenzene	99.8	66.1-129		%REC	238687	1	02/25/2017 22:02	JE
Surr: Dibromofluoromethane	95.1	83.6-123		%REC	238687	1	02/25/2017 22:02	JE
Surr: Toluene-d8	99.8	81.8-118		%REC	238687	1	02/25/2017 22:02	JE
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	BRL	0.50		ug/L	238785	1	03/01/2017 15:32	RF
Acenaphthylene	BRL	1.0		ug/L	238785	1	03/01/2017 15:32	RF
Acenaphthene	BRL	0.50		ug/L	238785	1	03/01/2017 15:32	RF
Fluorene	BRL	0.10		ug/L	238785	1	03/01/2017 15:32	RF
Phenanthrene	BRL	0.050		ug/L	238785	1	03/01/2017 15:32	RF
Anthracene	BRL	0.050		ug/L	238785	1	03/01/2017 15:32	RF
Fluoranthene	BRL	0.10		ug/L	238785	1	03/01/2017 15:32	RF
Pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 15:32	RF
Benz(a)anthracene	BRL	0.050		ug/L	238785	1	03/01/2017 15:32	RF
Chrysene	BRL	0.050		ug/L	238785	1	03/01/2017 15:32	RF
Benzo(b)fluoranthene	BRL	0.10		ug/L	238785	1	03/01/2017 15:32	RF
Benzo(k)fluoranthene	BRL	0.050		ug/L	238785	1	03/01/2017 15:32	RF
Benzo(a)pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 15:32	RF
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 15:32	RF
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238785	1	03/01/2017 15:32	RF
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238785	1	03/01/2017 15:32	RF
Surr: 4-Terphenyl-d14	74.1	58.5-125		%REC	238785	1	03/01/2017 15:32	RF
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238646	1	02/28/2017 16:53	YH
2-Methylphenol	BRL	10		ug/L	238646	1	02/28/2017 16:53	YH
3,4-Methylphenol	BRL	10		ug/L	238646	1	02/28/2017 16:53	YH
Phenol	BRL	10		ug/L	238646	1	02/28/2017 16:53	YH
Surr: 2,4,6-Tribromophenol	100	50-142		%REC	238646	1	02/28/2017 16:53	YH
Surr: 2-Fluorobiphenyl	83.3	46-124		%REC	238646	1	02/28/2017 16:53	YH
Surr: 2-Fluorophenol	55.9	25.3-120		%REC	238646	1	02/28/2017 16:53	YH
Surr: 4-Terphenyl-d14	97.9	45.1-133		%REC	238646	1	02/28/2017 16:53	YH
Surr: Nitrobenzene-d5	86.4	40.1-121		%REC	238646	1	02/28/2017 16:53	YH
Surr: Phenol-d5	41.7	16.3-120		%REC	238646	1	02/28/2017 16:53	YH

Qualifiers:

BRL Below reporting limit

Value exceeds maximum contaminant level

Н Holding times for preparation or analysis exceeded

Analyte not NELAC certified

Analyte detected in the associated method blank

Greater than Result value

E Estimated (value above quantitation range)

Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

Client: ERM-Southeast Client Sample ID: TB-01-20170223-01

Project Name:AGLC MaconCollection Date:2/23/2017Lab ID:1702K47-022Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/M	1S SW8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238687	1	02/25/2017 13:53	JE
Carbon disulfide	BRL	5.0		ug/L	238687	1	02/25/2017 13:53	JE
Ethylbenzene	BRL	5.0		ug/L	238687	1	02/25/2017 13:53	JE
Toluene	BRL	5.0		ug/L	238687	1	02/25/2017 13:53	JE
Xylenes, Total	BRL	5.0		ug/L	238687	1	02/25/2017 13:53	JE
Surr: 4-Bromofluorobenzene	99.9	66.1-129		%REC	238687	1	02/25/2017 13:53	JE
Surr: Dibromofluoromethane	100	83.6-123		%REC	238687	1	02/25/2017 13:53	JE
Surr: Toluene-d8	100	81.8-118		%REC	238687	1	02/25/2017 13:53	JE

Date:

3-Mar-17

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative NC Not confirmed

< Less than Result value

Client: ERM-Southeast Client Sample ID: TB-02-20170223-01

Project Name:AGLC MaconCollection Date:2/23/2017Lab ID:1702K47-023Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/N	MS SW8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238687	1	02/25/2017 14:19	JE
Carbon disulfide	BRL	5.0		ug/L	238687	1	02/25/2017 14:19	JE
Ethylbenzene	BRL	5.0		ug/L	238687	1	02/25/2017 14:19	JE
Toluene	BRL	5.0		ug/L	238687	1	02/25/2017 14:19	JE
Xylenes, Total	BRL	5.0		ug/L	238687	1	02/25/2017 14:19	JE
Surr: 4-Bromofluorobenzene	97.8	66.1-129		%REC	238687	1	02/25/2017 14:19	JE
Surr: Dibromofluoromethane	96.8	83.6-123		%REC	238687	1	02/25/2017 14:19	JE
Surr: Toluene-d8	101	81.8-118		%REC	238687	1	02/25/2017 14:19	JE

Date:

3-Mar-17

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative NC Not confirmed

Less than Result value

Client: ERM-Southeast Client Sample ID: TB-03-20170223-01

Project Name:AGLC MaconCollection Date:2/23/2017Lab ID:1702K47-024Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/N	MS SW8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238687	1	02/25/2017 14:44	JE
Carbon disulfide	BRL	5.0		ug/L	238687	1	02/25/2017 14:44	JE
Ethylbenzene	BRL	5.0		ug/L	238687	1	02/25/2017 14:44	JE
Toluene	BRL	5.0		ug/L	238687	1	02/25/2017 14:44	JE
Xylenes, Total	BRL	5.0		ug/L	238687	1	02/25/2017 14:44	JE
Surr: 4-Bromofluorobenzene	98.7	66.1-129		%REC	238687	1	02/25/2017 14:44	JE
Surr: Dibromofluoromethane	99	83.6-123		%REC	238687	1	02/25/2017 14:44	JE
Surr: Toluene-d8	100	81.8-118		%REC	238687	1	02/25/2017 14:44	JE

Date:

3-Mar-17

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative NC Not confirmed

< Less than Result value

Client: ERM-Southeast Client Sample ID: TB-04-20170223-01

Project Name:AGLC MaconCollection Date:2/23/2017Lab ID:1702K47-025Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/N	MS SW8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238687	1	02/25/2017 15:10	JE
Carbon disulfide	BRL	5.0		ug/L	238687	1	02/25/2017 15:10	JE
Ethylbenzene	BRL	5.0		ug/L	238687	1	02/25/2017 15:10	JE
Toluene	BRL	5.0		ug/L	238687	1	02/25/2017 15:10	JE
Xylenes, Total	BRL	5.0		ug/L	238687	1	02/25/2017 15:10	JE
Surr: 4-Bromofluorobenzene	99.7	66.1-129		%REC	238687	1	02/25/2017 15:10	JE
Surr: Dibromofluoromethane	98	83.6-123		%REC	238687	1	02/25/2017 15:10	JE
Surr: Toluene-d8	98.7	81.8-118		%REC	238687	1	02/25/2017 15:10	JE

Date:

3-Mar-17

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative NC Not confirmed

< Less than Result value

Client: ERM-Southeast Client Sample ID: TB-05-20170223-01

Project Name:AGLC MaconCollection Date:2/23/2017Lab ID:1702K47-026Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/M	MS SW8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238687	1	02/25/2017 15:36	JE
Carbon disulfide	BRL	5.0		ug/L	238687	1	02/25/2017 15:36	JE
Ethylbenzene	BRL	5.0		ug/L	238687	1	02/25/2017 15:36	JE
Toluene	BRL	5.0		ug/L	238687	1	02/25/2017 15:36	JE
Xylenes, Total	BRL	5.0		ug/L	238687	1	02/25/2017 15:36	JE
Surr: 4-Bromofluorobenzene	98	66.1-129		%REC	238687	1	02/25/2017 15:36	JE
Surr: Dibromofluoromethane	95.6	83.6-123		%REC	238687	1	02/25/2017 15:36	JE
Surr: Toluene-d8	100	81.8-118		%REC	238687	1	02/25/2017 15:36	JE

Date:

3-Mar-17

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative
NC Not confirmed

Less than Result value

Client: ERM-Southeast Client Sample ID: TB-06-20170223-01

Project Name:AGLC MaconCollection Date:2/23/2017Lab ID:1702K47-027Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/M	AS SW8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238687	1	02/25/2017 16:02	JE
Carbon disulfide	BRL	5.0		ug/L	238687	1	02/25/2017 16:02	JE
Ethylbenzene	BRL	5.0		ug/L	238687	1	02/25/2017 16:02	JE
Toluene	BRL	5.0		ug/L	238687	1	02/25/2017 16:02	JE
Xylenes, Total	BRL	5.0		ug/L	238687	1	02/25/2017 16:02	JE
Surr: 4-Bromofluorobenzene	98.5	66.1-129		%REC	238687	1	02/25/2017 16:02	JE
Surr: Dibromofluoromethane	97.2	83.6-123		%REC	238687	1	02/25/2017 16:02	JE
Surr: Toluene-d8	99.7	81.8-118		%REC	238687	1	02/25/2017 16:02	JE

Date:

3-Mar-17

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative NC Not confirmed

Less than Result value



#### SAMPLE/COOLER RECEIPT CHECKLIST

1	. Client Name:				AES Work Order Number	r:
2.	Carrier: FedEx UPS USPS Client Courier Other					
		Yes	No	N/A	Details	Comments
3	Shipping container/cooler received in good condition?				damaged leaking other	
4	Custody seals present on shipping container?					
5	Custody seals intact on shipping container?					
6	Temperature blanks present?					
7	Cooler temperature(s) within limits of 0-6°C? [See item 13 and 14 for temperature recordings.]				Cooling initiated for recently collected samples / ice	
Q	Chain of Custody (COC) present?				present	
9						
	Sampler name and/or signature on COC?					
11						
12	·				If no TAT indicated, proceeded with standard TAT per Te	orms & Conditions
12	TAT Harked on the coe:				in no tat indicated, proceeded with standard tat per re	ernis & conditions.
13	Cooler 1 Temperature Cooler 5 Temperature Cooler 5 Temperature Cooler 6 Temperature					er 4 Temperature °C
	Cooler 5 Temperature °C Cooler 6 Temperature		°(	0	Cooler 7 Temperature °C Cooler	8 Temperature °C
15	. Comments:					
					I certify that I have co	mpleted sections 1-15 (dated initials).
		Yes	No	N/A	Details	Comments
16	Were sample containers intact upon receipt?					
17	Custody seals present on sample containers?					
18	Custody seals intact on sample containers?					
19	Do sample container labels match the COC?				incomplete info illegible no label other	
20	Are analyses requested indicated on the COC?					
21	Were all of the samples listed on the COC received?				samples received but not listed on COC samples listed on COC not received	
22	Was the sample collection date/time noted?					
23	Did we receive sufficient sample volume for indicated analyses?					
24	Were samples received in appropriate containers?					
25	Were VOA samples received without headspace (< 1/4" bubble)?					
26	Were trip blanks submitted?				listed on COC not listed on COC	
27	. Comments:	•	•	-		
					I certify that I have co	mpleted sections 16-27 (dated initials).
		Yes	No	N/A	Details	Comments
28	Have containers needing chemical preservation been checked?					
	Containers meet preservation guidelines?					
	Was pH adjusted?					
		1		1		

I certify that I have completed sections 28-30 (dated initials).

**Client:** 

**Project Name:** 

Workorder:

ANALYTICAL QC SUMMARY REPORT

Date:

3-Mar-17

ERM-Southeast AGLC Macon

1702K47

BatchID: 238499

Sample ID: MB-238499 SampleType: MBLK	Client ID: TestCode: Semivolatile Org. Comp. by GC/MS SW8270D				Uni Bat	its: <b>ug/L</b> chID: <b>238499</b>		Prep Date:         02/23/2017         Run No:         337132           Analysis Date:         02/23/2017         Seq No:         7363956				
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Re	f Val	%RPD	RPD Limit	Qual
2,4-Dimethylphenol	BRL	10										
2-Methylphenol	BRL	10										
3,4-Methylphenol	BRL	10										
Phenol	BRL	10										
Surr: 2,4,6-Tribromophenol	86.45	0	100.0		86.4	50	142					
Surr: 2-Fluorobiphenyl	32.54	0	50.00		65.1	46	124					
Surr: 2-Fluorophenol	39.68	0	100.0		39.7	25.3	120					
Surr: 4-Terphenyl-d14	43.03	0	50.00		86.1	45.1	133					
Surr: Nitrobenzene-d5	36.54	0	50.00		73.1	40.1	121					
Surr: Phenol-d5	22.89	0	100.0		22.9	16.3	120					
Sample ID: LCS-238499 SampleType: LCS	Client ID: TestCode: Sen	nivolatile Org. Comp.	by GC/MS SW	/8270D	Uni Bat	its: <b>ug/L</b> chID: <b>238499</b>		p Date: alysis Date:	02/23/20 02/23/20		Run No: <b>3371</b> 3 Seq No: <b>7363</b> 9	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Re	f Val	%RPD	RPD Limit	Qual
Phenol	30.38	10	100.0		30.4	25	120					
Surr: 2,4,6-Tribromophenol	103.2	0	100.0		103	50	142					
Surr: 2-Fluorobiphenyl	40.36	0	50.00		80.7	46	124					
Surr: 2-Fluorophenol	53.49	0	100.0		53.5	25.3	120					
Surr: 4-Terphenyl-d14	53.61	0	50.00		107	45.1	133					
Surr: Nitrobenzene-d5	43.32	0	50.00		86.6	40.1	121					
Surr: Phenol-d5	33.83	0	100.0		33.8	16.3	120					
Sample ID: 1702J67-001CMS SampleType: MS	Client ID: TestCode: Sen	nivolatile Org. Comp.	by GC/MS SW	/8270D	Uni Bat	its: ug/L chID: <b>238499</b>		p Date: alysis Date:	02/23/20 02/23/20		Run No: <b>3371</b> 3 Seq No: <b>7366</b> 4	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Re	f Val	%RPD	RPD Limit	Qual
Phenol	34.62	10	100.0		34.6	31.5	120					
Qualifiers: > Greater than Result val  BRL Below reporting limit  J Estimated value detec  Rpt Lim Reporting Limit	ted below Reporting Lim	it	E Estim N Analy	than Result value ated (value above quantita te not NELAC certified Recovery outside limits d			Н	Analyte detected Holding times fo RPD outside lin	or preparation of	r analysis ex		

**Client: ERM-Southeast** 

**Project Name:** AGLC Macon Workorder: 1702K47

# ANALYTICAL QC SUMMARY REPORT

BatchID: 238499

Date:

3-Mar-17

Sample ID: 1702J67-001CMS	Client ID:				Uni	its: ug/L	Prep	Date: 02/2.	3/2017	Run No: 337132	2
SampleType: MS	TestCode:	Semivolatile Org. Comp.	by GC/MS SW	/8270D	Bat	chID: 238499	Ana	lysis Date: 02/23	3/2017	Seq No: <b>736646</b>	58
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: 2,4,6-Tribromophenol	98.55	0	100.0		98.6	50	142				
Surr: 2-Fluorobiphenyl	36.56	0	50.00		73.1	46	124				
Surr: 2-Fluorophenol	53.63	0	100.0		53.6	25.3	120				
Surr: 4-Terphenyl-d14	48.91	0	50.00		97.8	45.1	133				
Surr: Nitrobenzene-d5	39.96	0	50.00		79.9	40.1	121				
Surr: Phenol-d5	37.03	0	100.0		37.0	16.3	120				
Sample ID: 1702J67-001CMSD	Client ID:				Uni	its: ug/L	Prep	Date: 02/23	3/2017	Run No: <b>337132</b>	2
SampleType: MSD	TestCode:	Semivolatile Org. Comp.	by GC/MS SW	/8270D	Bat	chID: 238499	Ana	lysis Date: 02/23	3/2017	Seq No: <b>736646</b>	59
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Phenol	37.17	10	100.0		37.2	31.5	120	34.62	7.10	28.5	
Surr: 2,4,6-Tribromophenol	92.98	0	100.0		93.0	50	142	98.55	0	0	
Surr: 2-Fluorobiphenyl	36.11	0	50.00		72.2	46	124	36.56	0	0	
Surr: 2-Fluorophenol	56.99	0	100.0		57.0	25.3	120	53.63	0	0	
Surr: 4-Terphenyl-d14	46.17	0	50.00		92.3	45.1	133	48.91	0	0	
Surr: Nitrobenzene-d5	39.01	0	50.00		78.0	40.1	121	39.96	0	0	
Surr: Phenol-d5	39.99	0	100.0		40.0	16.3	120	37.03	0	0	

Qualifiers: Greater than Result value

> BRL Below reporting limit

Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

Date: 3-Mar-17

ERM-Southeast Client: **Project Name:** AGLC Macon Workorder: 1702K47

# ANALYTICAL QC SUMMARY REPORT

BatchID: 238646

Sample ID: MB-238646	Client ID:				Un			p Date:	02/27/2017		337320
SampleType: MBLK	TestCode: So	emivolatile Org. Comp.	. by GC/MS SW	V8270D	Bat	chID: 238646	Ana	alysis Date:	02/27/2017	Seq No:	7368780
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	Val %RF	D RPD	D Limit Qua
,4-Dimethylphenol	BRL	10									
-Methylphenol	BRL	10									
,4-Methylphenol	BRL	10									
henol	BRL	10									
Surr: 2,4,6-Tribromophenol	99.58	0	100.0		99.6	50	142				
Surr: 2-Fluorobiphenyl	41.43	0	50.00		82.9	46	124				
Surr: 2-Fluorophenol	43.38	0	100.0		43.4	25.3	120				
Surr: 4-Terphenyl-d14	44.59	0	50.00		89.2	45.1	133				
Surr: Nitrobenzene-d5	43.48	0	50.00		87.0	40.1	121				
Surr: Phenol-d5	25.19	0	100.0		25.2	16.3	120				
Sample ID: LCS-238646	Client ID:				Un	its: ug/L	Prep	p Date:	02/27/2017	Run No:	337316
SampleType: LCS	TestCode: Se	emivolatile Org. Comp.	. by GC/MS SW	V8270D	Bat	chID: 238646	Ana	alysis Date:	02/27/2017	Seq No:	7368856
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	Val %RF	D RPE	D Limit Qua
henol	25.68	10	100.0		25.7	25	120				
Surr: 2,4,6-Tribromophenol	89.19	0	100.0		89.2	50	142				
Surr: 2-Fluorobiphenyl	35.17	0	50.00		70.3	46	124				
Surr: 2-Fluorophenol	45.39	0	100.0		45.4	25.3	120				
Surr: 4-Terphenyl-d14	45.00	0	50.00		90.0	45.1	133				
Surr: Nitrobenzene-d5	37.78	0	50.00		75.6	40.1	121				
Surr: Phenol-d5	28.48	0	100.0		28.5	16.3	120				
Sample ID: 1702K47-006BMS SampleType: MS		IW-22D-20170221 emivolatile Org. Comp.		V8270D	Un Bat	its: <b>ug/L</b> cchID: <b>238646</b>		p Date: alysis Date:	02/27/2017 02/27/2017		337320 7370526
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	Val %RF	D RPE	D Limit Qua
henol	34.37	10	100.0		34.4	31.5	120				
ualifiers: > Greater than Result valu  BRL Below reporting limit  J Estimated value detecte		nit	E Estim	than Result value nated (value above quantity	ation range)		Н	-	in the associated meth		

**Client:** ERM-Southeast

Project Name: AGLC Macon
Workorder: 1702K47

## ANALYTICAL QC SUMMARY REPORT

Date:

3-Mar-17

BatchID: 238646

Sample ID: 1702K47-006BMS	Client ID:	MW-22D-20170221-	Units: ug/L			Date: 02/27	// <b>2017</b> F	Run No: 33732	0		
SampleType: MS	TestCode:	Semivolatile Org. Comp.	by GC/MS SW	V8270D	Bat	chID: 238646	Ana	lysis Date: 02/27	//2017	Seq No: 73705	26
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: 2,4,6-Tribromophenol	97.96	0	100.0		98.0	50	142				
Surr: 2-Fluorobiphenyl	38.16	0	50.00		76.3	46	124				
Surr: 2-Fluorophenol	51.26	0	100.0		51.3	25.3	120				
Surr: 4-Terphenyl-d14	41.70	0	50.00		83.4	45.1	133				
Surr: Nitrobenzene-d5	38.86	0	50.00		77.7	40.1	121				
Surr: Phenol-d5	37.08	0	100.0		37.1	16.3	120				
Sample ID: 1702K47-006BMSD	Client ID:	MW-22D-20170221-	Uni	its: ug/L	Prep	Date: 02/27	7/ <b>2017</b> F	Run No: <b>33732</b>	0		
SampleType: MSD	TestCode:	Semivolatile Org. Comp.	by GC/MS SW	V8270D	Bat	chID: 238646	Ana	lysis Date: 02/27	7/2017 S	Seq No: 73705	27
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Phenol	30.41	10	100.0		30.4	31.5	120	34.37	12.2	28.5	S
Surr: 2,4,6-Tribromophenol	93.29	0	100.0		93.3	50	142	97.96	0	0	
Surr: 2-Fluorobiphenyl	36.75	0	50.00		73.5	46	124	38.16	0	0	
Surr: 2-Fluorophenol	46.71	0	100.0		46.7	25.3	120	51.26	0	0	
Surr: 4-Terphenyl-d14	42.53	0	50.00		85.1	45.1	133	41.70	0	0	
Surr: Nitrobenzene-d5	38.23	0	50.00		76.5	40.1	121	38.86	0	0	
Surr: Phenol-d5	32.51	0	100.0		32.5	16.3	120	37.08	0	0	

Qualifiers: > Greater than Result value

BRL Below reporting limit

J Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

< Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

Date: 3-Mar-17

ERM-Southeast **Client: Project Name:** AGLC Macon Workorder: 1702K47

# ANALYTICAL QC SUMMARY REPORT

BatchID: 238651

Sample ID: MB-238651 SampleType: MBLK	Client ID: TestCode: SIM	I Polynuclear Aroma	tic Hydrocarbons	SW8270D	Uni Bat	ts: <b>ug/L</b> chID: <b>238651</b>		ep Date:	02/27/2017 02/28/2017	Run No: <b>337317</b> Seq No: <b>7371201</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC		High Limit			•
Acenaphthene	BRL	0.50								
Acenaphthylene	BRL	1.0								
Anthracene	BRL	0.050								
Benz(a)anthracene	BRL	0.050								
Benzo(a)pyrene	BRL	0.050								
Benzo(b)fluoranthene	BRL	0.10								
Benzo(g,h,i)perylene	BRL	0.10								
Benzo(k)fluoranthene	BRL	0.050								
Chrysene	BRL	0.050								
Dibenz(a,h)anthracene	BRL	0.10								
luoranthene	BRL	0.10								
luorene	BRL	0.10								
ndeno(1,2,3-cd)pyrene	BRL	0.050								
Vaphthalene	BRL	0.50								
henanthrene	BRL	0.050								
yrene	BRL	0.050								
Surr: 4-Terphenyl-d14	1.957	0	2.000		97.9	58.5	125			
Sample ID: LCS-238651	Client ID:				Uni	_		ep Date:	02/27/2017	Run No: <b>337317</b>
SampleType: LCS	TestCode: SIM	I Polynuclear Aromat	tic Hydrocarbons	SW8270D	Bat	chID: 238651	Ar	alysis Date:	02/28/2017	Seq No: <b>7371202</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Re	f Val %RPI	O RPD Limit Qual
cenaphthene	1.977	0.50	2.000		98.9	69.1	117			
cenaphthylene	1.915	1.0	2.000		95.7	59.7	118			
Anthracene	2.255	0.050	2.000		113	64.7	121			
Benz(a)anthracene	2.453	0.050	2.000		123	61.7	139			
Benzo(a)pyrene	2.144	0.050	2.000		107	65.1	124			
Benzo(b)fluoranthene	1.910	0.10	2.000		95.5	60.8	129			
Qualifiers: > Greater than Resu	ılt value		< Less t	han Result value			В	Analyte detected	in the associated metho	d blank
BRL Below reporting li	imit		E Estima	ated (value above quantita	ation range)		Н	Holding times fo	or preparation or analysis	s exceeded
	detected below Reporting Limi	t	-	te not NELAC certified			R	RPD outside lim	nits due to matrix	
Rpt Lim Reporting Limit			S Spike	Recovery outside limits of	lue to matrix					Page 37 of 48

ANALYTICAL QC SUMMARY REPORT

**Date:** 3-Mar-17

BatchID: 238651

Client:	ERM-Southeast
<b>Project Name:</b>	AGLC Macon
Workorder:	1702K47

Sample ID: LCS-238651 SampleType: LCS	Client ID: TestCode:	SIM Polynuclear Aromatic	Hydrocarbons	SW8270D	Uni Bat	its: <b>ug/L</b> chID: <b>238651</b>	•	Date: alysis Date:		Run No: <b>337317</b> Seq No: <b>7371202</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	Val %RPD	RPD Limit Qual
Benzo(g,h,i)perylene	1.972	0.10	2.000		98.6	60.1	129			
Benzo(k)fluoranthene	2.042	0.050	2.000		102	69.6	130			
Chrysene	2.292	0.050	2.000		115	76.5	127			
Dibenz(a,h)anthracene	1.765	0.10	2.000		88.2	55.2	126			
Fluoranthene	2.317	0.10	2.000		116	66.5	133			
Fluorene	2.016	0.10	2.000		101	66.1	122			
Indeno(1,2,3-cd)pyrene	2.059	0.050	2.000		103	58.8	132			
Naphthalene	1.959	0.50	2.000		97.9	60.6	120			
Phenanthrene	2.027	0.050	2.000		101	65.9	118			
Pyrene	2.208	0.050	2.000		110	70.2	129			
Surr: 4-Terphenyl-d14	2.184	0	2.000		109	58.5	125			
Sample ID: 1702K47-006BMS	Client ID:	MW-22D-20170221-0	1		Uni	its: ug/L	Prep	Date:	02/27/2017	Run No: <b>337317</b>
SampleType: MS	TestCode:	SIM Polynuclear Aromatic	Hydrocarbons	SW8270D	Bat	chID: 238651	Ana	llysis Date:	02/28/2017	Seq No: <b>7372719</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	Val %RPD	RPD Limit Qual
Acenaphthene	1.617	0.50	2.000		80.8	49.7	118			
Acenaphthylene	1.598	1.0	2.000		79.9	56.7	120			
Anthracene	1.843	0.050	2.000		92.1	54.4	117			
Benz(a)anthracene	2.290	0.050	2.000		115	52.4	135			
Benzo(a)pyrene	1.839	0.050	2.000		92.0	51.5	117			
Benzo(b)fluoranthene	1.714	0.10	2.000		85.7	45.6	124			
Benzo(g,h,i)perylene	1.581	0.10	2.000	0.06434	75.8	45.9	120			
Benzo(k)fluoranthene	1.647	0.050	2.000		82.4	51.8	122			
Chrysene	1.923	0.050	2.000		96.1	59.9	120			
Dibenz(a,h)anthracene	1.569	0.10	2.000	0.06345	75.3	41.6	120			
Fluoranthene	1.952	0.10	2.000		97.6	59.7	122			
Fluorene	1.687	0.10	2.000		84.3	57.9	117			
Qualifiers: > Greater than Result val	ue		< Less t	han Result value			В	Analyte detected is	n the associated method	blank

BRL Below reporting limit

Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

**Client: ERM-Southeast** 

**Project Name:** AGLC Macon Workorder: 1702K47

# ANALYTICAL QC SUMMARY REPORT

Date:

3-Mar-17

BatchID: 238651

Sample ID: 1702K47-006BMS SampleType: MS		MW-22D-20170221- SIM Polynuclear Aromat		SW8270D	Uni Bat	ts: ug/L chID: 238651		Date: 02/27 lysis Date: 02/28		Run No: <b>337317</b> Seq No: <b>7372719</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Indeno(1,2,3-cd)pyrene	1.721	0.050	2.000	0.05590	83.3	45.5	120			
Naphthalene	1.648	0.50	2.000	0.02203	81.3	53.9	120			
Phenanthrene	1.669	0.050	2.000		83.5	58.1	120			
Pyrene	1.903	0.050	2.000		95.2	61.6	120			
Surr: 4-Terphenyl-d14	2.086	0	2.000		104	58.5	125			
Sample ID: 1702K47-006BMS SampleType: MS		MW-22D-20170221- SIM Polynuclear Aromat		SW8270D	Uni Bat	ts: <b>ug/L</b> chID: <b>238651</b>		Date: <b>02/27</b> lysis Date: <b>03/01</b>		Run No: <b>337414</b> Seq No: <b>7375211</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Acenaphthene	1.588	0.50	2.000		79.4	49.7	118			
Acenaphthylene	1.570	1.0	2.000		78.5	56.7	120			
Anthracene	1.790	0.050	2.000		89.5	54.4	117			
Benz(a)anthracene	2.146	0.050	2.000		107	52.4	135			
Benzo(a)pyrene	1.778	0.050	2.000		88.9	51.5	117			
Benzo(b)fluoranthene	1.697	0.10	2.000		84.9	45.6	124			
Benzo(g,h,i)perylene	1.498	0.10	2.000	0.06434	71.7	45.9	120			
Benzo(k)fluoranthene	1.666	0.050	2.000		83.3	51.8	122			
Chrysene	1.800	0.050	2.000		90.0	59.9	120			
Dibenz(a,h)anthracene	1.459	0.10	2.000	0.06345	69.8	41.6	120			
Fluoranthene	1.936	0.10	2.000		96.8	59.7	122			
Fluorene	1.638	0.10	2.000		81.9	57.9	117			
Indeno(1,2,3-cd)pyrene	1.684	0.050	2.000	0.05590	81.4	45.5	120			
Naphthalene	1.620	0.50	2.000	0.02203	79.9	53.9	120			
Phenanthrene	1.634	0.050	2.000		81.7	58.1	120			
Pyrene	1.795	0.050	2.000		89.8	61.6	120			
5			2.000		99.2	58.5	125			

Qualifiers:

Greater than Result value

BRL Below reporting limit

Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

**Client:** ERM-Southeast

**Project Name:** 

Workorder:

AGLC Macon

1702K47

ANALYTICAL QC SUMMARY REPORT

Date:

3-Mar-17

BatchID: 238651

Sample ID: <b>1702K47-006BMSD</b>		MW-22D-20170221-01			Uni	its: ug/L	Prep	Date: <b>02/27</b>	/2017	Run No: <b>33731</b>	7
SampleType: MSD	TestCode:	SIM Polynuclear Aromatic Hy	drocarbons	SW8270D	Bat	chID: 238651	Ana	lysis Date: 03/01/	/2017	Seq No: 737272	20
Analyte	Result	RPT Limit SI	PK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.691	0.50	2.000		84.6	49.7	118	1.617	4.50	17.4	
Acenaphthylene	1.657	1.0	2.000		82.9	56.7	120	1.598	3.64	19.5	
Anthracene	1.835	0.050	2.000		91.7	54.4	117	1.843	0.437	24.5	
Benz(a)anthracene	2.262	0.050	2.000		113	52.4	135	2.290	1.23	30.2	
Benzo(a)pyrene	1.768	0.050	2.000		88.4	51.5	117	1.839	3.92	25.6	
Benzo(b)fluoranthene	1.700	0.10	2.000		85.0	45.6	124	1.714	0.871	20.9	
Benzo(g,h,i)perylene	1.318	0.10	2.000	0.06434	62.7	45.9	120	1.581	18.2	28.6	
Benzo(k)fluoranthene	1.591	0.050	2.000		79.6	51.8	122	1.647	3.44	28.6	
Chrysene	1.917	0.050	2.000		95.8	59.9	120	1.923	0.307	26.4	
Dibenz(a,h)anthracene	1.250	0.10	2.000	0.06345	59.3	41.6	120	1.569	22.6	17.8	R
Fluoranthene	1.956	0.10	2.000		97.8	59.7	122	1.952	0.233	22.1	
Fluorene	1.736	0.10	2.000		86.8	57.9	117	1.687	2.88	20.8	
Indeno(1,2,3-cd)pyrene	1.545	0.050	2.000	0.05590	74.5	45.5	120	1.721	10.8	19.3	
Naphthalene	1.680	0.50	2.000	0.02203	82.9	53.9	120	1.648	1.95	20.6	
Phenanthrene	1.697	0.050	2.000		84.8	58.1	120	1.669	1.65	19.4	
Pyrene	1.884	0.050	2.000		94.2	61.6	120	1.903	1.04	21.2	
Surr: 4-Terphenyl-d14	1.779	0	2.000		89.0	58.5	125	2.086	0	0	
Sample ID: 1702K47-006BMSD		MW-22D-20170221-01			Uni	U		Date: 02/27/		Run No: <b>33741</b>	4
SampleType: MSD	TestCode:	SIM Polynuclear Aromatic Hy	drocarbons	SW8270D	Bat	chID: 238651	Ana	lysis Date: 03/01/	/2017	Seq No: 73752	12
Analyte	Result	RPT Limit SI	PK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	1.679	0.50	2.000		83.9	49.7	118	1.617	3.74	17.4	
Acenaphthylene	1.637	1.0	2.000		81.9	56.7	120	1.598	2.45	19.5	
Anthracene	1.808	0.050	2.000		90.4	54.4	117	1.843	1.88	24.5	
Benz(a)anthracene	2.118	0.050	2.000		106	52.4	135	2.290	7.83	30.2	

Qualifiers:

Benzo(a)pyrene

Benzo(b)fluoranthene

1.680

1.642

0.050

0.10

2.000

2.000

84.0

82.1

51.5

45.6

117

124

9.08

4.29

1.839

1.714

25.6

20.9

<sup>&</sup>gt; Greater than Result value

BRL Below reporting limit

J Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

<sup>&</sup>lt; Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

R RPD outside limits due to matrix

**Client: ERM-Southeast** 

Workorder:

**Project Name:** AGLC Macon 1702K47

### ANALYTICAL QC SUMMARY REPORT

Date:

3-Mar-17

BatchID: 238651

Sample ID: 1702K47-006BMSD	Client ID:				Uni			Date: <b>02/27</b> /		Run No: 33741	
SampleType: MSD	TestCode:	SIM Polynuclear Aromat	ic Hydrocarbons	SW8270D	Bat	chID: 238651	Ana	lysis Date: 03/01/	/2017	Seq No: <b>73752</b>	12
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Benzo(g,h,i)perylene	1.285	0.10	2.000	0.06434	61.0	45.9	120	1.581	20.7	28.6	
Benzo(k)fluoranthene	1.583	0.050	2.000		79.2	51.8	122	1.647	3.96	28.6	
Chrysene	1.817	0.050	2.000		90.9	59.9	120	1.923	5.64	26.4	
Dibenz(a,h)anthracene	1.211	0.10	2.000	0.06345	57.4	41.6	120	1.569	25.7	17.8	R
Fluoranthene	1.923	0.10	2.000		96.2	59.7	122	1.952	1.47	22.1	
Fluorene	1.709	0.10	2.000		85.4	57.9	117	1.687	1.31	20.8	
Indeno(1,2,3-cd)pyrene	1.467	0.050	2.000	0.05590	70.5	45.5	120	1.721	16.0	19.3	
Naphthalene	1.668	0.50	2.000	0.02203	82.3	53.9	120	1.648	1.24	20.6	
Phenanthrene	1.665	0.050	2.000		83.3	58.1	120	1.669	0.214	19.4	
Pyrene	1.788	0.050	2.000		89.4	61.6	120	1.903	6.27	21.2	
Surr: 4-Terphenyl-d14	1.701	0	2.000		85.1	58.5	125	2.086	0	0	

Qualifiers: Greater than Result value

> BRL Below reporting limit

Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

1702K47

3-Mar-17 Date:

Client: **ERM-Southeast Project Name:** AGLC Macon Workorder:

# ANALYTICAL QC SUMMARY REPORT

BatchID: 238687

Sample ID: MB-238687 SampleType: MBLK	Client ID: TestCode:	Volatile Organic Compo	unds by GC/MS	SW8260B	Uni Bat	ts: <b>ug/L</b> chID: <b>238687</b>		ep Date: nalysis Date:	02/24/201° 02/24/201°		Run No: <b>33722</b> 5 Seq No: <b>73704</b> 7	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Re	f Val %	%RPD	RPD Limit	Qual
Benzene	BRL	5.0										
Carbon disulfide	BRL	5.0										
Ethylbenzene	BRL	5.0										
Toluene	BRL	5.0										
Kylenes, Total	BRL	5.0										
Surr: 4-Bromofluorobenzene	48.56	0	50.00		97.1	66.1	129					
Surr: Dibromofluoromethane	47.37	0	50.00		94.7	83.6	123					
Surr: Toluene-d8	49.44	0	50.00		98.9	81.8	118					
Sample ID: LCS-238687	Client ID:				Uni	its: ug/L	Pre	ep Date:	02/24/201	7 F	Run No: <b>33722</b>	5
SampleType: LCS	TestCode:	Volatile Organic Compo	unds by GC/MS	SW8260B	Bat	chID: 238687	Ar	nalysis Date:	02/24/201	7 S	Seq No: <b>73704</b>	79
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Re	f Val %	%RPD	RPD Limit	Qual
Benzene	50.37	5.0	50.00		101	74	125					
Toluene	51.16	5.0	50.00		102	75.9	126					
Surr: 4-Bromofluorobenzene	49.20	0	50.00		98.4	66.1	129					
Surr: Dibromofluoromethane	48.10	0	50.00		96.2	83.6	123					
Surr: Toluene-d8	49.20	0	50.00		98.4	81.8	118					
Sample ID: 1702K29-005AMS	Client ID:				Uni	its: ug/L	Pro	ep Date:	02/24/201	7 F	Run No: 33722	5
SampleType: MS	TestCode:	Volatile Organic Compo	unds by GC/MS	SW8260B	Bat	chID: 238687	Ar	nalysis Date:	02/24/201	7 S	Seq No: 737048	81
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Re	f Val %	%RPD	RPD Limit	Qual
Benzene	27510	2500	25000	2515	100.0	71.6	132					
oluene	25790	2500	25000	660.0	101	72.5	135					
Surr: 4-Bromofluorobenzene	24620	0	25000		98.5	66.1	129					
Surr: Dibromofluoromethane	24050	0	25000		96.2	83.6	123					
Surr: Toluene-d8	25070	0	25000		100	81.8	118					
Qualifiers: > Greater than Result val	alue < Less than Result value						В	Analyte detected	in the associated	l method bl	lank	
BRL Below reporting limit E Estimated (value above quantitati			ation range)		Н	Holding times fo	r preparation or a	analysis ex	ceeded			
J Estimated value detect	ted below Reporting	Limit	N Analy	yte not NELAC certified			R	RPD outside lim	its due to matrix			
Rpt Lim Reporting Limit			S Spike	Recovery outside limits of	due to matrix						Page 42 of 48	

**Client:** ERM-Southeast

ANALYTICAL QC SUMMARY REPORT

Date:

3-Mar-17

**Project Name:** AGLC Macon **Workorder:** 1702K47

BatchID: 238687

Sample ID: 1702K29-005AMSD	Client ID:				Uni	ts: ug/L	Prep	Date: 02/24	/2017	Run No: 337225
SampleType: MSD	TestCode:	Volatile Organic Compou	inds by GC/MS	SW8260B	Bate	chID: 238687	Ana	lysis Date: 02/24	/2017	Seq No: <b>7370482</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Benzene	27080	2500	25000	2515	98.3	71.6	132	27510	1.58	20.7
Toluene	25140	2500	25000	660.0	97.9	72.5	135	25790	2.55	23.2
Surr: 4-Bromofluorobenzene	24690	0	25000		98.8	66.1	129	24620	0	0
Surr: Dibromofluoromethane	23810	0	25000		95.2	83.6	123	24050	0	0
Surr: Toluene-d8	24400	0	25000		97.6	81.8	118	25070	0	0

Qualifiers: > Greater than Result value

BRL Below reporting limit

J Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

< Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

Client: ERM-Southeast

ANALYTICAL QC SUMMARY REPORT

Date:

3-Mar-17

**Project Name:** AGLC Macon **Workorder:** 1702K47

BatchID: 238785

Sample ID: MB-238785	Client ID:				Uni	_		•	03/01/2017	Run No: 337521
SampleType: MBLK	TestCode: SI	M Polynuclear Aromat	tic Hydrocarbons	SW8270D	Bat	chID: 238785	An	alysis Date:	03/01/2017	Seq No: <b>7373956</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	Val %RPD	RPD Limit Qual
Acenaphthene	BRL	0.50								
Acenaphthylene	BRL	1.0								
Anthracene	BRL	0.050								
Benz(a)anthracene	BRL	0.050								
Benzo(a)pyrene	BRL	0.050								
Benzo(b)fluoranthene	BRL	0.10								
Benzo(g,h,i)perylene	BRL	0.10								
Benzo(k)fluoranthene	BRL	0.050								
Chrysene	BRL	0.050								
Dibenz(a,h)anthracene	BRL	0.10								
Fluoranthene	BRL	0.10								
Fluorene	BRL	0.10								
ndeno(1,2,3-cd)pyrene	BRL	0.050								
Naphthalene	BRL	0.50								
Phenanthrene	BRL	0.050								
Pyrene	BRL	0.050								
Surr: 4-Terphenyl-d14	1.780	0	2.000		89.0	58.5	125			
Sample ID: LCS-238785	Client ID:				Uni	ts: ug/L	Pre	ep Date:	03/01/2017	Run No: <b>337521</b>
SampleType: LCS	TestCode: SI	M Polynuclear Aromat	tic Hydrocarbons	SW8270D	Bat	chID: 238785	An	alysis Date:	03/01/2017	Seq No: <b>7374026</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	Val %RPD	RPD Limit Qual
Acenaphthene	1.532	0.50	2.000		76.6	69.1	117			
Acenaphthylene	1.491	1.0	2.000		74.5	59.7	118			
Anthracene	1.566	0.050	2.000		78.3	64.7	121			
Benz(a)anthracene	1.595	0.050	2.000	0.01968	78.8	61.7	139			
Benzo(a)pyrene	1.644	0.050	2.000		82.2	65.1	124			
Benzo(b)fluoranthene	1.771	0.10	2.000	0.02664	87.2	60.8	129			
Qualifiers: > Greater than Resu	lt value		< Less t	han Result value			В	Analyte detected in	n the associated method	blank
BRL Below reporting li	mit		E Estima	ated (value above quantita	ation range)		Н	Holding times for	preparation or analysis	exceeded
J Estimated value	detected below Reporting Lir	nit	N Analy	te not NELAC certified			R	RPD outside limit	s due to matrix	
Rpt Lim Reporting Limit			S Spike	Recovery outside limits of	lue to matrix					Page 44 of 48

# ANALYTICAL QC SUMMARY REPORT

Date:

3-Mar-17

BatchID: 238785

Client:	ERM-Southeast
<b>Project Name:</b>	AGLC Macon
Workorder:	1702K47

Sample ID: LCS-238785 Sample Type: LCS	Client ID: TestCode:	SIM Polynuclear Aromat	ic Hydrocarbons	SW8270D	Uni Bat	ts: <b>ug/L</b> chID: <b>238785</b>		Date: alysis Date:	03/01/2017 03/01/2017	Run No: <b>337521</b> Seq No: <b>7374026</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	f Val %RPD	RPD Limit Qual
Benzo(g,h,i)perylene	1.781	0.10	2.000		89.0	60.1	129			
Benzo(k)fluoranthene	1.797	0.050	2.000	0.03083	88.3	69.6	130			
Chrysene	1.623	0.050	2.000	0.01833	80.3	76.5	127			
Dibenz(a,h)anthracene	1.638	0.10	2.000		81.9	55.2	126			
Fluoranthene	1.662	0.10	2.000	0.02468	81.9	66.5	133			
Fluorene	1.571	0.10	2.000		78.6	66.1	122			
Indeno(1,2,3-cd)pyrene	1.635	0.050	2.000	0.01925	80.8	58.8	132			
Naphthalene	1.429	0.50	2.000		71.4	60.6	120			
Phenanthrene	1.571	0.050	2.000		78.6	65.9	118			
Pyrene	1.494	0.050	2.000	0.02836	73.3	70.2	129			
Surr: 4-Terphenyl-d14	1.549	0	2.000		77.4	58.5	125			
Sample ID: 1702O89-003BMS	Client ID:				Uni	ts: ug/L	Prej	Date:	03/01/2017	Run No: <b>337521</b>
SampleType: MS	TestCode:	SIM Polynuclear Aromat	ic Hydrocarbons	SW8270D	Bat	chID: 238785	Ana	llysis Date:	03/01/2017	Seq No: <b>7375399</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	f Val %RPD	RPD Limit Qual
Acenaphthene	1.728	0.50	2.000		86.4	49.7	118			
Acenaphthene Acenaphthylene	1.728 1.625	0.50 1.0	2.000 2.000		86.4 81.3	49.7 56.7	118 120			
Acenaphthylene										
Acenaphthylene Anthracene	1.625	1.0	2.000		81.3	56.7	120			
Acenaphthylene Anthracene Benz(a)anthracene	1.625 1.702	1.0 0.050	2.000 2.000		81.3 85.1	56.7 54.4	120 117			
Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene	1.625 1.702 1.835	1.0 0.050 0.050	2.000 2.000 2.000		81.3 85.1 91.8	56.7 54.4 52.4	120 117 135			
Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene	1.625 1.702 1.835 1.741	1.0 0.050 0.050 0.050	2.000 2.000 2.000 2.000		81.3 85.1 91.8 87.0	56.7 54.4 52.4 51.5	120 117 135 117			
Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene	1.625 1.702 1.835 1.741 1.970	1.0 0.050 0.050 0.050 0.10	2.000 2.000 2.000 2.000 2.000		81.3 85.1 91.8 87.0 98.5	56.7 54.4 52.4 51.5 45.6	120 117 135 117 124			
Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene	1.625 1.702 1.835 1.741 1.970 1.721	1.0 0.050 0.050 0.050 0.10 0.10	2.000 2.000 2.000 2.000 2.000 2.000		81.3 85.1 91.8 87.0 98.5 86.1	56.7 54.4 52.4 51.5 45.6 45.9	120 117 135 117 124 120			
•	1.625 1.702 1.835 1.741 1.970 1.721 1.707	1.0 0.050 0.050 0.050 0.10 0.10 0.050	2.000 2.000 2.000 2.000 2.000 2.000 2.000		81.3 85.1 91.8 87.0 98.5 86.1 85.4	56.7 54.4 52.4 51.5 45.6 45.9 51.8	120 117 135 117 124 120 122			
Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene	1.625 1.702 1.835 1.741 1.970 1.721 1.707	1.0 0.050 0.050 0.050 0.10 0.10 0.050 0.050	2.000 2.000 2.000 2.000 2.000 2.000 2.000 2.000		81.3 85.1 91.8 87.0 98.5 86.1 85.4 86.8	56.7 54.4 52.4 51.5 45.6 45.9 51.8 59.9	120 117 135 117 124 120 122 120			

Below reporting limit

Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

ANALYTICAL QC SUMMARY REPORT

Date:

3-Mar-17

BatchID: 238785

Client:	ERM-Southeas
<b>Project Name:</b>	AGLC Macon
Workorder:	1702K47

Sample ID: 1702O89-003BMS SampleType: MS	Client ID: TestCode:	SIM Polynuclear Aromatic H	ydrocarbons	SW8270D	Uni Bat	its: <b>ug/L</b> chID: <b>238785</b>		Date: <b>03/0</b> 1 lysis Date: <b>03/0</b> 1	1/2017 1/2017	Run No: <b>337521</b> Seq No: <b>7375399</b>
Analyte	Result	RPT Limit S	PK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Indeno(1,2,3-cd)pyrene	1.641	0.050	2.000		82.0	45.5	120			
Naphthalene	1.600	0.50	2.000		80.0	53.9	120			
Phenanthrene	1.716	0.050	2.000		85.8	58.1	120			
Pyrene	1.818	0.050	2.000		90.9	61.6	120			
Surr: 4-Terphenyl-d14	1.639	0	2.000		81.9	58.5	125			
Sample ID: 1702O89-003BMSD	Client ID:			Units: ug/L Prep		p Date: 03/01/2017		Run No: <b>337521</b>		
SampleType: MSD	TestCode:	SIM Polynuclear Aromatic H	ydrocarbons	SW8270D	Bat	chID: 238785	Ana	lysis Date: 03/01	1/2017	Seq No: <b>7375400</b>
Analyte	Result	RPT Limit S	PK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Acenaphthene	1.666	0.50	2.000		83.3	49.7	118	1.728	3.65	17.4
Acenaphthylene	1.589	1.0	2.000		79.5	56.7	120	1.625	2.26	19.5
Anthracene	1.627	0.050	2.000		81.3	54.4	117	1.702	4.51	24.5
Benz(a)anthracene	1.743	0.050	2.000		87.1	52.4	135	1.835	5.17	30.2
Benzo(a)pyrene	1.620	0.050	2.000		81.0	51.5	117	1.741	7.20	25.6
Benzo(b)fluoranthene	1.838	0.10	2.000		91.9	45.6	124	1.970	6.93	20.9
Benzo(g,h,i)perylene	1.647	0.10	2.000		82.3	45.9	120	1.721	4.42	28.6
Benzo(k)fluoranthene	1.797	0.050	2.000		89.8	51.8	122	1.707	5.09	28.6
Chrysene	1.703	0.050	2.000		85.2	59.9	120	1.737	1.92	26.4
Dibenz(a,h)anthracene	1.586	0.10	2.000		79.3	41.6	120	1.661	4.59	17.8
Fluoranthene	1.755	0.10	2.000		87.8	59.7	122	1.815	3.37	22.1
Fluorene	1.741	0.10	2.000		87.0	57.9	117	1.721	1.16	20.8
Indeno(1,2,3-cd)pyrene	1.576	0.050	2.000		78.8	45.5	120	1.641	4.04	19.3
Naphthalene	1.531	0.50	2.000		76.5	53.9	120	1.600	4.40	20.6
Phenanthrene	1.662	0.050	2.000		83.1	58.1	120	1.716	3.17	19.4
Pyrene	1.555	0.050	2.000		77.7	61.6	120	1.818	15.6	21.2
Surr: 4-Terphenyl-d14	1.635	0	2.000		81.8	58.5	125	1.639	0	0

Qualifiers:

Greater than Result value

BRL Below reporting limit

Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

ental Services, Inc Date: 3-Mar-17

Client: ERM-Southeast
Project Name: AGLC Macon
Workorder: 1702K47

# ANALYTICAL QC SUMMARY REPORT

BatchID: 238828

Sample ID: <b>MB-238828</b>	Client ID:				Un	its: ug/L	Pr	ep Date:	02/28/20		Run No: <b>337496</b>
SampleType: MBLK	TestCode:	Volatile Organic Compo	unds by GC/MS	SW8260B	Bat	tchID: 238828	Aı	nalysis Date:	02/28/20	17	Seq No: <b>7373175</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	f Val	%RPD	RPD Limit Qua
Benzene	BRL	5.0									
Carbon disulfide	BRL	5.0									
Ethylbenzene	BRL	5.0									
Гoluene	BRL	5.0									
Xylenes, Total	BRL	5.0									
Surr: 4-Bromofluorobenzene	47.38	0	50.00		94.8	66.1	129				
Surr: Dibromofluoromethane	48.17	0	50.00		96.3	83.6	123				
Surr: Toluene-d8	46.95	0	50.00		93.9	81.8	118				
Sample ID: LCS-238828	Client ID:				Un	its: ug/L	Pr	ep Date:	02/28/20	<b>17</b>	Run No: <b>337496</b>
SampleType: LCS	TestCode:	Volatile Organic Compo	unds by GC/MS	SW8260B	Bat	tchID: 238828	Aı	nalysis Date:	02/28/20	17	Seq No: <b>7373171</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	f Val	%RPD	RPD Limit Qua
Benzene	48.25	5.0	50.00		96.5	74	125				
Toluene	49.16	5.0	50.00		98.3	75.9	126				
Surr: 4-Bromofluorobenzene	48.46	0	50.00		96.9	66.1	129				
Surr: Dibromofluoromethane	48.33	0	50.00		96.7	83.6	123				
Surr: Toluene-d8	46.86	0	50.00		93.7	81.8	118				
Sample ID: 1702K47-006AMS SampleType: MS		MW-22D-20170221- Volatile Organic Compo		SW8260B	Un Bat	its: <b>ug/L</b> tchID: <b>238828</b>		ep Date: nalysis Date:	02/28/20 02/28/20		Run No: <b>337496</b> Seq No: <b>7373177</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	f Val	%RPD	RPD Limit Qua
Benzene	50.70	5.0	50.00		101	71.6	132				
Toluene	51.81	5.0	50.00		104	72.5	135				
Surr: 4-Bromofluorobenzene	48.11	0	50.00		96.2	66.1	129				
Surr: Dibromofluoromethane	48.28	0	50.00		96.6	83.6	123				
Surr: Toluene-d8	47.01	0	50.00		94.0	81.8	118				
Qualifiers: > Greater than Result val	lue		< Less	than Result value			В	Analyte detected	in the associate	ed method b	lank
BRL Below reporting limit				nated (value above quantit	tation range)		Н	Holding times for			
J Estimated value detec	ted below Reportin	g Limit		yte not NELAC certified	· ·		R	RPD outside lim		-	
Rpt Lim Reporting Limit			S Spike	Recovery outside limits	due to matrix						Page 47 of 48

1702K47

Client: ERM-Southeast Project Name: AGLC Macon

Workorder:

ANALYTICAL QC SUMMARY REPORT

3-Mar-17

Date:

BatchID: 238828

Sample ID: 1702K47-006AMSD SampleType: MSD	Client ID: TestCode:	MW-22D-20170221- Volatile Organic Compo		SW8260B	Uni Bat	its: <b>ug/L</b> chID: <b>238828</b>		Date: 02/28 alysis Date: 02/28	3/2017 3/2017	Run No: <b>337496</b> Seq No: <b>7373178</b>	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qu	ual
Benzene	49.01	5.0	50.00		98.0	71.6	132	50.70	3.39	20.7	
Toluene	49.78	5.0	50.00		99.6	72.5	135	51.81	4.00	23.2	
Surr: 4-Bromofluorobenzene	47.38	0	50.00		94.8	66.1	129	48.11	0	0	
Surr: Dibromofluoromethane	48.27	0	50.00		96.5	83.6	123	48.28	0	0	
Surr: Toluene-d8	46.24	0	50.00		92.5	81.8	118	47.01	0	0	

Qualifiers: > Greater than Result value

BRL Below reporting limit

J Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

< Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

R RPD outside limits due to matrix

# ANALYTICAL ENVIRONMENTAL SERVICES, INC.



March 09, 2017

Adria Reimer ERM-Southeast 3200 Windy Hill Rd Atlanta GA

TEL: (678) 486-2700 FAX: (404) 745-0103

30339

RE: AGLC Macon

Dear Adria Reimer: Order No: 1702M96

Analytical Environmental Services, Inc. received 35 samples on 2/25/2017 10:40:00 AM for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES's accreditations are as follows:

- -NELAC/Florida State Laboratory ID E87582 for analysis of Non-Potable Water, Solid & Chemical Materials, and Drinking Water Microbiology, effective 07/01/16-06/30/17.
- -NELAC/Louisiana Agency Interest No. 100818 for or analysis of Non-Potable Water and Solid & Chemical Materials, effective 07/01/16-06/30/17.
- -AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Metals, PCM Asbestos, Gravimetric), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 09/01/17.

These results relate only to the items tested. This report may only be reproduced in full.

Mirzeta Kararic

Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC

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

Work Order: 195494 2/29/12 Page Date:

CHAIN OF CUSTODY

# RTL 6A 3033 9 PHONE:  SAMPLED BY: K S, M B, M T, M R  SAMPLED  SAMPLED  MW-2070-2017 0223-01  MW-2070-2017 0223-01  MW-101-2017 0223-01  MW-107-2017 0223-01	CA 3033 9  TIME Composite A 3033 9  1205 X Citab X Citab X X X X X X X X X X X X X X X X X X X	70208 Hannahan 8550c	PRESERVATION (See codes)	www.aesatlanta.com to check on the status of vour results, place bottle	
MPLED BY: K S, M B, M T, M R  SAME  SAME  SAME  SAME  MW-2070-20170223-01  MW-302D0-20170223-01  MW-101-20170223-01  MW-15-20170223-01  AMW-15-20170223-01	1205 X X Crab 1205 X X X X X X X X X X X X X X X X X X X	10978 1097	PRESERVATION (See codes)	vour results, place bottle	
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SIGNATU DATE 01 2/23/1 01 1	Сотрояте —	100000円 100000円 100000円 100000円 100000円 1000000円	PRESERVATION (See codes)		ənis
MW-207D-20170223-01 2/23/ MW-302DD-20170223-01 / MW-101-20170223-01 / AMW-15-20170223-01 / AMW-15-20170223-01 /	ДС 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	8 年 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	PRESERVATION (See codes)	orders, etc.	noO le
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AMW-1 MW-1					7
1-MW	/ Y/ Y-				J
	/ \  -				7
6 MW-400-20170223-01	× 017				1
7 W-304D-20170235-0)		2 2			7
8 DW-01-20170223-6/	\(\frac{\chi}{1}\)	2 2			<u>'</u>
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10 DWP-03-2017023	<u>λ</u>	7			7
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13 Dwp-04-26170223-01	x 1	2 2			ב
14 MW-14I-20170223-01 4	1645 X	7 7			マ
RELINQUISHED BY DATE/TIME RECEIVED BY			PROJECT INFORMATION	RECEIPT	
Fer / A 2/12 Musum	ulaux Harli	PROJECT NAME:	Macon	Total # of Containers	
		PROJECT #:		Turnaround Time Request	
		SITE ADDRESS:	75 T " " " " " " " " " " " " " " " " " "	Standard 5 Business Days	
		SEND REPORT TO: G	SEND REPORT TO: G LV. C. FE, MET & CVM. COM	O Vext Business Day Rush	
ECIAL INSTRUCTIONS/COMMENTS:  OUT /	SHIPMENT METHOD / VIA:	INVOICE TO: (IF DIFFERENT FROM ABOVE)	ABOVE)	O Same Day Rush (auth req.) Other	
LNEITO NI				STATE PROGRAM (if any): E-mail? Y/N; Fax? Y/N	
$\odot$ QUOTE #: PO#: $036660$ DATA PACKAGE: 1 II I	THOUND OTHER	QUOTE #:	PO#: 036660	=	IV VI

SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS UTHER ARKANGEMENTS ARE MADE.

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water

MATRIX CODES: A = Air GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water

PRESERVATIVE CODES: H+1 = Hydrochloric acid + ice I = Ice only N = Nitric acid S+1 = Sulfuric acid + ice SM+1 = Sodium Bisulfate Methanol + ice O = Other (specify) NA = None

White Copy - Original; Yellow Copy - Client

ANALYTICAL ENVIRONMENTAL SERVICES, INC

3080 Presidential Drive, Atlanta GA 30340-3704

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

178 MAC Work Order:

CHAIN OF CUSTODY

M 2/25/[/2 Page\_ Date:

No # of Containers J J II 7/2 2 Same Day Rush (auth req.) your results, place bottle to check on the status of Turnaround Time Request Fax? Y/N www.aesatlanta.com Standard 5 Business Days Next Business Day Rush SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES. SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE. Visit our website 2 Business Day Rush Total # of Containers RECEIPT orders, etc. ample time STATE PROGRAM (if any): REMARKS DATA PACKAGE: E-mail? Y/N; **X**000 SEND REPORT TO: alria. reiner Dernicam ろれ Macor PROJECT INFORMATION ANALYSIS REQUESTED PRESERVATION (See codes) SITE ADDRESS: Walnut (IF DIFFERENT FROM ABOVE) D 61 H 78 N d d 9/9 Ч 4 PROJECT NAME: INVOICE TO: ROJECT #  $\mathcal{J}$ 0 9728 20 U N DOOTE # N N 90 DATE/TIME 8 <u>ک</u>  $\Rightarrow$ (gee codes) 0:40/14 A125/14 Matrix Hedex UPS MAIL COURIER 3200 Windy Hill ATL GA 30339 Composite SHIPMENT METHOD VIA: Grab OTHER Menan/Tana 500 550 286 717 135 1300 1720 501 0 251 GKEYHOUND 000 SAMPLED CLIENT RECEIVED BY SANFLED BY: KS, AS, MB, MT, MR, CH, TBONATURE: 12/2 00T DATE/TIME 25/17 MW-2040-20170224-01 -2017027421 MW- 2000 R-20 70224-01 MW- 12 TR- 201002010 MW-120 RR-2017 0224-01 MW- 205 DD-20170224-01 MW-302D-20170224-01 MW-306 D-20170224-01 MW-14-20170224-01 -20170224-01 DWF-05-40170224-01 MW-103-20170224-0 MW-401-20170224-01 10-42201108-401-MN ヘエクー N HONE: 678-486-2700 SAMPLE ID PECIAL INSTRUCTIONS/COMMENTS: MW-2050 12R JELINQUISHED BY 12/1/

W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water SE = Sediment SO = Soil SW = Surface Water GW = Groundwater MATRIX CODES: A = Air

O = Other (specify) NA = None White Copy - Original; Yellow Copy - Client

CHAIN OF CUSTODY

ANALYTICAL ENVIRONMENTAL SERVICES, INC

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

MM Med Page S Work Order: Date: 2/25/(7

2014 N No # of Containers 1 to check on the status of your results, place bottle Turnaround Time Request www.aesatlanta.com Standard 5 Business Days Next Business Day Rush Visit our website 2 Business Day Rush Total # of Containers orders, etc. REMARKS 0000 SEND REPORT TO: adria. 12. Acr Bella ANALYSIS REQUESTED PROJECT INFORMATION PRESERVATION (See codes) Marcos 7 Nath PROJECT NAME: SITE ADDRESS: 2000 PROJECT # H 809 78 Q N DATE/TIME (See codes) 2/25/14 3 3 کے 3 .≥ Matrix 3 3200 Windy Hill Rd ATL 6A 30339 Composite Grab 2/25/17 Muans James TIME SAMPLED DATE/TIME RECEIVED BY SIGNATURE: ンデー 040 TB-03-20170224-0 10-42207102-TB-01-20170224-01 TB-02-20170224-01 B-04-20170224-01 20170224-111 20170224-0 HONE: 678-486-2700 SAMPLE ID 10-01 +B-06 RELINQUISHED BY AMPLED BY 10 13 13

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES.

SAMPLES ARE DISPOSED 30 DAYS AFTER REPORT COMPLETION UNLESS OTHER ARRANGEMENTS ARE MADE. SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water MATRIX CODES: A = Air

CLIENT Fedex UPS MAIL COURIER

O = Other (specify) NA = None
White Copy - Original; Yellow Copy - Client

Same Day Rush (auth req.)

111 111

Fax? Y/N

E-mail? Y/N;

STATE PROGRAM (if any):

(IF DIFFERENT FROM ABOVE)

INVOICE TO:

SHIPMENT METHOD VIA:

OUT

PECIAL INSTRUCTIONS/COMMENTS:

PRESERVATIVE CODES: H+1 = Hydrochloric acid + ice 1 = Ice only N = Nitric acid S+1 = Sulfuric acid + ice S/M+1 = Sodium Bisulfate/Methanol + ice

Client: ERM-Southeast Project: AGLC Macon

Lab ID:

AGLC Macon
1702M96

Case Narrative

Date:

9-Mar-17

#### Sample Receiving Nonconformance:

Collection time was not listed on the Chain of Custody for sample 1702M96-028. Sample was logged in using the information present on the sample bottle labels.

#### PAH Analysis by Method 8270D SIM:

Due to sample matrix, sample1702M96-008B, 009B required dilution during preparation and/or analysis resulting in elevated reporting limits.

Client:ERM-SoutheastClient Sample ID:MW-207D-20170223-01Project Name:AGLC MaconCollection Date:2/23/2017 12:05:00 PM

Date:

9-Mar-17

Lab ID:1702M96-001Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
Volatile Organic Compounds by GC/MS S	W8260B			(SV	/5030B)			
Benzene	BRL	5.0		ug/L	238968	1	03/03/2017 03:14	BN
Carbon disulfide	BRL	5.0		ug/L	238968	1	03/03/2017 03:14	BN
Ethylbenzene	BRL	5.0		ug/L	238968	1	03/03/2017 03:14	BN
Toluene	BRL	5.0		ug/L	238968	1	03/03/2017 03:14	BN
Xylenes, Total	BRL	5.0		ug/L	238968	1	03/03/2017 03:14	BN
Surr: 4-Bromofluorobenzene	83.8	66.1-129		%REC	238968	1	03/03/2017 03:14	BN
Surr: Dibromofluoromethane	102	83.6-123		%REC	238968	1	03/03/2017 03:14	BN
Surr: Toluene-d8	97.4	81.8-118		%REC	238968	1	03/03/2017 03:14	BN
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	BRL	0.50		ug/L	238741	1	03/01/2017 23:02	YH
Acenaphthylene	BRL	1.0		ug/L	238741	1	03/01/2017 23:02	YH
Acenaphthene	1.4	0.50		ug/L	238741	1	03/01/2017 23:02	YH
Fluorene	0.54	0.10		ug/L	238741	1	03/01/2017 23:02	YH
Phenanthrene	BRL	0.050		ug/L	238741	1	03/01/2017 23:02	YH
Anthracene	BRL	0.050		ug/L	238741	1	03/01/2017 23:02	YH
Fluoranthene	1.1	0.10		ug/L	238741	1	03/01/2017 23:02	YH
Pyrene	2.0	0.050		ug/L	238741	1	03/01/2017 23:02	YH
Benz(a)anthracene	BRL	0.050		ug/L	238741	1	03/01/2017 23:02	YH
Chrysene	BRL	0.050		ug/L	238741	1	03/01/2017 23:02	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238741	1	03/01/2017 23:02	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238741	1	03/01/2017 23:02	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 23:02	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 23:02	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238741	1	03/01/2017 23:02	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238741	1	03/01/2017 23:02	YH
Surr: 4-Terphenyl-d14	82.3	58.5-125		%REC	238741	1	03/01/2017 23:02	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2,4-Dimethylphenol	BRL	12		ug/L	238726	1	03/02/2017 15:03	YH
2-Methylphenol	BRL	12		ug/L	238726	1	03/02/2017 15:03	YH
3,4-Methylphenol	BRL	12		ug/L	238726	1	03/02/2017 15:03	YH
Phenol	BRL	12		ug/L	238726	1	03/02/2017 15:03	YH
Surr: 2,4,6-Tribromophenol	82.7	50-142		%REC	238726	1	03/02/2017 15:03	YH
Surr: 2-Fluorobiphenyl	62.9	46-124		%REC	238726	1	03/02/2017 15:03	YH
Surr: 2-Fluorophenol	52.4	25.3-120		%REC	238726	1	03/02/2017 15:03	YH
Surr: 4-Terphenyl-d14	87.7	45.1-133		%REC	238726	1	03/02/2017 15:03	YH
Surr: Nitrobenzene-d5	59.6	40.1-121		%REC	238726	1	03/02/2017 15:03	YH
Surr: Phenol-d5	39.2	16.3-120		%REC	238726	1	03/02/2017 15:03	YH

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

J Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-302DD-20170223-01Project Name:AGLC MaconCollection Date:2/23/2017 11:41:00 AM

Date:

9-Mar-17

Lab ID: 1702M96-002 Matrix: Aqueous

Benzene	Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
Carbon disulfide	Volatile Organic Compounds by GC/MS S	W8260B			(SW	/5030B)			
Ethylbenzene	Benzene	6.4	5.0		ug/L	238968	1	03/07/2017 15:45	BN
Toluene BRL 5.0 wg/L 238968 I 03/07/2017 15:45 Xylenes, Total BRL 5.0 wg/L 238968 I 03/07/2017 15:45 Surr: 4-Bromofluorobenzene 82.8 66.1-129 %REC 238968 I 03/07/2017 15:45 Surr: 4-Bromofluoromethane 93.7 83.6-123 %REC 238968 I 03/07/2017 15:45 Surr: Dibromofluoromethane 93.7 83.6-123 %REC 238968 I 03/07/2017 15:45 Surr: Toluene-d8 85.4 81.8-118 %REC 238968 I 03/07/2017 15:45 SIM Polynuclear Aromatic Hydrocarbons SW8270D	Carbon disulfide	BRL	5.0		ug/L	238968	1	03/07/2017 15:45	BN
Sylenes, Total   BRL   5.0   ug/L   238968   1   03/07/2017 15:45	Ethylbenzene	BRL	5.0		ug/L	238968	1	03/07/2017 15:45	BN
Surr: 4-Bromofluorobenzene   82.8   66.1-129   %REC   238968   1 03/07/2017 15:45	Toluene	BRL	5.0		ug/L	238968	1	03/07/2017 15:45	BN
Surr: 4-Bromofluorobenzene   \$2.8   66.1-129   %4REC   238968   1   0307/2017 15-45   Surr: Dibromofluoromethane   93.7   83.6-123   %4REC   238968   1   0307/2017 15-45   Surr: Toluene-d8   85.4   81.8-118   %4REC   238968   1   0307/2017 15-45   SIM Polynuclear Aromatic Hydrocarbons   SW8270D   SW82510C   SW3510C	Xylenes, Total	BRL	5.0		ug/L	238968	1	03/07/2017 15:45	BN
Surr: Toluene-d8		82.8	66.1-129		%REC	238968	1	03/07/2017 15:45	BN
Naphthalene	Surr: Dibromofluoromethane	93.7	83.6-123		%REC	238968	1	03/07/2017 15:45	BN
Naphthalene	Surr: Toluene-d8	85.4	81.8-118		%REC	238968	1	03/07/2017 15:45	BN
Acenaphthylene BRL 1.0 ug/L 238741 1 03/01/2017 23:28 Acenaphthene BRL 0.50 ug/L 238741 1 03/01/2017 23:28 Fluorene 0.24 0.10 ug/L 238741 1 03/01/2017 23:28 Phenanthrene BRL 0.050 ug/L 238741 1 03/01/2017 23:28 Anthracene BRL 0.050 ug/L 238741 1 03/01/2017 23:28 Fluoranthene BRL 0.050 ug/L 238741 1 03/01/2017 23:28 Fluoranthene BRL 0.050 ug/L 238741 1 03/01/2017 23:28 Fluoranthene BRL 0.050 ug/L 238741 1 03/01/2017 23:28 Pyrene BRL 0.050 ug/L 238741 1 03/01/2017 23:28 Enez(a)anthracene BRL 0.050 ug/L 238741 1 03/01/2017 23:28 Benz(a)anthracene BRL 0.050 ug/L 238741 1 03/01/2017 23:28 Benz(a)anthracene BRL 0.050 ug/L 238741 1 03/01/2017 23:28 Benzo(b)fluoranthene BRL 0.050 ug/L 238741 1 03/01/2017 23:28 Benzo(b)fluoranthene BRL 0.050 ug/L 238741 1 03/01/2017 23:28 Benzo(b)fluoranthene BRL 0.050 ug/L 238741 1 03/01/2017 23:28 Benzo(a)pyrene BRL 0.050 ug/L 238741 1 03/01/2017 23:28 Benzo(a)pyrene BRL 0.050 ug/L 238741 1 03/01/2017 23:28 Dibenz(a,h)anthracene BRL 0.050 ug/L 238741 1 03/01/2017 23:28 Dibenz(a,h)anthracene BRL 0.050 ug/L 238741 1 03/01/2017 23:28 Benzo(g,h,i)perylene BRL 0.050 ug/L 238741 1 03/01/2017 23:28 Benzo(g,h,i)perylene BRL 0.050 ug/L 238741 1 03/01/2017 23:28 Semivolatile Org. Comp. by GC/MS SW8270D  2.4-Dimethylphenol BRL 0.0 ug/L 238741 1 03/01/2017 23:28 Semivolatile Org. Comp. by GC/MS BRL 10 ug/L 238726 1 03/02/2017 15:29 Phenol BRL 10 ug/L 238726 1 03/02/2017 15:29 Surr: 2.4,6-Tribromophenol 101 50-142 %REC 238726 1 03/02/2017 15:29 Surr: 2.4,6-Tribromophenol 57.8 25.3-120 %REC 238726 1 03/02/2017 15:29 Surr: 2.4-Eluorobiphenyl 77.4 46-124 %REC 238726 1 03/02/2017 15:29 Surr: 2-Fluorobiphenyl 57.4 46-124 %REC 238726 1 03/02/2017 15:29 Surr: 4-Terphenyl-d14 95.8 45.1-133 %REC 238726 1 03/02/2017 15:29 Surr: 4-Terphenyl-d14 95.8 45.1-133 %REC 238726 1 03/02/2017 15:29 Surr: 4-Terphenyl-d14 95.8 45.1-13 %REC 238726 1 03/02/2017 15:29 Surr: 4-Terphenyl-d14 95.8 45.1-133 %REC 238726 1 03/02/2017 15:29 Surr: 4-Terphenyl-d14 95.8 45.1-133 %REC 238726 1 03/02/2017 15:29	SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Acenaphthylene         BRL         1.0         ug/L         238741         1         03/01/2017 23:28           Acenaphthene         BRL         0.50         ug/L         238741         1         03/01/2017 23:28           Fluorene         0.24         0.10         ug/L         238741         1         03/01/2017 23:28           Phenanthrene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Anthracene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Fluoranthene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Pyrene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Benz(a)anthracene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Chrysene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Benzo(b)fluoranthene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Benzo(b)fluoranthene         BRL         0.050         ug/L         238	Naphthalene	BRL	0.50		ug/L	238741	1	03/01/2017 23:28	YH
Acenaphthene	•	BRL	1.0		ug/L	238741	1	03/01/2017 23:28	YH
Fluorene   0.24   0.10   ug/L   238741   1   03/01/2017 23:28     Phenanthrene   BRL   0.050   ug/L   238741   1   03/01/2017 23:28     Anthracene   BRL   0.050   ug/L   238741   1   03/01/2017 23:28     Fluoranthene   BRL   0.10   ug/L   238741   1   03/01/2017 23:28     Pyrene   BRL   0.050   ug/L   238741   1   03/01/2017 23:28     Pyrene   BRL   0.050   ug/L   238741   1   03/01/2017 23:28     Benz(a)anthracene   BRL   0.050   ug/L   238741   1   03/01/2017 23:28     Benz(a)anthracene   BRL   0.050   ug/L   238741   1   03/01/2017 23:28     Benzo(b)fluoranthene   BRL   0.050   ug/L   238741   1   03/01/2017 23:28     Benzo(b)fluoranthene   BRL   0.050   ug/L   238741   1   03/01/2017 23:28     Benzo(a)apyrene   BRL   0.050   ug/L   238741   1   03/01/2017 23:28     Benzo(a)pyrene   BRL   0.050   ug/L   238741   1   03/01/2017 23:28     Indeno(1,2,3-cd)pyrene   BRL   0.050   ug/L   238741   1   03/01/2017 23:28     Benzo(g,h,)anthracene   BRL   0.050   ug/L   238741   1   03/01/2017 23:28     Benzo(g,h,)perylene   BRL   0.10   ug/L   238741   1   03/01/2017 23:28     Semivolatile Org. Comp. by GC/MS   SW8270D   ug/L   238741   1   03/01/2017 23:28     Semivolatile Org. Comp. by GC/MS   SW8270D   ug/L   238726   1   03/02/2017 15:29     Phenol   BRL   10   ug/L   238726   1   03/02/2017 15:29     Surr: 2,4,6-Tribromophenol   101   50-142   %REC   238726   1   03/02/2017 15:29     Surr: 2,5-Fluorophenol   57.8   25.3-120   %REC   238726   1   03/02/2017 15:29     Surr: 4-Terphenyl-d14   95.8   45.1-133   %REC   238726   1   03/02/2017 15:29     Surr: 4-Terphenyl-d14   95.8   45.1-133   %REC   238726   1   03/02/2017 15:29     Surr: 4-Terphenyl-d14   95.8   45.1-133   %REC   238726   1   03/02/2017 15:29     Su	- ·	BRL	0.50		ug/L	238741	1	03/01/2017 23:28	YH
Anthracene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Fluoranthene         BRL         0.10         ug/L         238741         1         03/01/2017 23:28           Pyrene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Benz(a)anthracene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Chrysene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Benzo(b)fluoranthene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Benzo(k)fluoranthene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Benzo(a)pyrene         BRL         0.050         ug/L	-	0.24	0.10		ug/L	238741	1	03/01/2017 23:28	YH
Fluoranthene	Phenanthrene	BRL	0.050		ug/L	238741	1	03/01/2017 23:28	YH
Pyrene	Anthracene	BRL	0.050		ug/L	238741	1	03/01/2017 23:28	YH
Benz(a)anthracene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Chrysene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Benzo(b)fluoranthene         BRL         0.10         ug/L         238741         1         03/01/2017 23:28           Benzo(k)fluoranthene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Benzo(a)pyrene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238741         1         03/01/2017 23:28           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238741         1         03/01/2017 23:28           Surr: 4-Terphenyl-d14         78.7         58.5-125         %REC         238741         1         03/01/2017 23:28           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)           2,4-Dimethylphenol         BRL         10	Fluoranthene	BRL	0.10		ug/L	238741	1	03/01/2017 23:28	YH
Benz(a)anthracene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Chrysene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Benzo(b)fluoranthene         BRL         0.10         ug/L         238741         1         03/01/2017 23:28           Benzo(k)fluoranthene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Benzo(a)pyrene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Indeno(1,2,3-ed)pyrene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Benzo(g,h,h)anthracene         BRL         0.10         ug/L         238741         1         03/01/2017 23:28           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238741         1         03/01/2017 23:28           Surr: 4-Terphenyl-d14         78.7         58.5-125         %REC         238741         1         03/01/2017 23:28           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)           2,4-Dimethylphenol         BRL         10	Pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 23:28	YH
Chrysene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Benzo(b)fluoranthene         BRL         0.10         ug/L         238741         1         03/01/2017 23:28           Benzo(k)fluoranthene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Benzo(a)pyrene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238741         1         03/01/2017 23:28           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238741         1         03/01/2017 23:28           Surr: 4-Terphenyl-d14         78.7         58.5-125         %REC         238741         1         03/01/2017 23:28           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238726         1         03/02/2017 15:29           2,4-Dimethylphenol         BRL         10	Benz(a)anthracene	BRL	0.050		ug/L	238741	1	03/01/2017 23:28	YH
Benzo(k)fluoranthene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Benzo(a)pyrene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238741         1         03/01/2017 23:28           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238741         1         03/01/2017 23:28           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238741         1         03/01/2017 23:28           Surr: 4-Terphenyl-d14         78.7         58.5-125         %REC         238741         1         03/01/2017 23:28           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238726         1         03/02/2017 15:29           2-Methylphenol         BRL         10         ug/L         238726         1         03/02/2017 15:29           3,4-Methylphenol         BRL         10         ug/L         238726         1         03/02/2017 15:29           Phenol         BRL         10         ug/L	Chrysene	BRL	0.050		ug/L	238741	1	03/01/2017 23:28	YH
Benzo(a)pyrene BRL 0.050 ug/L 238741 1 03/01/2017 23:28 Indeno(1,2,3-cd)pyrene BRL 0.050 ug/L 238741 1 03/01/2017 23:28 Dibenz(a,h)anthracene BRL 0.10 ug/L 238741 1 03/01/2017 23:28 Benzo(g,h,i)perylene BRL 0.10 ug/L 238741 1 03/01/2017 23:28 Surr: 4-Terphenyl-d14 78.7 58.5-125 %REC 238741 1 03/01/2017 23:28 Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)  2,4-Dimethylphenol BRL 10 ug/L 238726 1 03/02/2017 15:29 2-Methylphenol BRL 10 ug/L 238726 1 03/02/2017 15:29 3,4-Methylphenol BRL 10 ug/L 238726 1 03/02/2017 15:29 Phenol BRL 10 ug/L 238726 1 03/02/2017 15:29 Phenol BRL 10 ug/L 238726 1 03/02/2017 15:29 Surr: 2,4,6-Tribromophenol BRL 10 ug/L 238726 1 03/02/2017 15:29 Surr: 2-Fluorobiphenyl 77.4 46-124 %REC 238726 1 03/02/2017 15:29 Surr: 2-Fluorobiphenyl 57.8 25.3-120 %REC 238726 1 03/02/2017 15:29 Surr: 2-Fluorophenol 57.8 25.3-120 %REC 238726 1 03/02/2017 15:29 Surr: 4-Terphenyl-d14 95.8 45.1-133 %REC 238726 1 03/02/2017 15:29 Surr: Nitrobenzene-d5 72.6 40.1-121 %REC 238726 1 03/02/2017 15:29	Benzo(b)fluoranthene	BRL	0.10		ug/L	238741	1	03/01/2017 23:28	YH
Indeno(1,2,3-cd)pyrene   BRL   0.050   ug/L   238741   1   03/01/2017 23:28	Benzo(k)fluoranthene	BRL	0.050		ug/L	238741	1	03/01/2017 23:28	YH
Dibenz(a,h)anthracene         BRL         0.10         ug/L         238741         1         03/01/2017 23:28           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238741         1         03/01/2017 23:28           Surr: 4-Terphenyl-d14         78.7         58.5-125         %REC         238741         1         03/01/2017 23:28           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238726         1         03/02/2017 15:29           2-Methylphenol         BRL         10         ug/L         238726         1         03/02/2017 15:29           3,4-Methylphenol         BRL         10         ug/L         238726         1         03/02/2017 15:29           Phenol         BRL         10         ug/L         238726         1         03/02/2017 15:29           Surr: 2,4,6-Tribromophenol         101         50-142         %REC         238726         1         03/02/2017 15:29           Surr: 2-Fluorophenol         57.8         25.3-120         %REC         238726         1         03/02/2017 15:29           Surr: 4-Terphenyl-d14         95.8         45.1-133         %REC	Benzo(a)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 23:28	YH
Benzo(g,h,i)perylene BRL 0.10 ug/L 238741 1 03/01/2017 23:28 Surr: 4-Terphenyl-d14 78.7 58.5-125 %REC 238741 1 03/01/2017 23:28 Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)  2,4-Dimethylphenol BRL 10 ug/L 238726 1 03/02/2017 15:29 2-Methylphenol BRL 10 ug/L 238726 1 03/02/2017 15:29 3,4-Methylphenol BRL 10 ug/L 238726 1 03/02/2017 15:29 Phenol BRL 10 ug/L 238726 1 03/02/2017 15:29 Phenol BRL 10 ug/L 238726 1 03/02/2017 15:29 Surr: 2,4,6-Tribromophenol 101 50-142 %REC 238726 1 03/02/2017 15:29 Surr: 2-Fluorobiphenyl 77.4 46-124 %REC 238726 1 03/02/2017 15:29 Surr: 2-Fluorophenol 57.8 25.3-120 %REC 238726 1 03/02/2017 15:29 Surr: 4-Terphenyl-d14 95.8 45.1-133 %REC 238726 1 03/02/2017 15:29 Surr: Nitrobenzene-d5 72.6 40.1-121 %REC 238726 1 03/02/2017 15:29	Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 23:28	YH
Surr: 4-Terphenyl-d14         78.7         58.5-125         %REC         238741         1         03/01/2017 23:28           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238726         1         03/02/2017 15:29           2-Methylphenol         BRL         10         ug/L         238726         1         03/02/2017 15:29           3,4-Methylphenol         BRL         10         ug/L         238726         1         03/02/2017 15:29           Phenol         BRL         10         ug/L         238726         1         03/02/2017 15:29           Surr: 2,4,6-Tribromophenol         101         50-142         %REC         238726         1         03/02/2017 15:29           Surr: 2-Fluorobiphenyl         77.4         46-124         %REC         238726         1         03/02/2017 15:29           Surr: 2-Fluorophenol         57.8         25.3-120         %REC         238726         1         03/02/2017 15:29           Surr: 4-Terphenyl-d14         95.8         45.1-133         %REC         238726         1         03/02/2017 15:29           Surr: Nitrobenzene-d5         72.6         40.1-121         %REC	Dibenz(a,h)anthracene	BRL	0.10		ug/L	238741	1	03/01/2017 23:28	YH
Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238726         1         03/02/2017 15:29           2-Methylphenol         BRL         10         ug/L         238726         1         03/02/2017 15:29           3,4-Methylphenol         BRL         10         ug/L         238726         1         03/02/2017 15:29           Phenol         BRL         10         ug/L         238726         1         03/02/2017 15:29           Surr: 2,4,6-Tribromophenol         101         50-142         %REC         238726         1         03/02/2017 15:29           Surr: 2-Fluorobiphenyl         77.4         46-124         %REC         238726         1         03/02/2017 15:29           Surr: 2-Fluorophenol         57.8         25.3-120         %REC         238726         1         03/02/2017 15:29           Surr: 4-Terphenyl-d14         95.8         45.1-133         %REC         238726         1         03/02/2017 15:29           Surr: Nitrobenzene-d5         72.6         40.1-121         %REC         238726         1         03/02/2017 15:29	Benzo(g,h,i)perylene	BRL	0.10		ug/L	238741	1	03/01/2017 23:28	YH
2,4-Dimethylphenol       BRL       10       ug/L       238726       1       03/02/2017 15:29         2-Methylphenol       BRL       10       ug/L       238726       1       03/02/2017 15:29         3,4-Methylphenol       BRL       10       ug/L       238726       1       03/02/2017 15:29         Phenol       BRL       10       ug/L       238726       1       03/02/2017 15:29         Surr: 2,4,6-Tribromophenol       101       50-142       %REC       238726       1       03/02/2017 15:29         Surr: 2-Fluorobiphenyl       77.4       46-124       %REC       238726       1       03/02/2017 15:29         Surr: 2-Fluorophenol       57.8       25.3-120       %REC       238726       1       03/02/2017 15:29         Surr: 4-Terphenyl-d14       95.8       45.1-133       %REC       238726       1       03/02/2017 15:29         Surr: Nitrobenzene-d5       72.6       40.1-121       %REC       238726       1       03/02/2017 15:29	Surr: 4-Terphenyl-d14	78.7	58.5-125		%REC	238741	1	03/01/2017 23:28	YH
2-Methylphenol         BRL         10         ug/L         238726         1         03/02/2017 15:29           3,4-Methylphenol         BRL         10         ug/L         238726         1         03/02/2017 15:29           Phenol         BRL         10         ug/L         238726         1         03/02/2017 15:29           Surr: 2,4,6-Tribromophenol         101         50-142         %REC         238726         1         03/02/2017 15:29           Surr: 2-Fluorobiphenyl         77.4         46-124         %REC         238726         1         03/02/2017 15:29           Surr: 2-Fluorophenol         57.8         25.3-120         %REC         238726         1         03/02/2017 15:29           Surr: 4-Terphenyl-d14         95.8         45.1-133         %REC         238726         1         03/02/2017 15:29           Surr: Nitrobenzene-d5         72.6         40.1-121         %REC         238726         1         03/02/2017 15:29	Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2-Methylphenol       BRL       10       ug/L       238726       1       03/02/2017 15:29         3,4-Methylphenol       BRL       10       ug/L       238726       1       03/02/2017 15:29         Phenol       BRL       10       ug/L       238726       1       03/02/2017 15:29         Surr: 2,4,6-Tribromophenol       101       50-142       %REC       238726       1       03/02/2017 15:29         Surr: 2-Fluorobiphenyl       77.4       46-124       %REC       238726       1       03/02/2017 15:29         Surr: 2-Fluorophenol       57.8       25.3-120       %REC       238726       1       03/02/2017 15:29         Surr: 4-Terphenyl-d14       95.8       45.1-133       %REC       238726       1       03/02/2017 15:29         Surr: Nitrobenzene-d5       72.6       40.1-121       %REC       238726       1       03/02/2017 15:29	2,4-Dimethylphenol	BRL	10		ug/L	238726	1	03/02/2017 15:29	YH
3,4-Methylphenol       BRL       10       ug/L       238726       1       03/02/2017 15:29         Phenol       BRL       10       ug/L       238726       1       03/02/2017 15:29         Surr: 2,4,6-Tribromophenol       101       50-142       %REC       238726       1       03/02/2017 15:29         Surr: 2-Fluorobiphenyl       77.4       46-124       %REC       238726       1       03/02/2017 15:29         Surr: 2-Fluorophenol       57.8       25.3-120       %REC       238726       1       03/02/2017 15:29         Surr: 4-Terphenyl-d14       95.8       45.1-133       %REC       238726       1       03/02/2017 15:29         Surr: Nitrobenzene-d5       72.6       40.1-121       %REC       238726       1       03/02/2017 15:29	* *	BRL	10		ug/L	238726	1	03/02/2017 15:29	YH
Phenol         BRL         10         ug/L         238726         1         03/02/2017 15:29           Surr: 2,4,6-Tribromophenol         101         50-142         %REC         238726         1         03/02/2017 15:29           Surr: 2-Fluorobiphenyl         77.4         46-124         %REC         238726         1         03/02/2017 15:29           Surr: 2-Fluorophenol         57.8         25.3-120         %REC         238726         1         03/02/2017 15:29           Surr: 4-Terphenyl-d14         95.8         45.1-133         %REC         238726         1         03/02/2017 15:29           Surr: Nitrobenzene-d5         72.6         40.1-121         %REC         238726         1         03/02/2017 15:29		BRL	10		ug/L	238726	1	03/02/2017 15:29	YH
Surr: 2,4,6-Tribromophenol       101       50-142       %REC       238726       1       03/02/2017 15:29         Surr: 2-Fluorobiphenyl       77.4       46-124       %REC       238726       1       03/02/2017 15:29         Surr: 2-Fluorophenol       57.8       25.3-120       %REC       238726       1       03/02/2017 15:29         Surr: 4-Terphenyl-d14       95.8       45.1-133       %REC       238726       1       03/02/2017 15:29         Surr: Nitrobenzene-d5       72.6       40.1-121       %REC       238726       1       03/02/2017 15:29		BRL	10		ug/L	238726	1	03/02/2017 15:29	YH
Surr: 2-Fluorobiphenyl       77.4       46-124       %REC       238726       1       03/02/2017 15:29         Surr: 2-Fluorophenol       57.8       25.3-120       %REC       238726       1       03/02/2017 15:29         Surr: 4-Terphenyl-d14       95.8       45.1-133       %REC       238726       1       03/02/2017 15:29         Surr: Nitrobenzene-d5       72.6       40.1-121       %REC       238726       1       03/02/2017 15:29		101	50-142		%REC	238726	1	03/02/2017 15:29	YH
Surr: 2-Fluorophenol       57.8       25.3-120       %REC       238726       1       03/02/2017 15:29         Surr: 4-Terphenyl-d14       95.8       45.1-133       %REC       238726       1       03/02/2017 15:29         Surr: Nitrobenzene-d5       72.6       40.1-121       %REC       238726       1       03/02/2017 15:29	*				%REC		1		YH
Surr: 4-Terphenyl-d14       95.8       45.1-133       %REC       238726       1       03/02/2017 15:29         Surr: Nitrobenzene-d5       72.6       40.1-121       %REC       238726       1       03/02/2017 15:29	* *				%REC		1		YH
Surr: Nitrobenzene-d5 72.6 40.1-121 %REC 238726 1 03/02/2017 15:29	-				%REC				YH
					%REC				YH
Duit. I henor do 10.5 120 1 05/02/2017 15.27	Surr: Phenol-d5	41.5	16.3-120		%REC	238726	1	03/02/2017 15:29	YH

Qualifiers:

Narr See case narrative
NC Not confirmed

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

<sup>&</sup>lt; Less than Result value

J Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-101-20170223-01Project Name:AGLC MaconCollection Date:2/23/2017 12:05:00 PM

Date:

9-Mar-17

Lab ID:1702M96-003Matrix:Aqueous

	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS	SW8260B			(SW	(5030B)			
Benzene	BRL	5.0		ug/L	238968	1	03/03/2017 03:42	BN
Carbon disulfide	BRL	5.0		ug/L	238968	1	03/03/2017 03:42	BN
Ethylbenzene	BRL	5.0		ug/L	238968	1	03/03/2017 03:42	BN
Toluene	BRL	5.0		ug/L	238968	1	03/03/2017 03:42	BN
Xylenes, Total	BRL	5.0		ug/L	238968	1	03/03/2017 03:42	BN
Surr: 4-Bromofluorobenzene	85	66.1-129		%REC	238968	1	03/03/2017 03:42	BN
Surr: Dibromofluoromethane	101	83.6-123		%REC	238968	1	03/03/2017 03:42	BN
Surr: Toluene-d8	94	81.8-118		%REC	238968	1	03/03/2017 03:42	BN
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	3510C)			
Naphthalene	43	5.0		ug/L	238741	100	03/03/2017 11:12	YH
Acenaphthylene	BRL	1.0		ug/L	238741	1	03/01/2017 23:54	YH
Acenaphthene	1.4	0.50		ug/L	238741	1	03/01/2017 23:54	YH
Fluorene	1.7	0.10		ug/L	238741	1	03/01/2017 23:54	YH
Phenanthrene	1.0	0.050		ug/L	238741	1	03/01/2017 23:54	YH
Anthracene	0.22	0.050		ug/L	238741	1	03/01/2017 23:54	YH
Fluoranthene	0.12	0.10		ug/L	238741	1	03/01/2017 23:54	YH
Pyrene	0.084	0.050		ug/L	238741	1	03/01/2017 23:54	YH
Benz(a)anthracene	BRL	0.050		ug/L	238741	1	03/01/2017 23:54	YH
Chrysene	BRL	0.050		ug/L	238741	1	03/01/2017 23:54	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238741	1	03/01/2017 23:54	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238741	1	03/01/2017 23:54	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 23:54	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 23:54	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238741	1	03/01/2017 23:54	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238741	1	03/01/2017 23:54	YH
Surr: 4-Terphenyl-d14	78.3	58.5-125		%REC	238741	1	03/01/2017 23:54	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238726	1	03/02/2017 15:56	YH
2-Methylphenol	BRL	10		ug/L	238726	1	03/02/2017 15:56	YH
3,4-Methylphenol	BRL	10		ug/L	238726	1	03/02/2017 15:56	YH
Phenol	BRL	10		ug/L	238726	1	03/02/2017 15:56	YH
Surr: 2,4,6-Tribromophenol	85.4	50-142		%REC	238726	1	03/02/2017 15:56	YH
Surr: 2-Fluorobiphenyl	70	46-124		%REC	238726	1	03/02/2017 15:56	YH
Surr: 2-Fluorophenol	53.6	25.3-120		%REC	238726	1	03/02/2017 15:56	YH
Surr: 4-Terphenyl-d14	89.4	45.1-133		%REC	238726	1	03/02/2017 15:56	YH
Surr: Nitrobenzene-d5	67.2	40.1-121		%REC	238726	1	03/02/2017 15:56	YH
Surr: Phenol-d5	38.5	16.3-120		%REC	238726	1	03/02/2017 15:56	YH

Qualifiers:

Narr See case narrative
NC Not confirmed

Less than Result value

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:AMW-15-20170223-01Project Name:AGLC MaconCollection Date:2/23/2017 11:55:00 AM

Date:

9-Mar-17

Lab ID:1702M96-004Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS S	W8260B			(SW	/5030B)			
Benzene	78	5.0		ug/L	238968	1	03/03/2017 21:26	BN
Carbon disulfide	BRL	5.0		ug/L	238968	1	03/03/2017 21:26	BN
Ethylbenzene	14	5.0		ug/L	238968	1	03/03/2017 21:26	BN
Toluene	BRL	5.0		ug/L	238968	1	03/03/2017 21:26	BN
Xylenes, Total	10	5.0		ug/L	238968	1	03/03/2017 21:26	BN
Surr: 4-Bromofluorobenzene	96.9	66.1-129		%REC	238968	1	03/03/2017 21:26	BN
Surr: Dibromofluoromethane	92.5	83.6-123		%REC	238968	1	03/03/2017 21:26	BN
Surr: Toluene-d8	89.3	81.8-118		%REC	238968	1	03/03/2017 21:26	BN
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	12	5.0		ug/L	238741	100	03/03/2017 11:38	YH
Acenaphthylene	1.9	1.0		ug/L	238741	1	03/01/2017 20:08	YH
Acenaphthene	11	5.0		ug/L	238741	100	03/03/2017 11:38	YH
Fluorene	4.0	0.10		ug/L	238741	1	03/01/2017 20:08	YH
Phenanthrene	3.2	0.050		ug/L	238741	1	03/01/2017 20:08	YH
Anthracene	0.49	0.050		ug/L	238741	1	03/01/2017 20:08	YH
Fluoranthene	0.29	0.10		ug/L	238741	1	03/01/2017 20:08	YH
Pyrene	0.20	0.050		ug/L	238741	1	03/01/2017 20:08	YH
Benz(a)anthracene	BRL	0.050		ug/L	238741	1	03/01/2017 20:08	YH
Chrysene	BRL	0.050		ug/L	238741	1	03/01/2017 20:08	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238741	1	03/01/2017 20:08	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238741	1	03/01/2017 20:08	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 20:08	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 20:08	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238741	1	03/01/2017 20:08	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238741	1	03/01/2017 20:08	YH
Surr: 4-Terphenyl-d14	83.5	58.5-125		%REC	238741	1	03/01/2017 20:08	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238726	1	03/02/2017 16:22	YH
2-Methylphenol	BRL	10		ug/L	238726	1	03/02/2017 16:22	YH
3,4-Methylphenol	BRL	10		ug/L	238726	1	03/02/2017 16:22	YH
Phenol	BRL	10		ug/L	238726	1	03/02/2017 16:22	YH
Surr: 2,4,6-Tribromophenol	98.3	50-142		%REC	238726	1	03/02/2017 16:22	YH
Surr: 2-Fluorobiphenyl	78.6	46-124		%REC	238726	1	03/02/2017 16:22	YH
Surr: 2-Fluorophenol	61.3	25.3-120		%REC	238726	1	03/02/2017 16:22	YH
Surr: 4-Terphenyl-d14	98.3	45.1-133		%REC	238726	1	03/02/2017 16:22	YH
Surr: Nitrobenzene-d5	76.6	40.1-121		%REC	238726	1	03/02/2017 16:22	YH
Surr: Phenol-d5	43.5	16.3-120		%REC	238726	1	03/02/2017 16:22	YH

Qualifiers:

Narr See case narrative
NC Not confirmed

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

<sup>&</sup>lt; Less than Result value

J Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-15-20170223-01Project Name:AGLC MaconCollection Date:2/23/2017 10:50:00 AM

Date:

9-Mar-17

Lab ID:1702M96-005Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
Volatile Organic Compounds by GC/MS	SW8260B			(SW	(5030B)			
Benzene	BRL	5.0		ug/L	238968	1	03/03/2017 04:11	BN
Carbon disulfide	BRL	5.0		ug/L	238968	1	03/03/2017 04:11	BN
Ethylbenzene	BRL	5.0		ug/L	238968	1	03/03/2017 04:11	BN
Toluene	BRL	5.0		ug/L	238968	1	03/03/2017 04:11	BN
Xylenes, Total	BRL	5.0		ug/L	238968	1	03/03/2017 04:11	BN
Surr: 4-Bromofluorobenzene	79.5	66.1-129		%REC	238968	1	03/03/2017 04:11	BN
Surr: Dibromofluoromethane	98.6	83.6-123		%REC	238968	1	03/03/2017 04:11	BN
Surr: Toluene-d8	91.2	81.8-118		%REC	238968	1	03/03/2017 04:11	BN
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	3510C)			
Naphthalene	BRL	0.50		ug/L	238741	1	03/01/2017 20:34	YH
Acenaphthylene	BRL	1.0		ug/L	238741	1	03/01/2017 20:34	YH
Acenaphthene	BRL	0.50		ug/L	238741	1	03/01/2017 20:34	YH
Fluorene	BRL	0.10		ug/L	238741	1	03/01/2017 20:34	YH
Phenanthrene	BRL	0.050		ug/L	238741	1	03/01/2017 20:34	YH
Anthracene	0.074	0.050		ug/L	238741	1	03/01/2017 20:34	YH
Fluoranthene	BRL	0.10		ug/L	238741	1	03/01/2017 20:34	YH
Pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 20:34	YH
Benz(a)anthracene	BRL	0.050		ug/L	238741	1	03/01/2017 20:34	YH
Chrysene	BRL	0.050		ug/L	238741	1	03/01/2017 20:34	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238741	1	03/01/2017 20:34	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238741	1	03/01/2017 20:34	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 20:34	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 20:34	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238741	1	03/01/2017 20:34	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238741	1	03/01/2017 20:34	YH
Surr: 4-Terphenyl-d14	80.9	58.5-125		%REC	238741	1	03/01/2017 20:34	YH
Semivolatile Org. Comp. by GC/MS SW	/8270D			(SW	3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238726	1	03/02/2017 16:48	YH
2-Methylphenol	BRL	10		ug/L	238726	1	03/02/2017 16:48	YH
3,4-Methylphenol	BRL	10		ug/L	238726	1	03/02/2017 16:48	YH
Phenol	BRL	10		ug/L	238726	1	03/02/2017 16:48	YH
Surr: 2,4,6-Tribromophenol	100	50-142		%REC	238726	1	03/02/2017 16:48	YH
Surr: 2-Fluorobiphenyl	80.9	46-124		%REC	238726	1	03/02/2017 16:48	YH
Surr: 2-Fluorophenol	65.6	25.3-120		%REC	238726	1	03/02/2017 16:48	YH
Surr: 4-Terphenyl-d14	95.7	45.1-133		%REC	238726	1	03/02/2017 16:48	YH
Surr: Nitrobenzene-d5	79.7	40.1-121		%REC	238726	1	03/02/2017 16:48	YH
Surr: Phenol-d5	46.1	16.3-120		%REC	238726	1	03/02/2017 16:48	YH

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-400-20170223-01Project Name:AGLC MaconCollection Date:2/23/2017 3:45:00 PM

Date:

9-Mar-17

Lab ID:1702M96-006Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS S	SW8260B			(SW	(5030B)			
Benzene	BRL	5.0		ug/L	238968	1	03/03/2017 04:40	BN
Carbon disulfide	BRL	5.0		ug/L	238968	1	03/03/2017 04:40	BN
Ethylbenzene	BRL	5.0		ug/L	238968	1	03/03/2017 04:40	BN
Toluene	BRL	5.0		ug/L	238968	1	03/03/2017 04:40	BN
Xylenes, Total	BRL	5.0		ug/L	238968	1	03/03/2017 04:40	BN
Surr: 4-Bromofluorobenzene	83.4	66.1-129		%REC	238968	1	03/03/2017 04:40	BN
Surr: Dibromofluoromethane	104	83.6-123		%REC	238968	1	03/03/2017 04:40	BN
Surr: Toluene-d8	98.2	81.8-118		%REC	238968	1	03/03/2017 04:40	BN
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	0.56	0.50		ug/L	238741	1	03/01/2017 21:01	YH
Acenaphthylene	BRL	1.0		ug/L	238741	1	03/01/2017 21:01	YH
Acenaphthene	BRL	0.50		ug/L	238741	1	03/01/2017 21:01	YH
Fluorene	BRL	0.10		ug/L	238741	1	03/01/2017 21:01	YH
Phenanthrene	BRL	0.050		ug/L	238741	1	03/01/2017 21:01	YH
Anthracene	0.11	0.050		ug/L	238741	1	03/01/2017 21:01	YH
Fluoranthene	0.10	0.10		ug/L	238741	1	03/01/2017 21:01	YH
Pyrene	0.14	0.050		ug/L	238741	1	03/01/2017 21:01	YH
Benz(a)anthracene	BRL	0.050		ug/L	238741	1	03/01/2017 21:01	YH
Chrysene	BRL	0.050		ug/L	238741	1	03/01/2017 21:01	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238741	1	03/01/2017 21:01	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238741	1	03/01/2017 21:01	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 21:01	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 21:01	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238741	1	03/01/2017 21:01	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238741	1	03/01/2017 21:01	YH
Surr: 4-Terphenyl-d14	74.4	58.5-125		%REC	238741	1	03/01/2017 21:01	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238726	1	03/02/2017 17:25	YH
2-Methylphenol	BRL	10		ug/L	238726	1	03/02/2017 17:25	YH
3,4-Methylphenol	BRL	10		ug/L	238726	1	03/02/2017 17:25	YH
Phenol	BRL	10		ug/L	238726	1	03/02/2017 17:25	YH
Surr: 2,4,6-Tribromophenol	92.9	50-142		%REC	238726	1	03/02/2017 17:25	YH
Surr: 2-Fluorobiphenyl	73.8	46-124		%REC	238726	1	03/02/2017 17:25	YH
Surr: 2-Fluorophenol	62.8	25.3-120		%REC	238726	1	03/02/2017 17:25	YH
Surr: 4-Terphenyl-d14	90.9	45.1-133		%REC	238726	1	03/02/2017 17:25	YH
Surr: Nitrobenzene-d5	75.4	40.1-121		%REC	238726	1	03/02/2017 17:25	YH
Surr: Phenol-d5	44.4	16.3-120		%REC	238726	1	03/02/2017 17:25	YH

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-304D-20170223-01Project Name:AGLC MaconCollection Date:2/23/2017 4:10:00 PM

Date:

9-Mar-17

Lab ID:1702M96-007Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS S	SW8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238968	1	03/03/2017 05:09	BN
Carbon disulfide	BRL	5.0		ug/L	238968	1	03/03/2017 05:09	BN
Ethylbenzene	BRL	5.0		ug/L	238968	1	03/03/2017 05:09	BN
Toluene	BRL	5.0		ug/L	238968	1	03/03/2017 05:09	BN
Xylenes, Total	BRL	5.0		ug/L	238968	1	03/03/2017 05:09	BN
Surr: 4-Bromofluorobenzene	77.6	66.1-129		%REC	238968	1	03/03/2017 05:09	BN
Surr: Dibromofluoromethane	95	83.6-123		%REC	238968	1	03/03/2017 05:09	BN
Surr: Toluene-d8	94.4	81.8-118		%REC	238968	1	03/03/2017 05:09	BN
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	BRL	0.50		ug/L	238741	1	03/01/2017 21:28	YH
Acenaphthylene	BRL	1.0		ug/L	238741	1	03/01/2017 21:28	YH
Acenaphthene	BRL	0.50		ug/L	238741	1	03/01/2017 21:28	YH
Fluorene	BRL	0.10		ug/L	238741	1	03/01/2017 21:28	YH
Phenanthrene	BRL	0.050		ug/L	238741	1	03/01/2017 21:28	YH
Anthracene	BRL	0.050		ug/L	238741	1	03/01/2017 21:28	YH
Fluoranthene	BRL	0.10		ug/L	238741	1	03/01/2017 21:28	YH
Pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 21:28	YH
Benz(a)anthracene	BRL	0.050		ug/L	238741	1	03/01/2017 21:28	YH
Chrysene	BRL	0.050		ug/L	238741	1	03/01/2017 21:28	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238741	1	03/01/2017 21:28	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238741	1	03/01/2017 21:28	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 21:28	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 21:28	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238741	1	03/01/2017 21:28	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238741	1	03/01/2017 21:28	YH
Surr: 4-Terphenyl-d14	79.4	58.5-125		%REC	238741	1	03/01/2017 21:28	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238726	1	03/02/2017 17:39	YH
2-Methylphenol	BRL	10		ug/L	238726	1	03/02/2017 17:39	YH
3,4-Methylphenol	BRL	10		ug/L	238726	1	03/02/2017 17:39	YH
Phenol	BRL	10		ug/L	238726	1	03/02/2017 17:39	YH
Surr: 2,4,6-Tribromophenol	95.9	50-142		%REC	238726	1	03/02/2017 17:39	YH
Surr: 2-Fluorobiphenyl	74.5	46-124		%REC	238726	1	03/02/2017 17:39	YH
Surr: 2-Fluorophenol	53.1	25.3-120		%REC	238726	1	03/02/2017 17:39	YH
Surr: 4-Terphenyl-d14	95.5	45.1-133		%REC	238726	1	03/02/2017 17:39	YH
Surr: Nitrobenzene-d5	72.9	40.1-121		%REC	238726	1	03/02/2017 17:39	YH
Surr: Phenol-d5	37	16.3-120		%REC	238726	1	03/02/2017 17:39	YH

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

J Estimated value detected below Reporting Limit

Client: ERM-Southeast Client Sample ID: DUP-01-20170223-01

Project Name:AGLC MaconCollection Date:2/23/2017Lab ID:1702M96-008Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS S	SW8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238968	1	03/03/2017 05:38	BN
Carbon disulfide	BRL	5.0		ug/L	238968	1	03/03/2017 05:38	BN
Ethylbenzene	BRL	5.0		ug/L	238968	1	03/03/2017 05:38	BN
Toluene	BRL	5.0		ug/L	238968	1	03/03/2017 05:38	BN
Xylenes, Total	BRL	5.0		ug/L	238968	1	03/03/2017 05:38	BN
Surr: 4-Bromofluorobenzene	86.4	66.1-129		%REC	238968	1	03/03/2017 05:38	BN
Surr: Dibromofluoromethane	98.9	83.6-123		%REC	238968	1	03/03/2017 05:38	BN
Surr: Toluene-d8	96.7	81.8-118		%REC	238968	1	03/03/2017 05:38	BN
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	21	5.0		ug/L	238741	100	03/03/2017 12:05	YH
Acenaphthylene	BRL	100		ug/L	238741	100	03/03/2017 12:05	YH
Acenaphthene	BRL	50		ug/L	238741	100	03/03/2017 12:05	YH
Fluorene	BRL	10		ug/L	238741	100	03/03/2017 12:05	YH
Phenanthrene	BRL	5.0		ug/L	238741	100	03/03/2017 12:05	YH
Anthracene	BRL	5.0		ug/L	238741	100	03/03/2017 12:05	YH
Fluoranthene	BRL	10		ug/L	238741	100	03/03/2017 12:05	YH
Pyrene	BRL	5.0		ug/L	238741	100	03/03/2017 12:05	YH
Benz(a)anthracene	BRL	5.0		ug/L	238741	100	03/03/2017 12:05	YH
Chrysene	BRL	5.0		ug/L	238741	100	03/03/2017 12:05	YH
Benzo(b)fluoranthene	BRL	10		ug/L	238741	100	03/03/2017 12:05	YH
Benzo(k)fluoranthene	BRL	5.0		ug/L	238741	100	03/03/2017 12:05	YH
Benzo(a)pyrene	BRL	5.0		ug/L	238741	100	03/03/2017 12:05	YH
Indeno(1,2,3-cd)pyrene	BRL	5.0		ug/L	238741	100	03/03/2017 12:05	YH
Dibenz(a,h)anthracene	BRL	10		ug/L	238741	100	03/03/2017 12:05	YH
Benzo(g,h,i)perylene	BRL	10		ug/L	238741	100	03/03/2017 12:05	YH
Surr: 4-Terphenyl-d14	0	58.5-125	S	%REC	238741	100	03/03/2017 12:05	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238726	1	03/02/2017 18:04	YH
2-Methylphenol	BRL	10		ug/L	238726	1	03/02/2017 18:04	YH
3,4-Methylphenol	BRL	10		ug/L	238726	1	03/02/2017 18:04	YH
Phenol	BRL	10		ug/L	238726	1	03/02/2017 18:04	YH
Surr: 2,4,6-Tribromophenol	97.5	50-142		%REC	238726	1	03/02/2017 18:04	YH
Surr: 2-Fluorobiphenyl	76.2	46-124		%REC	238726	1	03/02/2017 18:04	YH
Surr: 2-Fluorophenol	57.4	25.3-120		%REC	238726	1	03/02/2017 18:04	YH
Surr: 4-Terphenyl-d14	99.1	45.1-133		%REC	238726	1	03/02/2017 18:04	YH
Surr: Nitrobenzene-d5	74.2	40.1-121		%REC	238726	1	03/02/2017 18:04	YH
Surr: Phenol-d5	40.5	16.3-120		%REC	238726	1	03/02/2017 18:04	YH

Qualifiers:

BRL Below reporting limit

Date:

9-Mar-17

<sup>\*</sup> Value exceeds maximum contaminant level

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

J Estimated value detected below Reporting Limit

Client: ERM-Southeast Client Sample ID: DUP-02-20170223-01

Project Name:AGLC MaconCollection Date:2/23/2017Lab ID:1702M96-009Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
Volatile Organic Compounds by GC/MS	SW8260B			(SW	/5030B)			
Benzene	80	5.0		ug/L	238968	1	03/03/2017 15:30	BN
Carbon disulfide	BRL	5.0		ug/L	238968	1	03/03/2017 15:30	BN
Ethylbenzene	17	5.0		ug/L	238968	1	03/03/2017 15:30	BN
Toluene	BRL	5.0		ug/L	238968	1	03/03/2017 15:30	BN
Xylenes, Total	12	5.0		ug/L	238968	1	03/03/2017 15:30	BN
Surr: 4-Bromofluorobenzene	97.3	66.1-129		%REC	238968	1	03/03/2017 15:30	BN
Surr: Dibromofluoromethane	96	83.6-123		%REC	238968	1	03/03/2017 15:30	BN
Surr: Toluene-d8	90.8	81.8-118		%REC	238968	1	03/03/2017 15:30	BN
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	11	5.0		ug/L	238741	100	03/03/2017 12:30	YH
Acenaphthylene	BRL	100		ug/L	238741	100	03/03/2017 12:30	YH
Acenaphthene	10	5.0		ug/L	238741	100	03/03/2017 12:30	YH
Fluorene	BRL	5.0		ug/L	238741	100	03/03/2017 12:30	YH
Phenanthrene	BRL	5.0		ug/L	238741	100	03/03/2017 12:30	YH
Anthracene	BRL	5.0		ug/L	238741	100	03/03/2017 12:30	YH
Fluoranthene	BRL	10		ug/L	238741	100	03/03/2017 12:30	YH
Pyrene	BRL	5.0		ug/L	238741	100	03/03/2017 12:30	YH
Benz(a)anthracene	BRL	5.0		ug/L	238741	100	03/03/2017 12:30	YH
Chrysene	BRL	5.0		ug/L	238741	100	03/03/2017 12:30	YH
Benzo(b)fluoranthene	BRL	10		ug/L	238741	100	03/03/2017 12:30	YH
Benzo(k)fluoranthene	BRL	5.0		ug/L	238741	100	03/03/2017 12:30	YH
Benzo(a)pyrene	BRL	5.0		ug/L	238741	100	03/03/2017 12:30	YH
Indeno(1,2,3-cd)pyrene	BRL	5.0		ug/L	238741	100	03/03/2017 12:30	YH
Dibenz(a,h)anthracene	BRL	10		ug/L	238741	100	03/03/2017 12:30	YH
Benzo(g,h,i)perylene	BRL	10		ug/L	238741	100	03/03/2017 12:30	YH
Surr: 4-Terphenyl-d14	0	58.5-125	S	%REC	238741	100	03/03/2017 12:30	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238726	1	03/02/2017 18:30	YH
2-Methylphenol	BRL	10		ug/L	238726	1	03/02/2017 18:30	YH
3,4-Methylphenol	BRL	10		ug/L	238726	1	03/02/2017 18:30	YH
Phenol	BRL	10		ug/L	238726	1	03/02/2017 18:30	YH
Surr: 2,4,6-Tribromophenol	103	50-142		%REC	238726	1	03/02/2017 18:30	YH
Surr: 2-Fluorobiphenyl	80.5	46-124		%REC	238726	1	03/02/2017 18:30	YH
Surr: 2-Fluorophenol	60.1	25.3-120		%REC	238726	1	03/02/2017 18:30	YH
Surr: 4-Terphenyl-d14	104	45.1-133		%REC	238726	1	03/02/2017 18:30	YH
Surr: Nitrobenzene-d5	79.2	40.1-121		%REC	238726	1	03/02/2017 18:30	YH
Surr: Phenol-d5	41.6	16.3-120		%REC	238726	1	03/02/2017 18:30	YH

Qualifiers:

BRL Below reporting limit

Date:

9-Mar-17

<sup>\*</sup> Value exceeds maximum contaminant level

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

Client: ERM-Southeast Client Sample ID: DUP-03-20170223

Project Name:AGLC MaconCollection Date:2/23/2017Lab ID:1702M96-010Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS S	SW8260B			(SW	(5030B)			
Benzene	BRL	5.0		ug/L	238968	1	03/03/2017 15:59	BN
Carbon disulfide	BRL	5.0		ug/L	238968	1	03/03/2017 15:59	BN
Ethylbenzene	BRL	5.0		ug/L	238968	1	03/03/2017 15:59	BN
Toluene	BRL	5.0		ug/L	238968	1	03/03/2017 15:59	BN
Xylenes, Total	BRL	5.0		ug/L	238968	1	03/03/2017 15:59	BN
Surr: 4-Bromofluorobenzene	84.1	66.1-129		%REC	238968	1	03/03/2017 15:59	BN
Surr: Dibromofluoromethane	89.1	83.6-123		%REC	238968	1	03/03/2017 15:59	BN
Surr: Toluene-d8	92.6	81.8-118		%REC	238968	1	03/03/2017 15:59	BN
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	3510C)			
Naphthalene	0.55	0.50		ug/L	238741	1	03/07/2017 20:49	YH
Acenaphthylene	BRL	1.0		ug/L	238741	1	03/07/2017 20:49	YH
Acenaphthene	BRL	0.50		ug/L	238741	1	03/07/2017 20:49	YH
Fluorene	BRL	0.10		ug/L	238741	1	03/07/2017 20:49	YH
Phenanthrene	BRL	0.050		ug/L	238741	1	03/07/2017 20:49	YH
Anthracene	0.12	0.050		ug/L	238741	1	03/07/2017 20:49	YH
Fluoranthene	BRL	0.10		ug/L	238741	1	03/07/2017 20:49	YH
Pyrene	0.14	0.050		ug/L	238741	1	03/07/2017 20:49	YH
Benz(a)anthracene	BRL	0.050		ug/L	238741	1	03/07/2017 20:49	YH
Chrysene	BRL	0.050		ug/L	238741	1	03/07/2017 20:49	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238741	1	03/07/2017 20:49	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238741	1	03/07/2017 20:49	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238741	1	03/07/2017 20:49	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238741	1	03/07/2017 20:49	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238741	1	03/07/2017 20:49	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238741	1	03/07/2017 20:49	YH
Surr: 4-Terphenyl-d14	73.1	58.5-125		%REC	238741	1	03/07/2017 20:49	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238787	1	03/02/2017 12:42	YH
2-Methylphenol	BRL	10		ug/L	238787	1	03/02/2017 12:42	YH
3,4-Methylphenol	BRL	10		ug/L	238787	1	03/02/2017 12:42	YH
Phenol	BRL	10		ug/L	238787	1	03/02/2017 12:42	YH
Surr: 2,4,6-Tribromophenol	118	50-142		%REC	238787	1	03/02/2017 12:42	YH
Surr: 2-Fluorobiphenyl	89.6	46-124		%REC	238787	1	03/02/2017 12:42	YH
Surr: 2-Fluorophenol	59.2	25.3-120		%REC	238787	1	03/02/2017 12:42	YH
Surr: 4-Terphenyl-d14	99.6	45.1-133		%REC	238787	1	03/02/2017 12:42	YH
Surr: Nitrobenzene-d5	82.4	40.1-121		%REC	238787	1	03/02/2017 12:42	YH
Surr: Phenol-d5	44.4	16.3-120		%REC	238787	1	03/02/2017 12:42	YH

Qualifiers:

Date:

9-Mar-17

Narr See case narrative
NC Not confirmed

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Less than Result value

J Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-12DD-20170223-01Project Name:AGLC MaconCollection Date:2/23/2017 2:05:00 PM

Date:

9-Mar-17

Lab ID:1702M96-011Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS S	SW8260B			(SW	/5030B)			
Benzene	35	5.0		ug/L	238968	1	03/03/2017 12:34	BN
Carbon disulfide	BRL	5.0		ug/L	238968	1	03/03/2017 12:34	BN
Ethylbenzene	BRL	5.0		ug/L	238968	1	03/03/2017 12:34	BN
Toluene	BRL	5.0		ug/L	238968	1	03/03/2017 12:34	BN
Xylenes, Total	BRL	5.0		ug/L	238968	1	03/03/2017 12:34	BN
Surr: 4-Bromofluorobenzene	86	66.1-129		%REC	238968	1	03/03/2017 12:34	BN
Surr: Dibromofluoromethane	91.9	83.6-123		%REC	238968	1	03/03/2017 12:34	BN
Surr: Toluene-d8	90.8	81.8-118		%REC	238968	1	03/03/2017 12:34	BN
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	4.3	0.50		ug/L	238741	1	03/01/2017 19:36	YH
Acenaphthylene	BRL	1.0		ug/L	238741	1	03/01/2017 19:36	YH
Acenaphthene	0.65	0.50		ug/L	238741	1	03/01/2017 19:36	YH
Fluorene	0.33	0.10		ug/L	238741	1	03/01/2017 19:36	YH
Phenanthrene	0.16	0.050		ug/L	238741	1	03/01/2017 19:36	YH
Anthracene	BRL	0.050		ug/L	238741	1	03/01/2017 19:36	YH
Fluoranthene	BRL	0.10		ug/L	238741	1	03/01/2017 19:36	YH
Pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 19:36	YH
Benz(a)anthracene	BRL	0.050		ug/L	238741	1	03/01/2017 19:36	YH
Chrysene	BRL	0.050		ug/L	238741	1	03/01/2017 19:36	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238741	1	03/01/2017 19:36	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238741	1	03/01/2017 19:36	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 19:36	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 19:36	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238741	1	03/01/2017 19:36	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238741	1	03/01/2017 19:36	YH
Surr: 4-Terphenyl-d14	75.3	58.5-125		%REC	238741	1	03/01/2017 19:36	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238787	1	03/03/2017 18:58	YH
2-Methylphenol	BRL	10		ug/L	238787	1	03/03/2017 18:58	YH
3,4-Methylphenol	BRL	10		ug/L	238787	1	03/03/2017 18:58	YH
Phenol	BRL	10		ug/L	238787	1	03/03/2017 18:58	YH
Surr: 2,4,6-Tribromophenol	84.2	50-142		%REC	238787	1	03/03/2017 18:58	YH
Surr: 2-Fluorobiphenyl	71.1	46-124		%REC	238787	1	03/03/2017 18:58	YH
Surr: 2-Fluorophenol	57.6	25.3-120		%REC	238787	1	03/03/2017 18:58	YH
Surr: 4-Terphenyl-d14	81.8	45.1-133		%REC	238787	1	03/03/2017 18:58	YH
Surr: Nitrobenzene-d5	69.6	40.1-121		%REC	238787	1	03/03/2017 18:58	YH
Surr: Phenol-d5	41	16.3-120		%REC	238787	1	03/03/2017 18:58	YH

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-110D-20170223-01Project Name:AGLC MaconCollection Date:2/23/2017 4:20:00 PM

Date:

9-Mar-17

**Lab ID:** 1702M96-012 **Matrix:** Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS	SW8260B			(SW	(5030B)			
Benzene	70	5.0		ug/L	238968	1	03/08/2017 12:17	NP
Carbon disulfide	BRL	5.0		ug/L	238968	1	03/08/2017 12:17	NP
Ethylbenzene	150	5.0		ug/L	238968	1	03/08/2017 12:17	NP
Toluene	BRL	5.0		ug/L	238968	1	03/08/2017 12:17	NP
Xylenes, Total	5.7	5.0		ug/L	238968	1	03/08/2017 12:17	NP
Surr: 4-Bromofluorobenzene	97	66.1-129		%REC	238968	1	03/08/2017 12:17	NP
Surr: Dibromofluoromethane	96.8	83.6-123		%REC	238968	1	03/08/2017 12:17	NP
Surr: Toluene-d8	98.4	81.8-118		%REC	238968	1	03/08/2017 12:17	NP
SIM Polynuclear Aromatic Hydrocarbons	s SW8270D			(SW	3510C)			
Naphthalene	760	50		ug/L	238741	100	03/03/2017 12:56	YH
Acenaphthylene	1.9	1.0		ug/L	238741	1	03/01/2017 20:02	YH
Acenaphthene	46	5.0		ug/L	238741	100	03/03/2017 12:56	YH
Fluorene	15	10		ug/L	238741	100	03/03/2017 12:56	YH
Phenanthrene	26	5.0		ug/L	238741	100	03/03/2017 12:56	YH
Anthracene	6.2	0.050		ug/L	238741	1	03/01/2017 20:02	YH
Fluoranthene	4.5	0.10		ug/L	238741	1	03/01/2017 20:02	YH
Pyrene	5.6	0.050		ug/L	238741	1	03/01/2017 20:02	YH
Benz(a)anthracene	0.20	0.050		ug/L	238741	1	03/01/2017 20:02	YH
Chrysene	0.16	0.050		ug/L	238741	1	03/01/2017 20:02	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238741	1	03/01/2017 20:02	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238741	1	03/01/2017 20:02	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 20:02	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 20:02	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238741	1	03/01/2017 20:02	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238741	1	03/01/2017 20:02	YH
Surr: 4-Terphenyl-d14	79.6	58.5-125		%REC	238741	1	03/01/2017 20:02	YH
Semivolatile Org. Comp. by GC/MS SV	V8270D			(SW	3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238787	1	03/03/2017 19:23	YH
2-Methylphenol	BRL	10		ug/L	238787	1	03/03/2017 19:23	YH
3,4-Methylphenol	BRL	10		ug/L	238787	1	03/03/2017 19:23	YH
Phenol	BRL	10		ug/L	238787	1	03/03/2017 19:23	YH
Surr: 2,4,6-Tribromophenol	92.5	50-142		%REC	238787	1	03/03/2017 19:23	YH
Surr: 2-Fluorobiphenyl	74	46-124		%REC	238787	1	03/03/2017 19:23	YH
Surr: 2-Fluorophenol	58.9	25.3-120		%REC	238787	1	03/03/2017 19:23	YH
Surr: 4-Terphenyl-d14	84.7	45.1-133		%REC	238787	1	03/03/2017 19:23	YH
Surr: Nitrobenzene-d5	73.1	40.1-121		%REC	238787	1	03/03/2017 19:23	YH
Surr: Phenol-d5	41.9	16.3-120		%REC	238787	1	03/03/2017 19:23	YH

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Desp man regard varie

J Estimated value detected below Reporting Limit

Client: ERM-Southeast Client Sample ID: DUP-04-20170223-01

Project Name:AGLC MaconCollection Date:2/23/2017Lab ID:1702M96-013Matrix:Aqueous

Separate   Separate		NP NP NP NP NP NP NP
Carbon disulfide         BRL         5.0         ug/L         238968         1           Ethylbenzene         160         5.0         ug/L         238968         1           Toluene         BRL         5.0         ug/L         238968         1           Xylenes, Total         6.0         5.0         ug/L         238968         1           Surr: Dibromofluorobenzene         100         66.1-129         %REC         238968         1           Surr: Dibromofluoromethane         94.5         83.6-123         %REC         238968         1           Surr: Toluene-d8         98.2         81.8-118         %REC         238968         1           SIM Polynuclear Aromatic Hydrocarbons         SW8270D         (SW3510C)         (SW3510C)           Naphthalene         1100         500         ug/L         238741         10           Acenaphthylene         1.8         1.0         ug/L         238741         1           Acenaphthene         55         50         ug/L         238741         10           Fluorene         19         10         ug/L         238741         10           Anthracene         5.5         0.050         ug/L         238741	03/08/2017 11:24 03/08/2017 11:24 03/08/2017 11:24 03/08/2017 11:24 03/08/2017 11:24 03/08/2017 11:24 03/08/2017 11:24	NP NP NP NP NP
Ethylbenzene         160         5.0         ug/L         238968         1           Toluene         BRL         5.0         ug/L         238968         1           Xylenes, Total         6.0         5.0         ug/L         238968         1           Surr: 4-Bromofluorobenzene         100         66.1-129         %REC         238968         1           Surr: Dibromofluoromethane         94.5         83.6-123         %REC         238968         1           Surr: Toluene-d8         98.2         81.8-118         %REC         238968         1           SIM Polynuclear Aromatic Hydrocarbons         SW8270D         (SW3510C)         (SW3510C)           SIM Polynuclear Aromatic Hydrocarbons         SW8270D         (SW3510C)         (SW3510C)         (SW3510C)         100         100         100         100         100         100         100         100         100         100         100         100         100	03/08/2017 11:24 03/08/2017 11:24 03/08/2017 11:24 03/08/2017 11:24 03/08/2017 11:24 03/08/2017 11:24	NP NP NP NP
Toluene	03/08/2017 11:24 03/08/2017 11:24 03/08/2017 11:24 03/08/2017 11:24 03/08/2017 11:24	NP NP NP NP
Toluene   BRL   5.0   ug/L   238968   1	03/08/2017 11:24 03/08/2017 11:24 03/08/2017 11:24 03/08/2017 11:24 03/08/2017 12:04	NP NP NP
Surr: 4-Bromofluorobenzene         100         66.1-129         %REC         238968         1           Surr: Dibromofluoromethane         94.5         83.6-123         %REC         238968         1           Surr: Toluene-d8         98.2         81.8-118         %REC         238968         1           SIM Polynuclear Aromatic Hydrocarbons         SW8270D         (SW3510C)           Naphthalene         1100         500         ug/L         238741         100           Acenaphthylene         1.8         1.0         ug/L         238741         1           Acenaphthene         55         50         ug/L         238741         100           Pluorene         19         10         ug/L         238741         100           Anthracene         32         5.0         ug/L         238741         100           Anthracene         5.5         0.050         ug/L         238741         1           Fluoranthene         4.1         0.10         ug/L         238741         1           Pyrene         5.1         0.050         ug/L         238741         1           Benz(a)anthracene         0.17         0.050         ug/L         238741 <td>03/08/2017 11:24 03/08/2017 11:24 03/08/2017 11:24 03/08/2017 12:04</td> <td>NP NP</td>	03/08/2017 11:24 03/08/2017 11:24 03/08/2017 11:24 03/08/2017 12:04	NP NP
Surr: Dibromofluoromethane         94.5         83.6-123         %REC         238968         1           Surr: Toluene-d8         98.2         81.8-118         %REC         238968         1           SIM Polynuclear Aromatic Hydrocarbons         SW8270D         (SW3510C)           Naphthalene         1100         500         ug/L         238741         100           Acenaphthylene         1.8         1.0         ug/L         238741         1           Acenaphthene         55         50         ug/L         238741         100           Fluorene         19         10         ug/L         238741         100           Phenanthrene         32         5.0         ug/L         238741         100           Anthracene         5.5         0.050         ug/L         238741         1           Fluoranthene         4.1         0.10         ug/L         238741         1           Pyrene         5.1         0.050         ug/L         238741         1           Benz(a)anthracene         0.17         0.050         ug/L         238741         1           Benzo(b)fluoranthene         BRL         0.10         ug/L         238741         1	03/08/2017 11:24 03/08/2017 11:24 0 03/08/2017 12:04	NP
Surr: Toluene-d8         98.2         81.8-118         %REC         238968         1           SIM Polynuclear Aromatic Hydrocarbons         SW8270D         (SW3510C)           Naphthalene         1100         500         ug/L         238741         100           Acenaphthylene         1.8         1.0         ug/L         238741         1           Acenaphthene         55         50         ug/L         238741         100           Phenanthrene         19         10         ug/L         238741         100           Phenanthrene         32         5.0         ug/L         238741         100           Anthracene         5.5         0.050         ug/L         238741         1           Pyrene         5.1         0.050         ug/L         238741         1           Pyrene         5.1         0.050         ug/L         238741         1           Benz(a)anthracene         0.17         0.050         ug/L         238741         1           Chrysene         0.14         0.050         ug/L         238741         1           Benzo(b)fluoranthene         BRL         0.10         ug/L         238741         1           Be	03/08/2017 11:24	
SIM Polynuclear Aromatic Hydrocarbons   SW8270D   SW82510C	0 03/08/2017 12:04	NP
Naphthalene         1100         500         ug/L         238741         100           Acenaphthylene         1.8         1.0         ug/L         238741         1           Acenaphthene         55         50         ug/L         238741         100           Fluorene         19         10         ug/L         238741         100           Phenanthrene         32         5.0         ug/L         238741         100           Anthracene         5.5         0.050         ug/L         238741         1           Fluoranthene         4.1         0.10         ug/L         238741         1           Pyrene         5.1         0.050         ug/L         238741         1           Benz(a)anthracene         0.17         0.050         ug/L         238741         1           Chrysene         0.14         0.050         ug/L         238741         1           Benzo(b)fluoranthene         BRL         0.10         ug/L         238741         1           Benzo(a)pyrene         BRL         0.050         ug/L         238741         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238741         1 </td <td></td> <td></td>		
Acenaphthylene         1.8         1.0         ug/L         238741         1           Acenaphthene         55         50         ug/L         238741         100           Fluorene         19         10         ug/L         238741         100           Phenanthrene         32         5.0         ug/L         238741         1           Anthracene         5.5         0.050         ug/L         238741         1           Fluoranthene         4.1         0.10         ug/L         238741         1           Pyrene         5.1         0.050         ug/L         238741         1           Benz(a)anthracene         0.17         0.050         ug/L         238741         1           Chrysene         0.14         0.050         ug/L         238741         1           Benzo(b)fluoranthene         BRL         0.10         ug/L         238741         1           Benzo(k)fluoranthene         BRL         0.050         ug/L         238741         1           Benzo(a)pyrene         BRL         0.050         ug/L         238741         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238741         <		
Acenaphthylene       1.8       1.0       ug/L       238741       1         Acenaphthene       55       50       ug/L       238741       100         Fluorene       19       10       ug/L       238741       100         Phenanthrene       32       5.0       ug/L       238741       100         Anthracene       5.5       0.050       ug/L       238741       1         Fluoranthene       4.1       0.10       ug/L       238741       1         Pyrene       5.1       0.050       ug/L       238741       1         Benz(a)anthracene       0.17       0.050       ug/L       238741       1         Chrysene       0.14       0.050       ug/L       238741       1         Benzo(b)fluoranthene       BRL       0.10       ug/L       238741       1         Benzo(k)fluoranthene       BRL       0.050       ug/L       238741       1         Benzo(a)pyrene       BRL       0.050       ug/L       238741       1         Indeno(1,2,3-cd)pyrene       BRL       0.050       ug/L       238741       1         Dibenz(a,h)anthracene       BRL       0.10       ug/L       238741 <td></td> <td>YH</td>		YH
Acenaphthene       55       50       ug/L       238741       100         Fluorene       19       10       ug/L       238741       100         Phenanthrene       32       5.0       ug/L       238741       100         Anthracene       5.5       0.050       ug/L       238741       1         Fluoranthene       4.1       0.10       ug/L       238741       1         Pyrene       5.1       0.050       ug/L       238741       1         Benz(a)anthracene       0.17       0.050       ug/L       238741       1         Chrysene       0.14       0.050       ug/L       238741       1         Benzo(b)fluoranthene       BRL       0.10       ug/L       238741       1         Benzo(k)fluoranthene       BRL       0.050       ug/L       238741       1         Benzo(a)pyrene       BRL       0.050       ug/L       238741       1         Indeno(1,2,3-cd)pyrene       BRL       0.050       ug/L       238741       1         Dibenz(a,h)anthracene       BRL       0.10       ug/L       238741       1         Benzo(g,h,i)perylene       BRL       0.10       ug/L       23	03/01/2017 20:27	YH
Fluorene         19         10         ug/L         238741         100           Phenanthrene         32         5.0         ug/L         238741         100           Anthracene         5.5         0.050         ug/L         238741         1           Fluoranthene         4.1         0.10         ug/L         238741         1           Pyrene         5.1         0.050         ug/L         238741         1           Benz(a)anthracene         0.17         0.050         ug/L         238741         1           Chrysene         0.14         0.050         ug/L         238741         1           Benzo(b)fluoranthene         BRL         0.10         ug/L         238741         1           Benzo(a)pyrene         BRL         0.050         ug/L         238741         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238741         1           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238741         1           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238741         1           Surr: 4-Terphenyl-d14         73.3         58.5-125         %REC         <	03/08/2017 11:38	YH
Anthracene       5.5       0.050       ug/L       238741       1         Fluoranthene       4.1       0.10       ug/L       238741       1         Pyrene       5.1       0.050       ug/L       238741       1         Benz(a)anthracene       0.17       0.050       ug/L       238741       1         Chrysene       0.14       0.050       ug/L       238741       1         Benzo(b)fluoranthene       BRL       0.10       ug/L       238741       1         Benzo(k)fluoranthene       BRL       0.050       ug/L       238741       1         Benzo(a)pyrene       BRL       0.050       ug/L       238741       1         Indeno(1,2,3-cd)pyrene       BRL       0.050       ug/L       238741       1         Dibenz(a,h)anthracene       BRL       0.10       ug/L       238741       1         Benzo(g,h,i)perylene       BRL       0.10       ug/L       238741       1         Surr: 4-Terphenyl-d14       73.3       58.5-125       %REC       238741       1	03/08/2017 11:38	YH
Fluoranthene       4.1       0.10       ug/L       238741       1         Pyrene       5.1       0.050       ug/L       238741       1         Benz(a)anthracene       0.17       0.050       ug/L       238741       1         Chrysene       0.14       0.050       ug/L       238741       1         Benzo(b)fluoranthene       BRL       0.10       ug/L       238741       1         Benzo(k)fluoranthene       BRL       0.050       ug/L       238741       1         Benzo(a)pyrene       BRL       0.050       ug/L       238741       1         Indeno(1,2,3-cd)pyrene       BRL       0.050       ug/L       238741       1         Dibenz(a,h)anthracene       BRL       0.10       ug/L       238741       1         Benzo(g,h,i)perylene       BRL       0.10       ug/L       238741       1         Surr: 4-Terphenyl-d14       73.3       58.5-125       %REC       238741       1	03/08/2017 11:38	YH
Pyrene         5.1         0.050         ug/L         238741         1           Benz(a)anthracene         0.17         0.050         ug/L         238741         1           Chrysene         0.14         0.050         ug/L         238741         1           Benzo(b)fluoranthene         BRL         0.10         ug/L         238741         1           Benzo(k)fluoranthene         BRL         0.050         ug/L         238741         1           Benzo(a)pyrene         BRL         0.050         ug/L         238741         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238741         1           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238741         1           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238741         1           Surr: 4-Terphenyl-d14         73.3         58.5-125         %REC         238741         1	03/01/2017 20:27	YH
Benz(a)anthracene         0.17         0.050         ug/L         238741         1           Chrysene         0.14         0.050         ug/L         238741         1           Benzo(b)fluoranthene         BRL         0.10         ug/L         238741         1           Benzo(k)fluoranthene         BRL         0.050         ug/L         238741         1           Benzo(a)pyrene         BRL         0.050         ug/L         238741         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238741         1           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238741         1           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238741         1           Surr: 4-Terphenyl-d14         73.3         58.5-125         %REC         238741         1	03/01/2017 20:27	YH
Benz(a)anthracene         0.17         0.050         ug/L         238741         1           Chrysene         0.14         0.050         ug/L         238741         1           Benzo(b)fluoranthene         BRL         0.10         ug/L         238741         1           Benzo(k)fluoranthene         BRL         0.050         ug/L         238741         1           Benzo(a)pyrene         BRL         0.050         ug/L         238741         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238741         1           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238741         1           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238741         1           Surr: 4-Terphenyl-d14         73.3         58.5-125         %REC         238741         1	03/01/2017 20:27	YH
Chrysene         0.14         0.050         ug/L         238741         1           Benzo(b)fluoranthene         BRL         0.10         ug/L         238741         1           Benzo(k)fluoranthene         BRL         0.050         ug/L         238741         1           Benzo(a)pyrene         BRL         0.050         ug/L         238741         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238741         1           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238741         1           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238741         1           Surr: 4-Terphenyl-d14         73.3         58.5-125         %REC         238741         1	03/01/2017 20:27	YH
Benzo(b)fluoranthene         BRL         0.10         ug/L         238741         1           Benzo(k)fluoranthene         BRL         0.050         ug/L         238741         1           Benzo(a)pyrene         BRL         0.050         ug/L         238741         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238741         1           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238741         1           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238741         1           Surr: 4-Terphenyl-d14         73.3         58.5-125         %REC         238741         1	03/01/2017 20:27	YH
Benzo(a)pyrene         BRL         0.050         ug/L         238741         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238741         1           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238741         1           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238741         1           Surr: 4-Terphenyl-d14         73.3         58.5-125         %REC         238741         1	03/01/2017 20:27	YH
Benzo(a)pyrene         BRL         0.050         ug/L         238741         1           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238741         1           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238741         1           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238741         1           Surr: 4-Terphenyl-d14         73.3         58.5-125         %REC         238741         1	03/01/2017 20:27	YH
Dibenz(a,h)anthracene         BRL         0.10         ug/L         238741         1           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238741         1           Surr: 4-Terphenyl-d14         73.3         58.5-125         %REC         238741         1	03/01/2017 20:27	YH
Benzo(g,h,i)perylene         BRL         0.10         ug/L         238741         1           Surr: 4-Terphenyl-d14         73.3         58.5-125         %REC         238741         1	03/01/2017 20:27	YH
Surr: 4-Terphenyl-d14 73.3 58.5-125 %REC 238741 1	03/01/2017 20:27	YH
	03/01/2017 20:27	YH
	03/01/2017 20:27	YH
Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)		
2,4-Dimethylphenol BRL 10 ug/L 238787 1	03/03/2017 19:47	YH
2-Methylphenol BRL 10 ug/L 238787 1	03/03/2017 19:47	YH
3,4-Methylphenol BRL 10 ug/L 238787 1	03/03/2017 19:47	YH
Phenol BRL 10 ug/L 238787 1	03/03/2017 19:47	YH
Surr: 2,4,6-Tribromophenol 89.1 50-142 %REC 238787 1	03/03/2017 19:47	YH
Surr: 2-Fluorobiphenyl 73.3 46-124 %REC 238787 1	03/03/2017 19:47	YH
Surr: 2-Fluorophenol 57.8 25.3-120 %REC 238787 1	03/03/2017 19:47	YH
Surr: 4-Terphenyl-d14 85.7 45.1-133 %REC 238787 1	03/03/2017 19:47	YH
Surr: Nitrobenzene-d5 72.6 40.1-121 %REC 238787 1	03/03/2017 19:47	YH
Surr: Phenol-d5 42.1 16.3-120 %REC 238787 1	03/03/2017 19:47	YH

Qualifiers:

BRL Below reporting limit

Date:

9-Mar-17

<sup>\*</sup> Value exceeds maximum contaminant level

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-14I-20170223-01Project Name:AGLC MaconCollection Date:2/23/2017 4:45:00 PM

Date:

9-Mar-17

Lab ID:1702M96-014Matrix:Aqueous

	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS S	SW8260B			(SW	(5030B)			
Benzene	BRL	5.0		ug/L	238968	1	03/03/2017 16:28	BN
Carbon disulfide	BRL	5.0		ug/L	238968	1	03/03/2017 16:28	BN
Ethylbenzene	BRL	5.0		ug/L	238968	1	03/03/2017 16:28	BN
Toluene	BRL	5.0		ug/L	238968	1	03/03/2017 16:28	BN
Xylenes, Total	BRL	5.0		ug/L	238968	1	03/03/2017 16:28	BN
Surr: 4-Bromofluorobenzene	81.7	66.1-129		%REC	238968	1	03/03/2017 16:28	BN
Surr: Dibromofluoromethane	92.3	83.6-123		%REC	238968	1	03/03/2017 16:28	BN
Surr: Toluene-d8	93.8	81.8-118		%REC	238968	1	03/03/2017 16:28	BN
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	3510C)			
Naphthalene	BRL	0.50		ug/L	238741	1	03/01/2017 20:52	YH
Acenaphthylene	1.8	1.0		ug/L	238741	1	03/01/2017 20:52	YH
Acenaphthene	1.9	0.50		ug/L	238741	1	03/01/2017 20:52	YH
Fluorene	0.77	0.10		ug/L	238741	1	03/01/2017 20:52	YH
Phenanthrene	BRL	0.050		ug/L	238741	1	03/01/2017 20:52	YH
Anthracene	BRL	0.050		ug/L	238741	1	03/01/2017 20:52	YH
Fluoranthene	0.11	0.10		ug/L	238741	1	03/01/2017 20:52	YH
Pyrene	0.29	0.050		ug/L	238741	1	03/01/2017 20:52	YH
Benz(a)anthracene	BRL	0.050		ug/L	238741	1	03/01/2017 20:52	YH
Chrysene	BRL	0.050		ug/L	238741	1	03/01/2017 20:52	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238741	1	03/01/2017 20:52	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238741	1	03/01/2017 20:52	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 20:52	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 20:52	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238741	1	03/01/2017 20:52	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238741	1	03/01/2017 20:52	YH
Surr: 4-Terphenyl-d14	78.2	58.5-125		%REC	238741	1	03/01/2017 20:52	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238787	1	03/03/2017 20:13	YH
2-Methylphenol	BRL	10		ug/L	238787	1	03/03/2017 20:13	YH
3,4-Methylphenol	BRL	10		ug/L	238787	1	03/03/2017 20:13	YH
Phenol	BRL	10		ug/L	238787	1	03/03/2017 20:13	YH
Surr: 2,4,6-Tribromophenol	88.8	50-142		%REC	238787	1	03/03/2017 20:13	YH
Surr: 2-Fluorobiphenyl	74.4	46-124		%REC	238787	1	03/03/2017 20:13	YH
Surr: 2-Fluorophenol	59.7	25.3-120		%REC	238787	1	03/03/2017 20:13	YH
Surr: 4-Terphenyl-d14	84.6	45.1-133		%REC	238787	1	03/03/2017 20:13	YH
Surr: Nitrobenzene-d5	73.1	40.1-121		%REC	238787	1	03/03/2017 20:13	YH
Surr: Phenol-d5	42.4	16.3-120		%REC	238787	1	03/03/2017 20:13	YH

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

J Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-12DRR-20170224-01Project Name:AGLC MaconCollection Date:2/24/2017 10:05:00 AM

Date:

9-Mar-17

Lab ID:1702M96-015Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
Volatile Organic Compounds by GC/MS S	W8260B			(SW	/5030B)			
Benzene	470	50		ug/L	238968	10	03/03/2017 02:16	BN
Carbon disulfide	BRL	5.0		ug/L	238968	1	03/03/2017 15:00	BN
Ethylbenzene	150	50		ug/L	238968	10	03/03/2017 02:16	BN
Toluene	BRL	5.0		ug/L	238968	1	03/03/2017 15:00	BN
Xylenes, Total	140	5.0		ug/L	238968	1	03/03/2017 15:00	BN
Surr: 4-Bromofluorobenzene	89.3	66.1-129		%REC	238968	10	03/03/2017 02:16	BN
Surr: 4-Bromofluorobenzene	97.2	66.1-129		%REC	238968	1	03/03/2017 15:00	BN
Surr: Dibromofluoromethane	89.7	83.6-123		%REC	238968	1	03/03/2017 15:00	BN
Surr: Dibromofluoromethane	92.4	83.6-123		%REC	238968	10	03/03/2017 02:16	BN
Surr: Toluene-d8	88.9	81.8-118		%REC	238968	10	03/03/2017 02:16	BN
Surr: Toluene-d8	91.1	81.8-118		%REC	238968	1	03/03/2017 15:00	BN
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	1600	500		ug/L	238741	1000	03/06/2017 14:26	YH
Acenaphthylene	6.5	1.0		ug/L	238741	1	03/01/2017 21:18	YH
Acenaphthene	36	5.0		ug/L	238741	100	03/03/2017 13:22	YH
Fluorene	32	10		ug/L	238741	100	03/03/2017 13:22	YH
Phenanthrene	17	5.0		ug/L	238741	100	03/03/2017 13:22	YH
Anthracene	4.5	0.050		ug/L	238741	1	03/01/2017 21:18	YH
Fluoranthene	5.0	0.10		ug/L	238741	1	03/01/2017 21:18	YH
Pyrene	5.3	0.050		ug/L	238741	1	03/01/2017 21:18	YH
Benz(a)anthracene	0.15	0.050		ug/L	238741	1	03/01/2017 21:18	YH
Chrysene	0.12	0.050		ug/L	238741	1	03/01/2017 21:18	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238741	1	03/01/2017 21:18	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238741	1	03/01/2017 21:18	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 21:18	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 21:18	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238741	1	03/01/2017 21:18	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238741	1	03/01/2017 21:18	YH
Surr: 4-Terphenyl-d14	84.1	58.5-125		%REC	238741	1	03/01/2017 21:18	YH
Semivolatile Org. Comp. by GC/MS SW3	8270D			(SW	/3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238787	1	03/03/2017 20:39	YH
2-Methylphenol	BRL	10		ug/L	238787	1	03/03/2017 20:39	YH
3,4-Methylphenol	BRL	10		ug/L	238787	1	03/03/2017 20:39	YH
Phenol	BRL	10		ug/L	238787	1	03/03/2017 20:39	YH
Surr: 2,4,6-Tribromophenol	89.8	50-142		%REC	238787	1	03/03/2017 20:39	YH
Surr: 2-Fluorobiphenyl	71.7	46-124		%REC	238787	1	03/03/2017 20:39	YH
Surr: 2-Fluorophenol	55.7	25.3-120		%REC	238787	1	03/03/2017 20:39	YH
Surr: 4-Terphenyl-d14	89.4	45.1-133		%REC	238787	1	03/03/2017 20:39	YH
Surr: Nitrobenzene-d5	69.7	40.1-121		%REC	238787	1	03/03/2017 20:39	YH

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

 Client:
 ERM-Southeast
 Client Sample ID:
 MW-12DRR-20170224-01

 Project Name:
 AGLC Macon
 Collection Date:
 2/24/2017 10:05:00 AM

Lab ID:1702M96-015Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Semivolatile Org. Comp. by GC/MS	SW8270D			(SV	V3510C)			
Surr: Phenol-d5	40.7	16.3-120		%REC	238787	1	03/03/2017 20:39	YH

Date:

9-Mar-17

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

< Less than Result value

J Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-200DR-20170224-01Project Name:AGLC MaconCollection Date:2/24/2017 10:06:00 AM

Date:

9-Mar-17

Lab ID: 1702M96-016 Matrix: Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
Volatile Organic Compounds by GC/MS S	SW8260B			(SW	/5030B)			
Benzene	110	5.0		ug/L	238968	1	03/03/2017 21:54	BN
Carbon disulfide	BRL	5.0		ug/L	238968	1	03/03/2017 21:54	BN
Ethylbenzene	58	5.0		ug/L	238968	1	03/03/2017 21:54	BN
Toluene	BRL	5.0		ug/L	238968	1	03/03/2017 21:54	BN
Xylenes, Total	5.2	5.0		ug/L	238968	1	03/03/2017 21:54	BN
Surr: 4-Bromofluorobenzene	88.4	66.1-129		%REC	238968	1	03/03/2017 21:54	BN
Surr: Dibromofluoromethane	86	83.6-123		%REC	238968	1	03/03/2017 21:54	BN
Surr: Toluene-d8	90.9	81.8-118		%REC	238968	1	03/03/2017 21:54	BN
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	680	50		ug/L	238741	100	03/03/2017 13:48	YH
Acenaphthylene	2.2	1.0		ug/L	238741	1	03/01/2017 21:44	YH
Acenaphthene	28	5.0		ug/L	238741	100	03/03/2017 13:48	YH
Fluorene	20	10		ug/L	238741	100	03/03/2017 13:48	YH
Phenanthrene	5.4	0.050		ug/L	238741	1	03/01/2017 21:44	YH
Anthracene	1.9	0.050		ug/L	238741	1	03/01/2017 21:44	YH
Fluoranthene	3.0	0.10		ug/L	238741	1	03/01/2017 21:44	YH
Pyrene	3.1	0.050		ug/L	238741	1	03/01/2017 21:44	YH
Benz(a)anthracene	0.065	0.050		ug/L	238741	1	03/01/2017 21:44	YH
Chrysene	BRL	0.050		ug/L	238741	1	03/01/2017 21:44	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238741	1	03/01/2017 21:44	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238741	1	03/01/2017 21:44	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 21:44	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 21:44	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238741	1	03/01/2017 21:44	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238741	1	03/01/2017 21:44	YH
Surr: 4-Terphenyl-d14	80.3	58.5-125		%REC	238741	1	03/01/2017 21:44	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238787	1	03/03/2017 21:04	YH
2-Methylphenol	BRL	10		ug/L	238787	1	03/03/2017 21:04	YH
3,4-Methylphenol	BRL	10		ug/L	238787	1	03/03/2017 21:04	YH
Phenol	BRL	10		ug/L	238787	1	03/03/2017 21:04	YH
Surr: 2,4,6-Tribromophenol	85.6	50-142		%REC	238787	1	03/03/2017 21:04	YH
Surr: 2-Fluorobiphenyl	69.4	46-124		%REC	238787	1	03/03/2017 21:04	YH
Surr: 2-Fluorophenol	50.8	25.3-120		%REC	238787	1	03/03/2017 21:04	YH
Surr: 4-Terphenyl-d14	75.7	45.1-133		%REC	238787	1	03/03/2017 21:04	YH
Surr: Nitrobenzene-d5	69.5	40.1-121		%REC	238787	1	03/03/2017 21:04	YH
Surr: Phenol-d5	34.1	16.3-120		%REC	238787	1	03/03/2017 21:04	YH

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-204D-20170224-01Project Name:AGLC MaconCollection Date:2/24/2017 10:55:00 AM

Date:

9-Mar-17

Lab ID: 1702M96-017 Matrix: Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS S	W8260B			(SW	/5030B)			
Benzene	490	50		ug/L	238968	10	03/03/2017 02:45	BN
Carbon disulfide	BRL	5.0		ug/L	238968	1	03/03/2017 14:01	BN
Ethylbenzene	340	50		ug/L	238968	10	03/03/2017 02:45	BN
Toluene	BRL	5.0		ug/L	238968	1	03/03/2017 14:01	BN
Xylenes, Total	34	5.0		ug/L	238968	1	03/03/2017 14:01	BN
Surr: 4-Bromofluorobenzene	85.2	66.1-129		%REC	238968	10	03/03/2017 02:45	BN
Surr: 4-Bromofluorobenzene	91.6	66.1-129		%REC	238968	1	03/03/2017 14:01	BN
Surr: Dibromofluoromethane	89.1	83.6-123		%REC	238968	1	03/03/2017 14:01	BN
Surr: Dibromofluoromethane	94.8	83.6-123		%REC	238968	10	03/03/2017 02:45	BN
Surr: Toluene-d8	86.2	81.8-118		%REC	238968	1	03/03/2017 14:01	BN
Surr: Toluene-d8	92.7	81.8-118		%REC	238968	10	03/03/2017 02:45	BN
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	2000	500		ug/L	238741	1000	03/06/2017 15:17	YH
Acenaphthylene	2.3	1.0		ug/L	238741	1	03/01/2017 22:10	YH
Acenaphthene	50	50		ug/L	238741	100	03/03/2017 14:14	YH
Fluorene	17	10		ug/L	238741	100	03/03/2017 14:14	YH
Phenanthrene	20	5.0		ug/L	238741	100	03/03/2017 14:14	YH
Anthracene	4.1	0.050		ug/L	238741	1	03/01/2017 22:10	YH
Fluoranthene	4.0	0.10		ug/L	238741	1	03/01/2017 22:10	YH
Pyrene	4.5	0.050		ug/L	238741	1	03/01/2017 22:10	YH
Benz(a)anthracene	0.12	0.050		ug/L	238741	1	03/01/2017 22:10	YH
Chrysene	0.081	0.050		ug/L	238741	1	03/01/2017 22:10	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238741	1	03/01/2017 22:10	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238741	1	03/01/2017 22:10	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 22:10	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 22:10	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238741	1	03/01/2017 22:10	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238741	1	03/01/2017 22:10	YH
Surr: 4-Terphenyl-d14	81.3	58.5-125		%REC	238741	1	03/01/2017 22:10	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238787	1	03/03/2017 21:30	YH
2-Methylphenol	BRL	10		ug/L	238787	1	03/03/2017 21:30	YH
3,4-Methylphenol	BRL	10		ug/L	238787	1	03/03/2017 21:30	YH
Phenol	BRL	10		ug/L	238787	1	03/03/2017 21:30	YH
Surr: 2,4,6-Tribromophenol	84.1	50-142		%REC	238787	1	03/03/2017 21:30	YH
Surr: 2-Fluorobiphenyl	74	46-124		%REC	238787	1	03/03/2017 21:30	YH
Surr: 2-Fluorophenol	52.4	25.3-120		%REC	238787	1	03/03/2017 21:30	YH
Surr: 4-Terphenyl-d14	85.6	45.1-133		%REC	238787	1	03/03/2017 21:30	YH
Surr: Nitrobenzene-d5	76	40.1-121		%REC	238787	1	03/03/2017 21:30	YH

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

J Estimated value detected below Reporting Limit

 Client:
 ERM-Southeast
 Client Sample ID:
 MW-204D-20170224-01

 Project Name:
 AGLC Macon
 Collection Date:
 2/24/2017 10:55:00 AM

 Lab ID:
 1702M96-017
 Matrix:
 Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Semivolatile Org. Comp. by GC/MS	SW8270D			(SV	W3510C)			
Surr: Phenol-d5	37	16.3-120		%REC	238787	1	03/03/2017 21:30	YH

Date:

9-Mar-17

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

< Less than Result value

J Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-205D-20170224-01Project Name:AGLC MaconCollection Date:2/24/2017 11:30:00 AM

Date:

9-Mar-17

**Lab ID:** 1702M96-018 **Matrix:** Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
Volatile Organic Compounds by GC/MS S	W8260B			(SW	(5030B)			
Benzene	4300	250		ug/L	238968	50	03/03/2017 00:49	BN
Carbon disulfide	BRL	5.0		ug/L	238968	1	03/03/2017 13:31	BN
Ethylbenzene	860	250		ug/L	238968	50	03/03/2017 00:49	BN
Toluene	12	5.0		ug/L	238968	1	03/03/2017 13:31	BN
Xylenes, Total	580	5.0		ug/L	238968	1	03/03/2017 13:31	BN
Surr: 4-Bromofluorobenzene	87.7	66.1-129		%REC	238968	50	03/03/2017 00:49	BN
Surr: 4-Bromofluorobenzene	101	66.1-129		%REC	238968	1	03/03/2017 13:31	BN
Surr: Dibromofluoromethane	98.8	83.6-123		%REC	238968	50	03/03/2017 00:49	BN
Surr: Dibromofluoromethane	83.9	83.6-123		%REC	238968	1	03/03/2017 13:31	BN
Surr: Toluene-d8	93.4	81.8-118		%REC	238968	50	03/03/2017 00:49	BN
Surr: Toluene-d8	86.3	81.8-118		%REC	238968	1	03/03/2017 13:31	BN
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	3400	500		ug/L	238741	1000	03/06/2017 15:44	YH
Acenaphthylene	1.4	1.0		ug/L	238741	1	03/01/2017 22:35	YH
Acenaphthene	120	50		ug/L	238741	100	03/03/2017 14:40	YH
Fluorene	29	10		ug/L	238741	100	03/03/2017 14:40	YH
Phenanthrene	31	5.0		ug/L	238741	100	03/03/2017 14:40	YH
Anthracene	5.3	0.050		ug/L	238741	1	03/01/2017 22:35	YH
Fluoranthene	1.6	0.10		ug/L	238741	1	03/01/2017 22:35	YH
Pyrene	1.7	0.050		ug/L	238741	1	03/01/2017 22:35	YH
Benz(a)anthracene	BRL	0.050		ug/L	238741	1	03/01/2017 22:35	YH
Chrysene	BRL	0.050		ug/L	238741	1	03/01/2017 22:35	YH
Benzo(b)fluoranthene	BRL	0.10		ug/L	238741	1	03/01/2017 22:35	YH
Benzo(k)fluoranthene	BRL	0.050		ug/L	238741	1	03/01/2017 22:35	YH
Benzo(a)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 22:35	YH
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238741	1	03/01/2017 22:35	YH
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238741	1	03/01/2017 22:35	YH
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238741	1	03/01/2017 22:35	YH
Surr: 4-Terphenyl-d14	77.4	58.5-125		%REC	238741	1	03/01/2017 22:35	YH
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238787	1	03/03/2017 21:56	YH
2-Methylphenol	BRL	10		ug/L	238787	1	03/03/2017 21:56	YH
3,4-Methylphenol	BRL	10		ug/L	238787	1	03/03/2017 21:56	YH
Phenol	BRL	10		ug/L	238787	1	03/03/2017 21:56	YH
Surr: 2,4,6-Tribromophenol	83.8	50-142		%REC	238787	1	03/03/2017 21:56	YH
Surr: 2-Fluorobiphenyl	71.5	46-124		%REC	238787	1	03/03/2017 21:56	YH
Surr: 2-Fluorophenol	64.2	25.3-120		%REC	238787	1	03/03/2017 21:56	YH
Surr: 4-Terphenyl-d14	80.4	45.1-133		%REC	238787	1	03/03/2017 21:56	YH
Surr: Nitrobenzene-d5	79.2	40.1-121		%REC	238787	1	03/03/2017 21:56	YH

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

J Estimated value detected below Reporting Limit

Surr: Phenol-d5

 Client:
 ERM-Southeast
 Client Sample ID:
 MW-205D-20170224-01

 Project Name:
 AGLC Macon
 Collection Date:
 2/24/2017 11:30:00 AM

 Lab ID:
 1702M96-018
 Matrix:
 Aqueous

51.4

Analyses Result Reporting Limit Qual Units BatchID Dilution Factor Date Analysed Analyst

Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)

16.3-120

%REC

238787

Date:

9-Mar-17

03/03/2017 21:56

YH

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative NC Not confirmed

Less than Result value

Estimated value detected below Reporting Limit

Page 26 of 59

Client:ERM-SoutheastClient Sample ID:MW-205DD-20170224-01Project Name:AGLC MaconCollection Date:2/24/2017 12:45:00 PM

Date:

9-Mar-17

Lab ID: 1702M96-019 Matrix: Aqueous

Benzene         BRL         5.0         ug/L           Carbon disulfide         BRL         5.0         ug/L           Ethylbenzene         BRL         5.0         ug/L           Toluene         BRL         5.0         ug/L           Xylenes, Total         BRL         5.0         ug/L           Surr: 4-Bromofluorobenzene         82.7         66.1-129         %REC           Surr: Dibromofluoromethane         89.5         83.6-123         %REC           Surr: Toluene-d8         92.9         81.8-118         %REC	238968 238968 238968 238968 238968 238968 238968 238968	1 1 1 1 1 1 1	03/03/2017 20:28 03/03/2017 20:28 03/03/2017 20:28 03/03/2017 20:28 03/03/2017 20:28 03/03/2017 20:28 03/03/2017 20:28 03/03/2017 20:28	BN BN BN BN BN BN
Carbon disulfide         BRL         5.0         ug/L           Ethylbenzene         BRL         5.0         ug/L           Toluene         BRL         5.0         ug/L           Xylenes, Total         BRL         5.0         ug/L           Surr: 4-Bromofluorobenzene         82.7         66.1-129         %REC           Surr: Dibromofluoromethane         89.5         83.6-123         %REC           Surr: Toluene-d8         92.9         81.8-118         %REC	238968 238968 238968 238968 238968 238968 238968	1 1 1 1 1	03/03/2017 20:28 03/03/2017 20:28 03/03/2017 20:28 03/03/2017 20:28 03/03/2017 20:28 03/03/2017 20:28	BN BN BN BN BN
Ethylbenzene         BRL         5.0         ug/L           Toluene         BRL         5.0         ug/L           Xylenes, Total         BRL         5.0         ug/L           Surr: 4-Bromofluorobenzene         82.7         66.1-129         %REC           Surr: Dibromofluoromethane         89.5         83.6-123         %REC           Surr: Toluene-d8         92.9         81.8-118         %REC	238968 238968 238968 238968 238968 238968	1 1 1 1	03/03/2017 20:28 03/03/2017 20:28 03/03/2017 20:28 03/03/2017 20:28 03/03/2017 20:28	BN BN BN BN
Toluene         BRL         5.0         ug/L           Xylenes, Total         BRL         5.0         ug/L           Surr: 4-Bromofluorobenzene         82.7         66.1-129         %REC           Surr: Dibromofluoromethane         89.5         83.6-123         %REC           Surr: Toluene-d8         92.9         81.8-118         %REC	238968 238968 238968 238968 238968	1 1 1	03/03/2017 20:28 03/03/2017 20:28 03/03/2017 20:28 03/03/2017 20:28	BN BN BN BN
Toluene         BRL         5.0         ug/L           Xylenes, Total         BRL         5.0         ug/L           Surr: 4-Bromofluorobenzene         82.7         66.1-129         %REC           Surr: Dibromofluoromethane         89.5         83.6-123         %REC           Surr: Toluene-d8         92.9         81.8-118         %REC	238968 238968 238968 238968	1 1 1	03/03/2017 20:28 03/03/2017 20:28 03/03/2017 20:28	BN BN BN
Surr: 4-Bromofluorobenzene       82.7       66.1-129       %REC         Surr: Dibromofluoromethane       89.5       83.6-123       %REC         Surr: Toluene-d8       92.9       81.8-118       %REC	238968 238968 238968	1 1	03/03/2017 20:28 03/03/2017 20:28	BN BN
Surr: 4-Bromofluorobenzene       82.7       66.1-129       %REC         Surr: Dibromofluoromethane       89.5       83.6-123       %REC         Surr: Toluene-d8       92.9       81.8-118       %REC	238968 238968	1	03/03/2017 20:28	BN
Surr: Toluene-d8 92.9 81.8-118 %REC	238968			
Suit. Totache do		1	03/03/2017 20:28	RN
SIM Polynuclear Arametic Hydrocarbons SW9770D (SW7	2510(*)		03/03/201/ 20.20	DIN
SIM Polynuclear Aromatic Hydrocarbons SW8270D (SW3	3510C)			
Naphthalene BRL 0.50 ug/L	238785	1	03/01/2017 15:59	RF
Acenaphthylene BRL 1.0 ug/L	238785	1	03/01/2017 15:59	RF
Acenaphthene 2.3 0.50 ug/L	238785	1	03/01/2017 15:59	RF
Fluorene 0.40 0.10 ug/L	238785	1	03/01/2017 15:59	RF
Phenanthrene 0.068 0.050 ug/L	238785	1	03/01/2017 15:59	RF
Anthracene 0.051 0.050 ug/L	238785	1	03/01/2017 15:59	RF
Fluoranthene BRL 0.10 ug/L	238785	1	03/01/2017 15:59	RF
Pyrene BRL 0.050 ug/L	238785	1	03/01/2017 15:59	RF
Benz(a)anthracene BRL 0.050 ug/L	238785	1	03/01/2017 15:59	RF
Chrysene BRL 0.050 ug/L	238785	1	03/01/2017 15:59	RF
Benzo(b)fluoranthene BRL 0.10 ug/L	238785	1	03/01/2017 15:59	RF
Benzo(k)fluoranthene BRL 0.050 ug/L	238785	1	03/01/2017 15:59	RF
Benzo(a)pyrene BRL 0.050 ug/L	238785	1	03/01/2017 15:59	RF
Indeno(1,2,3-cd)pyrene BRL 0.050 ug/L	238785	1	03/01/2017 15:59	RF
Dibenz(a,h)anthracene BRL 0.10 ug/L	238785	1	03/01/2017 15:59	RF
Benzo(g,h,i)perylene BRL 0.10 ug/L	238785	1	03/01/2017 15:59	RF
Surr: 4-Terphenyl-d14 88.1 58.5-125 %REC	238785	1	03/01/2017 15:59	RF
Semivolatile Org. Comp. by GC/MS SW8270D (SW3	3510C)			
2,4-Dimethylphenol BRL 10 ug/L	238787	1	03/03/2017 22:21	YH
2-Methylphenol BRL 10 ug/L	238787	1	03/03/2017 22:21	YH
3,4-Methylphenol BRL 10 ug/L	238787	1	03/03/2017 22:21	YH
Phenol BRL 10 ug/L	238787	1	03/03/2017 22:21	YH
Surr: 2,4,6-Tribromophenol 84.6 50-142 %REC	238787	1	03/03/2017 22:21	YH
Surr: 2-Fluorobiphenyl 69.9 46-124 %REC	238787	1	03/03/2017 22:21	YH
Surr: 2-Fluorophenol 58.6 25.3-120 %REC	238787	1	03/03/2017 22:21	YH
Surr: 4-Terphenyl-d14 84.1 45.1-133 %REC	238787	1	03/03/2017 22:21	YH
Surr: Nitrobenzene-d5 70.4 40.1-121 %REC	238787	1	03/03/2017 22:21	YH
Surr: Phenol-d5 40.3 16.3-120 %REC	238787	1	03/03/2017 22:21	YH

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-302D-20170224-01Project Name:AGLC MaconCollection Date:2/24/2017 11:35:00 AM

Date:

9-Mar-17

Lab ID:1702M96-020Matrix:Aqueous

Carbon disulfide	Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Carbon disulfide	Volatile Organic Compounds by GC/MS S	W8260B			(SW	/5030B)			
Ethylbenzene	Benzene	5.4	5.0		ug/L	238968	1	03/03/2017 20:57	BN
Toluene	Carbon disulfide	BRL	5.0		ug/L	238968	1	03/03/2017 20:57	BN
Xylenes, Total   BRL   5.0   ug/L   238968   1   03/03/2017 20:57   E	Ethylbenzene	BRL	5.0		ug/L	238968	1	03/03/2017 20:57	BN
Surr: 4-Bromofluorobenzene	Toluene	BRL	5.0		ug/L	238968	1	03/03/2017 20:57	BN
Surr: Dibromofluoromethane   92.9   83.6-123   %REC   238968   1   03/03/2017 20:57   E   Surr: Toluene-d8   94.1   81.8-118   %REC   238968   1   03/03/2017 20:57   E   SIM Polynuclear Aromatic Hydrocarbons   SW8270D   SW8510C)   SIM Polynuclear Aromatic Hydrocarbons   SW8270D   SW8510C)   SW5510C)   SIM Polynuclear Aromatic Hydrocarbons   SW8270D   SW8510C)   SW5510C	Xylenes, Total	BRL	5.0		ug/L	238968	1	03/03/2017 20:57	BN
Surr: Toluene-d8	Surr: 4-Bromofluorobenzene	88.6	66.1-129		%REC	238968	1	03/03/2017 20:57	BN
SIM Polynuclear Aromatic Hydrocarbons   SW8270D   SW8510C)   Naphthalene	Surr: Dibromofluoromethane	92.9	83.6-123		%REC	238968	1	03/03/2017 20:57	BN
Naphthalene	Surr: Toluene-d8	94.1	81.8-118		%REC	238968	1	03/03/2017 20:57	BN
Acenaphthylene 7.2 1.0 ug/L 238785 1 03/01/2017 16:27 R Acenaphthene 2.5 0.50 ug/L 238785 1 03/01/2017 16:27 R Fluorene 6.8 0.10 ug/L 238785 1 03/01/2017 16:27 R Phenanthrene 11 0.25 ug/L 238785 5 03/01/2017 16:27 R Anthracene 1.9 0.050 ug/L 238785 1 03/01/2017 16:27 R Fluoranthene 0.96 0.10 ug/L 238785 1 03/01/2017 16:27 R Fluoranthene 0.96 0.10 ug/L 238785 1 03/01/2017 16:27 R Pyrene 1.2 0.050 ug/L 238785 1 03/01/2017 16:27 R Benz(a)anthracene BRL 0.050 ug/L 238785 1 03/01/2017 16:27 R Chrysene BRL 0.050 ug/L 238785 1 03/01/2017 16:27 R Benzo(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 16:27 R Benzo(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 16:27 R Benzo(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 16:27 R Benzo(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 16:27 R Benzo(a)pyrene BRL 0.050 ug/L 238785 1 03/01/2017 16:27 R Benzo(a)pyrene BRL 0.050 ug/L 238785 1 03/01/2017 16:27 R Dibenz(a,h)anthracene BRL 0.050 ug/L 238785 1 03/01/2017 16:27 R Benzo(g,h,i)perylene BRL 0.10 ug/L 238785 1 03/01/2017 16:27 R Benzo(g,h,i)perylene BRL 0.10 ug/L 238785 1 03/01/2017 16:27 R Benzo(g,h,i)perylene BRL 0.10 ug/L 238785 1 03/01/2017 16:27 R Surr: 4-Terphenyl-d14 73.7 58.5-125 %REC 238785 1 03/01/2017 16:27 R Semivolatile Org. Comp. by GC/MS SW8270D  2.4-Dimethylphenol BRL 10 ug/L 238787 1 03/03/2017 22:47 M Surr: 2.4,6-Tribromophenol 80.5 50-142 %REC 238787 1 03/03/2017 22:47 M Surr: 2.4,6-Tribromophenol 54.2 25.3-120 %REC 238787 1 03/03/2017 22:47 M Surr: 2-Fluorobiphenyl 68.2 46-124 %REC 238787 1 03/03/2017 22:47 M Surr: 2-Fluorobiphenyl 68.2 46-124 %REC 238787 1 03/03/2017 22:47 M Surr: 2-Fluorobiphenyl 68.2 46-124 %REC 238787 1 03/03/2017 22:47 M Surr: 2-Fluorobiphenyl 64.2 25.3-120 %REC 238787 1 03/03/2017 22:47 M Surr: 4-Terphenyl-d14 77.9 45.1-133 %REC 238787 1 03/03/2017 22:47 M Surr: 4-Terphenyl-d14 77.9 45.1-133 %REC 238787 1 03/03/2017 22:47 M Surr: 4-Terphenyl-d14 77.9 45.1-133 %REC 238787 1 03/03/2017 22:47 M	SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Acenaphthylene         7.2         1.0         ug/L         238785         1         03/01/2017 16:27         Recaphthene           Acenaphthene         2.5         0.50         ug/L         238785         1         03/01/2017 16:27         Recaphthene           Fluorene         6.8         0.10         ug/L         238785         1         03/01/2017 16:27         Recaphthene           Phenanthrene         11         0.25         ug/L         238785         5         03/01/2017 16:27         Recaphthene           Anthracene         1.9         0.050         ug/L         238785         1         03/01/2017 16:27         Recaphthene           Fluoranthene         0.96         0.10         ug/L         238785         1         03/01/2017 16:27         Recaphthene           Pyrene         1.2         0.050         ug/L         238785         1         03/01/2017 16:27         Recaphthene           Benz(a)anthracene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         Recaphthene           Chrysene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         Recaphtene         Benzo(b)fluoranthene         BRL         0.050	Naphthalene	5.5	0.50		ug/L	238785	1	03/01/2017 16:27	RF
Acenaphthene         2.5         0.50         ug/L         238785         1         03/01/2017 16:27         R           Fluorene         6.8         0.10         ug/L         238785         1         03/01/2017 16:27         R           Phenanthrene         11         0.25         ug/L         238785         5         03/01/2017 16:27         R           Anthracene         1.9         0.050         ug/L         238785         1         03/01/2017 16:27         R           Fluoranthene         0.96         0.10         ug/L         238785         1         03/01/2017 16:27         R           Pyrene         1.2         0.050         ug/L         238785         1         03/01/2017 16:27         R           Benz(a)anthracene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         R           Benzo(b)fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         R           Benzo(b)fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         R           Benzo(b)fluoranthene         BRL         0.050         ug/L         238785	-	7.2	1.0		ug/L	238785	1	03/01/2017 16:27	RF
Phenanthrene         11         0.25         ug/L         238785         5         03/01/2017 23:47         R           Anthracene         1.9         0.050         ug/L         238785         1         03/01/2017 16:27         R           Fluoranthene         0.96         0.10         ug/L         238785         1         03/01/2017 16:27         R           Pyrene         1.2         0.050         ug/L         238785         1         03/01/2017 16:27         R           Benz(a)anthracene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         R           Benzo(b)fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         R           Benzo(k)fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         R           Benzo(k)fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         R           Benzo(a)apyrene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         R           Benzo(a)pyrene         BRL         0.06         ug/L         23878		2.5	0.50		ug/L	238785	1	03/01/2017 16:27	RF
Anthracene 1.9 0.050 ug/L 238785 1 03/01/2017 16:27 Refluoranthene 0.96 0.10 ug/L 238785 1 03/01/2017 16:27 Refluoranthene 0.96 0.10 ug/L 238785 1 03/01/2017 16:27 Refluoranthene 0.96 0.10 ug/L 238785 1 03/01/2017 16:27 Refluoranthracene 0.8RL 0.050 ug/L 238785 1 03/01/2017 16:27 Refluoranthracene 0.8RL 0.050 ug/L 238785 1 03/01/2017 16:27 Refluoranthene 0.8RL 0.050 ug/L 238785 1 03/01/2017 16:27 Refluoranthracene 0.8RL 0.050 ug/L 238785 1 03/01/2017 16:27 Refluoranthracene 0.8RL 0.10 ug/L 238787 1 03/03/2017 22:47 New 1.00 ug/L 238787 1 03/03/2017 22:	Fluorene	6.8	0.10		ug/L	238785	1	03/01/2017 16:27	RF
Fluoranthene 0.96 0.10 ug/L 238785 1 03/01/2017 16:27 FPyrene 1.2 0.050 ug/L 238785 1 03/01/2017 16:27 FPyrene 1.2 0.050 ug/L 238785 1 03/01/2017 16:27 FPyrene 1.2 0.050 ug/L 238785 1 03/01/2017 16:27 FPyrene BRL 0.10 ug/L 238787 1 03/03/2017 22:47 FPyrene BR	Phenanthrene	11	0.25		ug/L	238785	5	03/01/2017 23:47	RF
Pyrene         1.2         0.050         ug/L         238785         1         03/01/2017 16:27         Renz(a) anthracene           Benz(a)anthracene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         Renzo(b) fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         Renzo(b) fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         Renzo(a) fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         Renzo(a) fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         Renzo(a) fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         Renzo(a) fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         Renzo(a) fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         Renzo(a) fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         Renzo(a) fluoranthene         BRL         0.10         ug/L         238785         1         03/01/2017 16:27 <td>Anthracene</td> <td>1.9</td> <td>0.050</td> <td></td> <td>ug/L</td> <td>238785</td> <td>1</td> <td>03/01/2017 16:27</td> <td>RF</td>	Anthracene	1.9	0.050		ug/L	238785	1	03/01/2017 16:27	RF
Benz(a)anthracene   BRL   0.050   ug/L   238785   1 03/01/2017 16:27   Renzo(b)fluoranthene   BRL   0.050   ug/L   238785   1 03/01/2017 16:27   Renzo(b)fluoranthene   BRL   0.10   ug/L   238785   1 03/01/2017 16:27   Renzo(k)fluoranthene   BRL   0.050   ug/L   238785   1 03/01/2017 16:27   Renzo(a)pyrene   BRL   0.050   ug/L   238785   1 03/01/2017 16:27   Renzo(a)pyrene   BRL   0.050   ug/L   238785   1 03/01/2017 16:27   Renzo(a)pyrene   BRL   0.050   ug/L   238785   1 03/01/2017 16:27   Renzo(a,b)anthracene   BRL   0.10   ug/L   238785   1 03/01/2017 16:27   Renzo(a,b)anthracene   BRL   10   ug/L   238787   1 03/03/2017 22:47   Year   Y	Fluoranthene	0.96	0.10		ug/L	238785	1	03/01/2017 16:27	RF
Chrysene BRL 0.050 ug/L 238785 1 03/01/2017 16:27 R Benzo(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 16:27 R Benzo(k)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 16:27 R Benzo(a)pyrene BRL 0.050 ug/L 238785 1 03/01/2017 16:27 R Indeno(1,2,3-ed)pyrene BRL 0.050 ug/L 238785 1 03/01/2017 16:27 R Dibenz(a,h)anthracene BRL 0.050 ug/L 238785 1 03/01/2017 16:27 R Benzo(g,h,i)perylene BRL 0.10 ug/L 238785 1 03/01/2017 16:27 R Benzo(g,h,i)perylene BRL 0.10 ug/L 238785 1 03/01/2017 16:27 R Surr: 4-Terphenyl-d14 73.7 58.5-125 %REC 238785 1 03/01/2017 16:27 R Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)  2,4-Dimethylphenol BRL 10 ug/L 238787 1 03/03/2017 22:47 M 3,4-Methylphenol BRL 10 ug/L 238787 1 03/03/2017 22:47 M 3,4-Methylphenol BRL 10 ug/L 238787 1 03/03/2017 22:47 M 9-Henol BRL 10 ug/L 238787 1 03/03/2017 22:47 M Surr: 2,4,6-Tribromophenol 80.5 50-142 %REC 238787 1 03/03/2017 22:47 M Surr: 2-Fluorobiphenyl 68.2 46-124 %REC 238787 1 03/03/2017 22:47 M Surr: 2-Fluorobiphenol 54.2 25.3-120 %REC 238787 1 03/03/2017 22:47 M Surr: 2-Fluorophenol 54.2 25.3-120 %REC 238787 1 03/03/2017 22:47 M Surr: 4-Terphenyl-d14 77.9 45.1-133 %REC 238787 1 03/03/2017 22:47 M Surr: Nitrobenzene-d5 67.7 40.1-121 %REC 238787 1 03/03/2017 22:47 M	Pyrene	1.2	0.050		ug/L	238785	1	03/01/2017 16:27	RF
Benzo(b)fluoranthene         BRL         0.10         ug/L         238785         1         03/01/2017 16:27         Renzo(k) fluoranthene           Benzo(k)fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         Renzo(a) pyrene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         Renzo(a) pyrene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         Renzo(a) pyrene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         Renzo(a) pyrene         BRL         0.10         ug/L         238785         1         03/01/2017 16:27         Renzo(a) pyrene         BRL         0.10         ug/L         238785         1         03/01/2017 16:27         Renzo(a) pyrene         BRL         0.10         ug/L         238785         1         03/01/2017 16:27         Renzo(a) pyrene         BRL         0.10         ug/L         238785         1         03/01/2017 16:27         Renzo(a) pyrene         BRL         0.10         ug/L         238785         1         03/01/2017 16:27         Rescountry         Rescountry         238785         1         03/01/2017 16:27         Rescountry         Rescountry         238787	Benz(a)anthracene	BRL	0.050		ug/L	238785	1	03/01/2017 16:27	RF
Benzo(k)fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         Renzo(a) pyrene           Benzo(a)pyrene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         Renzo(a) pyrene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         Renzo(a) pyrene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         Renzo(a) pyrene         BRL         0.10         ug/L         238785         1         03/01/2017 16:27         Renzo(a) pyrene         BRL         0.10         ug/L         238785         1         03/01/2017 16:27         Renzo(a) pyrene         BRL         0.10         ug/L         238785         1         03/01/2017 16:27         Renzo(a) pyrene         BRL         0.10         ug/L         238785         1         03/01/2017 16:27         Renzo(a) pyrene         BRL         0.10         ug/L         238785         1         03/01/2017 16:27         Renzo(a) pyrene         BR         0.10         ug/L         238785         1         03/01/2017 16:27         Renzo(a) pyrene         BR         0.10         ug/L         238785         1         03/03/2017 22:47         Dyrenal         Ug/L	Chrysene	BRL	0.050		ug/L	238785	1	03/01/2017 16:27	RF
Benzo(a)pyrene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         Relation 1,2,3-ed)pyrene           Indeno(1,2,3-ed)pyrene         BRL         0.050         ug/L         238785         1         03/01/2017 16:27         Relation 200         Relation 200         Relation 200         Leg/L         238785         1         03/01/2017 16:27         Relation 200         Rela	Benzo(b)fluoranthene	BRL	0.10		ug/L	238785	1	03/01/2017 16:27	RF
Indeno(1,2,3-cd)pyrene	Benzo(k)fluoranthene	BRL	0.050		ug/L	238785	1	03/01/2017 16:27	RF
Dibenz(a,h)anthracene         BRL         0.10         ug/L         238785         1         03/01/2017 16:27         Renzo(g,h,i)perylene           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238785         1         03/01/2017 16:27         Renzo(g,h,i)perylene         Renzo(g,h,i)perylene         Renzo(g,h,i)perylene         Renzo(g,h,i)perylene         1         03/01/2017 16:27         Renzo(g,h,i)perylene         Renzo(g,h,i)perylene         1         03/01/2017 16:27         Renzo(g,h,i)perylene         Renzo(g,h,i)perylene         Renzo(g,h,i)perylene         Renzo(g,h,i)perylene         1         03/03/2017 22:47         Yenzo(g,h,i)perylene         Renzo(g,h,iperylene         1         03/03/2017 22:47         Yenzo(g,h,i)perylene         Renzo(g,h,iperylene         1         03/03/2017 22:47         Yenzo(g,h,i)perylene         1         03/03/2017 22:47 <td< td=""><td>Benzo(a)pyrene</td><td>BRL</td><td>0.050</td><td></td><td>ug/L</td><td>238785</td><td>1</td><td>03/01/2017 16:27</td><td>RF</td></td<>	Benzo(a)pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 16:27	RF
Benzo(g,h,i)perylene BRL 0.10 ug/L 238785 1 03/01/2017 16:27 R Surr: 4-Terphenyl-d14 73.7 58.5-125 %REC 238785 1 03/01/2017 16:27 R Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)  2,4-Dimethylphenol BRL 10 ug/L 238787 1 03/03/2017 22:47 M 2-Methylphenol BRL 10 ug/L 238787 1 03/03/2	Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 16:27	RF
Surr: 4-Terphenyl-d14         73.7         58.5-125         %REC         238785         1         03/01/2017 16:27         Remival of the content	Dibenz(a,h)anthracene	BRL	0.10		ug/L	238785	1	03/01/2017 16:27	RF
Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238787         1         03/03/2017 22:47         Y           2-Methylphenol         BRL         10         ug/L         238787         1         03/03/2017 22:47         Y           3,4-Methylphenol         BRL         10         ug/L         238787         1         03/03/2017 22:47         Y           Phenol         BRL         10         ug/L         238787         1         03/03/2017 22:47         Y           Surr: 2,4,6-Tribromophenol         80.5         50-142         %REC         238787         1         03/03/2017 22:47         Y           Surr: 2-Fluorobiphenyl         68.2         46-124         %REC         238787         1         03/03/2017 22:47         Y           Surr: 2-Fluorophenol         54.2         25.3-120         %REC         238787         1         03/03/2017 22:47         Y           Surr: 4-Terphenyl-d14         77.9         45.1-133         %REC         238787         1         03/03/2017 22:47         Y           Surr: Nitrobenzene-d5         67.7         40.1-121         %REC         238787         1         03/03/2017 22:4	Benzo(g,h,i)perylene	BRL	0.10		ug/L	238785	1	03/01/2017 16:27	RF
2,4-Dimethylphenol       BRL       10       ug/L       238787       1       03/03/2017 22:47       Y         2-Methylphenol       BRL       10       ug/L       238787       1       03/03/2017 22:47       Y         3,4-Methylphenol       BRL       10       ug/L       238787       1       03/03/2017 22:47       Y         Phenol       BRL       10       ug/L       238787       1       03/03/2017 22:47       Y         Surr: 2,4,6-Tribromophenol       80.5       50-142       %REC       238787       1       03/03/2017 22:47       Y         Surr: 2-Fluorobiphenyl       68.2       46-124       %REC       238787       1       03/03/2017 22:47       Y         Surr: 2-Fluorophenol       54.2       25.3-120       %REC       238787       1       03/03/2017 22:47       Y         Surr: 4-Terphenyl-d14       77.9       45.1-133       %REC       238787       1       03/03/2017 22:47       Y         Surr: Nitrobenzene-d5       67.7       40.1-121       %REC       238787       1       03/03/2017 22:47       Y	Surr: 4-Terphenyl-d14	73.7	58.5-125		%REC	238785	1	03/01/2017 16:27	RF
2-Methylphenol BRL 10 ug/L 238787 1 03/03/2017 22:47 Y 3,4-Methylphenol BRL 10 ug/L 238787 1 03/03/2017 22:47 Y 5,2-Methylphenol BRL 10 ug/L 238787 1 03/03/2017 22:47 Y 5,2-Methylphenol BRL 10 ug/L 238787 1 03/03/2017 22:47 Y 5,2-Methylphenol 80.5 50-142 %REC 238787 1 03/03/2017 22:47 Y 5,2-Methylphenol 80.5 50-142 %REC 238787 1 03/03/2017 22:47 Y 5,2-Methylphenol 54.2 25.3-120 %REC 238787 1 03/03/2017 22:47 Y 5,2-Methylphenol 22.24 25.3-120 %REC 238787 1 03/03/2017 22:47 Y 5,2-Methylphenol 22.24 25.3-120 %REC 238787 1 03/03/2017 22:47 Y 5,2-Methylphenol 22.24 25.3-120 %REC 238787 1 03/03/2017 22:47 Y 5,2-Methylphenol 22.24 25.3-1	Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2-Methylphenol         BRL         10         ug/L         238787         1         03/03/2017 22:47         Y           3,4-Methylphenol         BRL         10         ug/L         238787         1         03/03/2017 22:47         Y           Phenol         BRL         10         ug/L         238787         1         03/03/2017 22:47         Y           Surr: 2,4,6-Tribromophenol         80.5         50-142         %REC         238787         1         03/03/2017 22:47         Y           Surr: 2-Fluorobiphenyl         68.2         46-124         %REC         238787         1         03/03/2017 22:47         Y           Surr: 2-Fluorophenol         54.2         25.3-120         %REC         238787         1         03/03/2017 22:47         Y           Surr: 4-Terphenyl-d14         77.9         45.1-133         %REC         238787         1         03/03/2017 22:47         Y           Surr: Nitrobenzene-d5         67.7         40.1-121         %REC         238787         1         03/03/2017 22:47         Y	2,4-Dimethylphenol	BRL	10		ug/L	238787	1	03/03/2017 22:47	YH
3,4-Methylphenol       BRL       10       ug/L       238787       1       03/03/2017 22:47       Y         Phenol       BRL       10       ug/L       238787       1       03/03/2017 22:47       Y         Surr: 2,4,6-Tribromophenol       80.5       50-142       %REC       238787       1       03/03/2017 22:47       Y         Surr: 2-Fluorobiphenyl       68.2       46-124       %REC       238787       1       03/03/2017 22:47       Y         Surr: 2-Fluorophenol       54.2       25.3-120       %REC       238787       1       03/03/2017 22:47       Y         Surr: 4-Terphenyl-d14       77.9       45.1-133       %REC       238787       1       03/03/2017 22:47       Y         Surr: Nitrobenzene-d5       67.7       40.1-121       %REC       238787       1       03/03/2017 22:47       Y		BRL	10		ug/L	238787	1	03/03/2017 22:47	YH
Surr: 2,4,6-Tribromophenol       80.5       50-142       %REC       238787       1       03/03/2017 22:47       Year         Surr: 2-Fluorobiphenyl       68.2       46-124       %REC       238787       1       03/03/2017 22:47       Year         Surr: 2-Fluorophenol       54.2       25.3-120       %REC       238787       1       03/03/2017 22:47       Year         Surr: 4-Terphenyl-d14       77.9       45.1-133       %REC       238787       1       03/03/2017 22:47       Year         Surr: Nitrobenzene-d5       67.7       40.1-121       %REC       238787       1       03/03/2017 22:47       Year	* *	BRL	10		ug/L	238787	1	03/03/2017 22:47	YH
Surr: 2-Fluorobiphenyl       68.2       46-124       %REC       238787       1       03/03/2017 22:47       Y         Surr: 2-Fluorophenol       54.2       25.3-120       %REC       238787       1       03/03/2017 22:47       Y         Surr: 4-Terphenyl-d14       77.9       45.1-133       %REC       238787       1       03/03/2017 22:47       Y         Surr: Nitrobenzene-d5       67.7       40.1-121       %REC       238787       1       03/03/2017 22:47       Y	Phenol	BRL	10		ug/L	238787	1	03/03/2017 22:47	YH
Surr: 2-Fluorobiphenyl       68.2       46-124       %REC       238787       1       03/03/2017 22:47       Y         Surr: 2-Fluorophenol       54.2       25.3-120       %REC       238787       1       03/03/2017 22:47       Y         Surr: 4-Terphenyl-d14       77.9       45.1-133       %REC       238787       1       03/03/2017 22:47       Y         Surr: Nitrobenzene-d5       67.7       40.1-121       %REC       238787       1       03/03/2017 22:47       Y	Surr: 2,4,6-Tribromophenol	80.5	50-142		%REC	238787	1	03/03/2017 22:47	YH
Surr: 2-Fluorophenol       54.2       25.3-120       %REC       238787       1       03/03/2017 22:47       Y         Surr: 4-Terphenyl-d14       77.9       45.1-133       %REC       238787       1       03/03/2017 22:47       Y         Surr: Nitrobenzene-d5       67.7       40.1-121       %REC       238787       1       03/03/2017 22:47       Y	-	68.2	46-124		%REC	238787	1	03/03/2017 22:47	YH
Surr: 4-Terphenyl-d14       77.9       45.1-133       %REC       238787       1       03/03/2017 22:47       Y         Surr: Nitrobenzene-d5       67.7       40.1-121       %REC       238787       1       03/03/2017 22:47       Y		54.2	25.3-120		%REC	238787	1	03/03/2017 22:47	YH
Surr: Nitrobenzene-d5 67.7 40.1-121 %REC 238787 1 03/03/2017 22:47 Y	*	77.9	45.1-133		%REC	238787	1	03/03/2017 22:47	YH
	* *	67.7	40.1-121		%REC	238787	1	03/03/2017 22:47	YH
		38.3	16.3-120		%REC	238787	1	03/03/2017 22:47	YH

Qualifiers:

BRL Below reporting limit

<sup>\*</sup> Value exceeds maximum contaminant level

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

J Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-306D-20170224-01Project Name:AGLC MaconCollection Date:2/24/2017 1:00:00 PM

Date:

9-Mar-17

Lab ID: 1702M96-021 Matrix: Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS S	SW8260B			(SW	(5030B)			
Benzene	BRL	5.0		ug/L	238923	1	03/03/2017 04:53	NP
Carbon disulfide	BRL	5.0		ug/L	238923	1	03/03/2017 04:53	NP
Ethylbenzene	5.9	5.0		ug/L	238923	1	03/03/2017 04:53	NP
Toluene	BRL	5.0		ug/L	238923	1	03/03/2017 04:53	NP
Xylenes, Total	BRL	5.0		ug/L	238923	1	03/03/2017 04:53	NP
Surr: 4-Bromofluorobenzene	95.2	66.1-129		%REC	238923	1	03/03/2017 04:53	NP
Surr: Dibromofluoromethane	94.2	83.6-123		%REC	238923	1	03/03/2017 04:53	NP
Surr: Toluene-d8	96.6	81.8-118		%REC	238923	1	03/03/2017 04:53	NP
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	3510C)			
Naphthalene	BRL	0.50		ug/L	238785	1	03/01/2017 16:55	RF
Acenaphthylene	BRL	1.0		ug/L	238785	1	03/01/2017 16:55	RF
Acenaphthene	1.3	0.50		ug/L	238785	1	03/01/2017 16:55	RF
Fluorene	0.57	0.10		ug/L	238785	1	03/01/2017 16:55	RF
Phenanthrene	0.46	0.050		ug/L	238785	1	03/01/2017 16:55	RF
Anthracene	0.053	0.050		ug/L	238785	1	03/01/2017 16:55	RF
Fluoranthene	0.11	0.10		ug/L	238785	1	03/01/2017 16:55	RF
Pyrene	0.12	0.050		ug/L	238785	1	03/01/2017 16:55	RF
Benz(a)anthracene	BRL	0.050		ug/L	238785	1	03/01/2017 16:55	RF
Chrysene	BRL	0.050		ug/L	238785	1	03/01/2017 16:55	RF
Benzo(b)fluoranthene	BRL	0.10		ug/L	238785	1	03/01/2017 16:55	RF
Benzo(k)fluoranthene	BRL	0.050		ug/L	238785	1	03/01/2017 16:55	RF
Benzo(a)pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 16:55	RF
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 16:55	RF
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238785	1	03/01/2017 16:55	RF
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238785	1	03/01/2017 16:55	RF
Surr: 4-Terphenyl-d14	69.4	58.5-125		%REC	238785	1	03/01/2017 16:55	RF
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238787	1	03/02/2017 18:55	YH
2-Methylphenol	BRL	10		ug/L	238787	1	03/02/2017 18:55	YH
3,4-Methylphenol	BRL	10		ug/L	238787	1	03/02/2017 18:55	YH
Phenol	BRL	10		ug/L	238787	1	03/02/2017 18:55	YH
Surr: 2,4,6-Tribromophenol	91.5	50-142		%REC	238787	1	03/02/2017 18:55	YH
Surr: 2-Fluorobiphenyl	74.9	46-124		%REC	238787	1	03/02/2017 18:55	YH
Surr: 2-Fluorophenol	51.5	25.3-120		%REC	238787	1	03/02/2017 18:55	YH
Surr: 4-Terphenyl-d14	85.6	45.1-133		%REC	238787	1	03/02/2017 18:55	YH
Surr: Nitrobenzene-d5	72.4	40.1-121		%REC	238787	1	03/02/2017 18:55	YH
Surr: Phenol-d5	37.6	16.3-120		%REC	238787	1	03/02/2017 18:55	YH

Qualifiers:

Narr See case narrative
NC Not confirmed

Less than Result value

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-401-20170224-01Project Name:AGLC MaconCollection Date:2/24/2017 11:10:00 AM

Date:

9-Mar-17

**Lab ID:** 1702M96-022 **Matrix:** Aqueous

Carbon disulfide	Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Carbon disulfide	Volatile Organic Compounds by GC/MS S	W8260B			(SW	/5030B)			
Ethylbemzene BRL 5.0 ug/L 238923 1 03/03/2017 05:18 N Toluene BRL 5.0 ug/L 238923 1 03/03/2017 05:18 N Xylenes, Total BRL 5.0 ug/L 238923 1 03/03/2017 05:18 N Xylenes, Total BRL 5.0 ug/L 238923 1 03/03/2017 05:18 N Surr: 4-Bromofluorobenzene 94.6 66.1-129 %REC 238923 1 03/03/2017 05:18 N Surr: Dibromofluoromethane 96.8 83.6-123 %REC 238923 1 03/03/2017 05:18 N Surr: Toluene-d8 96.8 818-118 %REC 238923 1 03/03/2017 05:18 N Surr: Toluene-d8 96.8 818-118 %REC 238923 1 03/03/2017 05:18 N SIM Polynuclear Aromatic Hydrocarbons SW270D (SW3510C)  Naphthalene BRL 0.50 ug/L 238785 1 03/01/2017 17:23 R Acenaphthylene BRL 1.0 ug/L 238785 1 03/01/2017 17:23 R Acenaphthene 9.83 0.50 ug/L 238785 1 03/01/2017 17:23 R Phenanthrene BRL 0.10 ug/L 238785 1 03/01/2017 17:23 R Phenanthrene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Phenanthrene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Phyrene 1.0 0.050 ug/L 238785 1 03/01/2017 17:23 R Pyrene 1.0 0.050 ug/L 238785 1 03/01/2017 17:23 R Pyrene 1.0 0.050 ug/L 238785 1 03/01/2017 17:23 R Benz(a)amthracene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benz(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benz(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benz(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benz(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benz(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benz(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benz(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benz(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benz(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benz(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benz(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benz(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benz(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benz(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benz(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benz(b)fluo	Benzene	BRL	5.0		ug/L	238923	1	03/03/2017 05:18	NP
Toluene   BRL   5.0   wg/L   238923   1   03/03/2017 05:18   N   N   N   N   N   N   N   N   N	Carbon disulfide	BRL	5.0		ug/L	238923	1	03/03/2017 05:18	NP
Xylenes, Total   BRL   5.0   ug/L   238923   1   03/03/2017 05:18   N	Ethylbenzene	BRL	5.0		ug/L	238923	1	03/03/2017 05:18	NP
Surr: 4-Bromofluorobenzene   94.6   66.1-129   %REC   238923   1   03/03/2017 05:18   N	Toluene	BRL	5.0		ug/L	238923	1	03/03/2017 05:18	NP
Surr: Dibromofluoromethane   96.8   83.6-123   %REC   238923   1   03/03/2017 05:18   N	Xylenes, Total	BRL	5.0		ug/L	238923	1	03/03/2017 05:18	NP
Surr: Toluene-d8	Surr: 4-Bromofluorobenzene	94.6	66.1-129		%REC	238923	1	03/03/2017 05:18	NP
SIM Polynuclear Aromatic Hydrocarbons   SW8270D   SW8270D   SW82510C)   Naphthalene	Surr: Dibromofluoromethane	96.8	83.6-123		%REC	238923	1	03/03/2017 05:18	NP
Naphthalene	Surr: Toluene-d8	96.8	81.8-118		%REC	238923	1	03/03/2017 05:18	NP
Acenaphthylene         BRL         1.0         ug/L         238785         1         03/01/2017 17:23         R           Acenaphthene         0.83         0.50         ug/L         238785         1         03/01/2017 17:23         R           Fluorene         BRL         0.10         ug/L         238785         1         03/01/2017 17:23         R           Phenanthrene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Anthracene         0.060         0.050         ug/L         238785         1         03/01/2017 17:23         R           Fluoranthene         BRL         0.10         ug/L         238785         1         03/01/2017 17:23         R           Pyrene         1.0         0.050         ug/L         238785         1         03/01/2017 17:23         R           Benza(a)anthracene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Chrysene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Benzo(b)fluoranthene         BRL         0.050         ug/L         238785         1	SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Acenaphthylene         BRL         1.0         ug/L         238785         1         03/01/2017 17:23         R           Acenaphthene         0.83         0.50         ug/L         238785         1         03/01/2017 17:23         R           Fluorene         BRL         0.10         ug/L         238785         1         03/01/2017 17:23         R           Phenanthrene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Anthracene         0.060         0.050         ug/L         238785         1         03/01/2017 17:23         R           Fluoranthene         BRL         0.10         ug/L         238785         1         03/01/2017 17:23         R           Pyrene         1.0         0.050         ug/L         238785         1         03/01/2017 17:23         R           Benza(a)anthracene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Chrysene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Benzo(b)fluoranthene         BRL         0.050         ug/L         238785         1	Naphthalene	BRL	0.50		ug/L	238785	1	03/01/2017 17:23	RF
Acenaphthene         0.83         0.50         ug/L         238785         1         03/01/2017 17:23         R           Fluorene         BRL         0.10         ug/L         238785         1         03/01/2017 17:23         R           Phenanthrene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Anthracene         0.060         0.050         ug/L         238785         1         03/01/2017 17:23         R           Fluoranthene         BRL         0.10         ug/L         238785         1         03/01/2017 17:23         R           Pyrene         1.0         0.050         ug/L         238785         1         03/01/2017 17:23         R           Benz(a)anthracene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Benzo(b)fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Benzo(b)fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Benzo(b)fluoranthene         BRL         0.050         ug/L         238785	-	BRL	1.0		ug/L	238785	1	03/01/2017 17:23	RF
Fluorene		0.83	0.50		ug/L	238785	1	03/01/2017 17:23	RF
Anthracene 0.060 0.050 ug/L 238785 1 03/01/2017 17:23 R Fluoranthene BRL 0.10 ug/L 238785 1 03/01/2017 17:23 R Pyrene 1.0 0.050 ug/L 238785 1 03/01/2017 17:23 R Benz(a)anthracene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benz(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benzo(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benzo(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benzo(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benzo(a)pyrene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benzo(a)pyrene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benzo(a)pyrene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Indeno(1,2,3-cd)pyrene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Dibenz(a,h)anthracene BRL 0.050 ug/L 238785 1 03/01/2017 17:23 R Benzo(g,h,i)perylene BRL 0.10 ug/L 238785 1 03/01/2017 17:23 R Benzo(g,h,i)perylene BRL 0.10 ug/L 238785 1 03/01/2017 17:23 R Surr: 4-Terphenyl-d14 82.5 58.5-125 %REC 238785 1 03/01/2017 17:23 R Semivolatile Org. Comp. by GC/MS SW8270D  2.4-Dimethylphenol BRL 10 ug/L 238787 1 03/02/2017 19:20 Y 2-Methylphenol BRL 10 ug/L 238787 1 03/02/2017 19:20 Y 2-Methylphenol BRL 10 ug/L 238787 1 03/02/2017 19:20 Y 2-Methylphenol BRL 10 ug/L 238787 1 03/02/2017 19:20 Y 2-Methylphenol BRL 10 ug/L 238787 1 03/02/2017 19:20 Y 2-Methylphenol BRL 10 ug/L 238787 1 03/02/2017 19:20 Y 2-Methylphenol BRL 10 ug/L 238787 1 03/02/2017 19:20 Y 2-Methylphenol BRL 10 ug/L 238787 1 03/02/2017 19:20 Y 2-Methylphenol BRL 10 ug/L 238787 1 03/02/2017 19:20 Y 2-Methylphenol BRL 10 ug/L 238787 1 03/02/2017 19:20 Y 2-Methylphenol BRL 10 ug/L 238787 1 03/02/2017 19:20 Y 2-Methylphenol BRL 10 ug/L 238787 1 03/02/2017 19:20 Y 2-Methylphenol BRL 10 ug/L 238787 1 03/02/2017 19:20 Y 2-Methylphenol BRL 10 ug/L 238787 1 03/02/2017 19:20 Y 2-Methylphenol BRL 10 ug/L 238787 1 03/02/2017 19:20 Y 2-Methylphenol BRL 10 ug/L 238787 1 03/02/2017 19:20 Y 2-Methylphenol BRL 10 ug/L 238787 1 03/02/2017 19:20 Y 2-Methylphenol BRL 10 ug/L 238787 1 03/02/2017 19:20 Y 2-Methylphenol BRL 10 ug/L 238787	Fluorene	BRL	0.10		ug/L	238785	1	03/01/2017 17:23	RF
Fluoranthene	Phenanthrene	BRL	0.050		ug/L	238785	1	03/01/2017 17:23	RF
Pyrene	Anthracene	0.060	0.050		ug/L	238785	1	03/01/2017 17:23	RF
Benz(a)anthracene   BRL   0.050   ug/L   238785   1   03/01/2017 17:23   R	Fluoranthene	BRL	0.10		ug/L	238785	1	03/01/2017 17:23	RF
Chrysene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Benzo(b)fluoranthene         BRL         0.10         ug/L         238785         1         03/01/2017 17:23         R           Benzo(k)fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Benzo(a)pyrene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238785         1         03/01/2017 17:23         R           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238785         1         03/01/2017 17:23         R           Surr: 4-Terphenyl-d14         82.5         58.5-125         %REC         238785         1         03/01/2017 17:23         R           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)         (SW3510C)         (SW3510C)         Y           2,4-Dimethylphenol         BRL	Pyrene	1.0	0.050		ug/L	238785	1	03/01/2017 17:23	RF
Benzo(b)fluoranthene         BRL         0.10         ug/L         238785         1         03/01/2017 17:23         R           Benzo(k)fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Benzo(a)pyrene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238785         1         03/01/2017 17:23         R           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238785         1         03/01/2017 17:23         R           Surr: 4-Terphenyl-d14         82.5         58.5-125         %REC         238785         1         03/01/2017 17:23         R           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           2,4-Dimethylphenol         BRL         10         ug/L         238787	Benz(a)anthracene	BRL	0.050		ug/L	238785	1	03/01/2017 17:23	RF
Benzo(k)fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Benzo(a)pyrene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238785         1         03/01/2017 17:23         R           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238785         1         03/01/2017 17:23         R           Surr: 4-Terphenyl-d14         82.5         58.5-125         %REC         238785         1         03/01/2017 17:23         R           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)         (SW3510C)         Y           2,4-Dimethylphenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           2-Methylphenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           Phenol         BRL         10         ug/L	Chrysene	BRL	0.050		ug/L	238785	1	03/01/2017 17:23	RF
Benzo(a)pyrene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238785         1         03/01/2017 17:23         R           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238785         1         03/01/2017 17:23         R           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238785         1         03/01/2017 17:23         R           Surr: 4-Terphenyl-d14         82.5         58.5-125         %REC         238785         1         03/01/2017 17:23         R           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)         US         1         03/01/2017 17:23         R           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         US         1         03/01/2017 17:23         R           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         US         1         03/02/2017 19:20         Y           2,4-Dimethylphenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y <td< td=""><td>Benzo(b)fluoranthene</td><td>BRL</td><td>0.10</td><td></td><td>ug/L</td><td>238785</td><td>1</td><td>03/01/2017 17:23</td><td>RF</td></td<>	Benzo(b)fluoranthene	BRL	0.10		ug/L	238785	1	03/01/2017 17:23	RF
Indeno(1,2,3-cd)pyrene	Benzo(k)fluoranthene	BRL	0.050		ug/L	238785	1	03/01/2017 17:23	RF
Dibenz(a,h)anthracene         BRL         0.10         ug/L         238785         1         03/01/2017 17:23         R           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238785         1         03/01/2017 17:23         R           Surr: 4-Terphenyl-d14         82.5         58.5-125         %REC         238785         1         03/01/2017 17:23         R           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)         (SW3510C)         Y           2,4-Dimethylphenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           2-Methylphenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           3,4-Methylphenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           Phenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           Surr: 2,4,6-Tribromophenol         82.2         50-142         %REC         238787         1         03/02/2017 19:20         Y           Surr: 2-Fluorobiphenyl         64.9         46-124         %REC	Benzo(a)pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 17:23	RF
Benzo(g,h,i)perylene         BRL Surr: 4-Terphenyl-d14         0.10 wg/L 238785         1 03/01/2017 17:23 R 03/01/2017 17:23 R 03/01/2017 17:23 R           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)           2,4-Dimethylphenol         BRL 10 wg/L 238787 1 03/02/2017 19:20 Y 2-Methylphenol         BRL 10 wg/L 238787 1 03/02/2017 19:20 Y 2-Methylphenol         Y 2-Methylphenol           3,4-Methylphenol         BRL 10 wg/L 238787 1 03/02/2017 19:20 Y 2-Methylphenol	Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 17:23	RF
Surr: 4-Terphenyl-d14         82.5         58.5-125         %REC         238785         1         03/01/2017 17:23         R           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)         Y           2,4-Dimethylphenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           2-Methylphenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           3,4-Methylphenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           Phenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           Surr: 2,4,6-Tribromophenol         82.2         50-142         %REC         238787         1         03/02/2017 19:20         Y           Surr: 2-Fluorobiphenyl         64.9         46-124         %REC         238787         1         03/02/2017 19:20         Y           Surr: 4-Terphenyl-d14         78.9         45.1-133         %REC         238787         1         03/02/2017 19:20         Y           Surr: Nitrobenzene-d5         64.5         40.1-121         %REC         238787	Dibenz(a,h)anthracene	BRL	0.10		ug/L	238785	1	03/01/2017 17:23	RF
Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           2-Methylphenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           3,4-Methylphenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           Phenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           Surr: 2,4,6-Tribromophenol         82.2         50-142         %REC         238787         1         03/02/2017 19:20         Y           Surr: 2-Fluorobiphenyl         64.9         46-124         %REC         238787         1         03/02/2017 19:20         Y           Surr: 2-Fluorophenol         45.6         25.3-120         %REC         238787         1         03/02/2017 19:20         Y           Surr: 4-Terphenyl-d14         78.9         45.1-133         %REC         238787         1         03/02/2017 19:20         Y           Surr: Nitrobenzene-d5         64.5         40.1-121         %REC         238787         1         03/02/2017 19:2	Benzo(g,h,i)perylene	BRL	0.10		ug/L	238785	1	03/01/2017 17:23	RF
2,4-Dimethylphenol       BRL       10       ug/L       238787       1       03/02/2017 19:20       Y         2-Methylphenol       BRL       10       ug/L       238787       1       03/02/2017 19:20       Y         3,4-Methylphenol       BRL       10       ug/L       238787       1       03/02/2017 19:20       Y         Phenol       BRL       10       ug/L       238787       1       03/02/2017 19:20       Y         Surr: 2,4,6-Tribromophenol       82.2       50-142       %REC       238787       1       03/02/2017 19:20       Y         Surr: 2-Fluorobiphenyl       64.9       46-124       %REC       238787       1       03/02/2017 19:20       Y         Surr: 2-Fluorophenol       45.6       25.3-120       %REC       238787       1       03/02/2017 19:20       Y         Surr: 4-Terphenyl-d14       78.9       45.1-133       %REC       238787       1       03/02/2017 19:20       Y         Surr: Nitrobenzene-d5       64.5       40.1-121       %REC       238787       1       03/02/2017 19:20       Y	Surr: 4-Terphenyl-d14	82.5	58.5-125		%REC	238785	1	03/01/2017 17:23	RF
2-Methylphenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           3,4-Methylphenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           Phenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           Surr: 2,4,6-Tribromophenol         82.2         50-142         %REC         238787         1         03/02/2017 19:20         Y           Surr: 2-Fluorobiphenyl         64.9         46-124         %REC         238787         1         03/02/2017 19:20         Y           Surr: 2-Fluorophenol         45.6         25.3-120         %REC         238787         1         03/02/2017 19:20         Y           Surr: 4-Terphenyl-d14         78.9         45.1-133         %REC         238787         1         03/02/2017 19:20         Y           Surr: Nitrobenzene-d5         64.5         40.1-121         %REC         238787         1         03/02/2017 19:20         Y	Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2-Methylphenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           3,4-Methylphenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           Phenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           Surr: 2,4,6-Tribromophenol         82.2         50-142         %REC         238787         1         03/02/2017 19:20         Y           Surr: 2-Fluorobiphenyl         64.9         46-124         %REC         238787         1         03/02/2017 19:20         Y           Surr: 2-Fluorophenol         45.6         25.3-120         %REC         238787         1         03/02/2017 19:20         Y           Surr: 4-Terphenyl-d14         78.9         45.1-133         %REC         238787         1         03/02/2017 19:20         Y           Surr: Nitrobenzene-d5         64.5         40.1-121         %REC         238787         1         03/02/2017 19:20         Y	2,4-Dimethylphenol	BRL	10		ug/L	238787	1	03/02/2017 19:20	YH
3,4-Methylphenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           Phenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           Surr: 2,4,6-Tribromophenol         82.2         50-142         %REC         238787         1         03/02/2017 19:20         Y           Surr: 2-Fluorobiphenyl         64.9         46-124         %REC         238787         1         03/02/2017 19:20         Y           Surr: 2-Fluorophenol         45.6         25.3-120         %REC         238787         1         03/02/2017 19:20         Y           Surr: 4-Terphenyl-d14         78.9         45.1-133         %REC         238787         1         03/02/2017 19:20         Y           Surr: Nitrobenzene-d5         64.5         40.1-121         %REC         238787         1         03/02/2017 19:20         Y		BRL	10		ug/L	238787	1	03/02/2017 19:20	YH
Phenol         BRL         10         ug/L         238787         1         03/02/2017 19:20         Y           Surr: 2,4,6-Tribromophenol         82.2         50-142         %REC         238787         1         03/02/2017 19:20         Y           Surr: 2-Fluorobiphenyl         64.9         46-124         %REC         238787         1         03/02/2017 19:20         Y           Surr: 2-Fluorophenol         45.6         25.3-120         %REC         238787         1         03/02/2017 19:20         Y           Surr: 4-Terphenyl-d14         78.9         45.1-133         %REC         238787         1         03/02/2017 19:20         Y           Surr: Nitrobenzene-d5         64.5         40.1-121         %REC         238787         1         03/02/2017 19:20         Y	* *	BRL	10		ug/L	238787	1	03/02/2017 19:20	YH
Surr: 2-Fluorobiphenyl       64.9       46-124       %REC       238787       1       03/02/2017 19:20       Y         Surr: 2-Fluorophenol       45.6       25.3-120       %REC       238787       1       03/02/2017 19:20       Y         Surr: 4-Terphenyl-d14       78.9       45.1-133       %REC       238787       1       03/02/2017 19:20       Y         Surr: Nitrobenzene-d5       64.5       40.1-121       %REC       238787       1       03/02/2017 19:20       Y		BRL	10		ug/L	238787	1	03/02/2017 19:20	YH
Surr: 2-Fluorobiphenyl       64.9       46-124       %REC       238787       1       03/02/2017 19:20       Y         Surr: 2-Fluorophenol       45.6       25.3-120       %REC       238787       1       03/02/2017 19:20       Y         Surr: 4-Terphenyl-d14       78.9       45.1-133       %REC       238787       1       03/02/2017 19:20       Y         Surr: Nitrobenzene-d5       64.5       40.1-121       %REC       238787       1       03/02/2017 19:20       Y	Surr: 2,4,6-Tribromophenol	82.2	50-142		%REC	238787	1	03/02/2017 19:20	YH
Surr: 2-Fluorophenol       45.6       25.3-120       %REC       238787       1       03/02/2017 19:20       Y         Surr: 4-Terphenyl-d14       78.9       45.1-133       %REC       238787       1       03/02/2017 19:20       Y         Surr: Nitrobenzene-d5       64.5       40.1-121       %REC       238787       1       03/02/2017 19:20       Y					%REC				YH
Surr: 4-Terphenyl-d14       78.9       45.1-133       %REC       238787       1       03/02/2017 19:20       Y         Surr: Nitrobenzene-d5       64.5       40.1-121       %REC       238787       1       03/02/2017 19:20       Y	- ·				%REC		1	03/02/2017 19:20	YH
Surr: Nitrobenzene-d5 64.5 40.1-121 %REC 238787 1 03/02/2017 19:20 Y	*				%REC		1	03/02/2017 19:20	YH
	* *				%REC		1	03/02/2017 19:20	YH
					%REC		1	03/02/2017 19:20	YH

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-103-20170224-01Project Name:AGLC MaconCollection Date:2/24/2017 12:20:00 PM

Date:

9-Mar-17

**Lab ID:** 1702M96-023 **Matrix:** Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
Volatile Organic Compounds by GC/MS	SW8260B			(SW	(5030B)			
Benzene	BRL	5.0		ug/L	238923	1	03/03/2017 05:44	NP
Carbon disulfide	BRL	5.0		ug/L	238923	1	03/03/2017 05:44	NP
Ethylbenzene	BRL	5.0		ug/L	238923	1	03/03/2017 05:44	NP
Toluene	BRL	5.0		ug/L	238923	1	03/03/2017 05:44	NP
Xylenes, Total	BRL	5.0		ug/L	238923	1	03/03/2017 05:44	NP
Surr: 4-Bromofluorobenzene	95.4	66.1-129		%REC	238923	1	03/03/2017 05:44	NP
Surr: Dibromofluoromethane	97	83.6-123		%REC	238923	1	03/03/2017 05:44	NP
Surr: Toluene-d8	96.9	81.8-118		%REC	238923	1	03/03/2017 05:44	NP
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	3510C)			
Naphthalene	BRL	0.50		ug/L	238785	1	03/01/2017 17:50	RF
Acenaphthylene	BRL	1.0		ug/L	238785	1	03/01/2017 17:50	RF
Acenaphthene	BRL	0.50		ug/L	238785	1	03/01/2017 17:50	RF
Fluorene	BRL	0.10		ug/L	238785	1	03/01/2017 17:50	RF
Phenanthrene	BRL	0.050		ug/L	238785	1	03/01/2017 17:50	RF
Anthracene	BRL	0.050		ug/L	238785	1	03/01/2017 17:50	RF
Fluoranthene	BRL	0.10		ug/L	238785	1	03/01/2017 17:50	RF
Pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 17:50	RF
Benz(a)anthracene	BRL	0.050		ug/L	238785	1	03/01/2017 17:50	RF
Chrysene	BRL	0.050		ug/L	238785	1	03/01/2017 17:50	RF
Benzo(b)fluoranthene	BRL	0.10		ug/L	238785	1	03/01/2017 17:50	RF
Benzo(k)fluoranthene	BRL	0.050		ug/L	238785	1	03/01/2017 17:50	RF
Benzo(a)pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 17:50	RF
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 17:50	RF
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238785	1	03/01/2017 17:50	RF
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238785	1	03/01/2017 17:50	RF
Surr: 4-Terphenyl-d14	90.3	58.5-125		%REC	238785	1	03/01/2017 17:50	RF
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238787	1	03/02/2017 19:46	YH
2-Methylphenol	BRL	10		ug/L	238787	1	03/02/2017 19:46	YH
3,4-Methylphenol	BRL	10		ug/L	238787	1	03/02/2017 19:46	YH
Phenol	BRL	10		ug/L	238787	1	03/02/2017 19:46	YH
Surr: 2,4,6-Tribromophenol	82.2	50-142		%REC	238787	1	03/02/2017 19:46	YH
Surr: 2-Fluorobiphenyl	67	46-124		%REC	238787	1	03/02/2017 19:46	YH
Surr: 2-Fluorophenol	49.5	25.3-120		%REC	238787	1	03/02/2017 19:46	YH
Surr: 4-Terphenyl-d14	83.3	45.1-133		%REC	238787	1	03/02/2017 19:46	YH
Surr: Nitrobenzene-d5	66.2	40.1-121		%REC	238787	1	03/02/2017 19:46	YH
Surr: Phenol-d5	33.2	16.3-120		%REC	238787	1	03/02/2017 19:46	YH

Qualifiers:

Narr See case narrative
NC Not confirmed

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

<sup>&</sup>lt; Less than Result value

J Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-14-20170224-01Project Name:AGLC MaconCollection Date:2/24/2017 11:50:00 AM

Date:

9-Mar-17

**Lab ID:** 1702M96-024 **Matrix:** Aqueous

	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS	SW8260B			(SW	(5030B)			
Benzene	BRL	5.0		ug/L	238923	1	03/03/2017 06:09	NP
Carbon disulfide	BRL	5.0		ug/L	238923	1	03/03/2017 06:09	NP
Ethylbenzene	BRL	5.0		ug/L	238923	1	03/03/2017 06:09	NP
Toluene	BRL	5.0		ug/L	238923	1	03/03/2017 06:09	NP
Xylenes, Total	BRL	5.0		ug/L	238923	1	03/03/2017 06:09	NP
Surr: 4-Bromofluorobenzene	94.9	66.1-129		%REC	238923	1	03/03/2017 06:09	NP
Surr: Dibromofluoromethane	100	83.6-123		%REC	238923	1	03/03/2017 06:09	NP
Surr: Toluene-d8	98.4	81.8-118		%REC	238923	1	03/03/2017 06:09	NP
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	3510C)			
Naphthalene	BRL	0.50		ug/L	238785	1	03/01/2017 18:16	RF
Acenaphthylene	BRL	1.0		ug/L	238785	1	03/01/2017 18:16	RF
Acenaphthene	BRL	0.50		ug/L	238785	1	03/01/2017 18:16	RF
Fluorene	BRL	0.10		ug/L	238785	1	03/01/2017 18:16	RF
Phenanthrene	BRL	0.050		ug/L	238785	1	03/01/2017 18:16	RF
Anthracene	BRL	0.050		ug/L	238785	1	03/01/2017 18:16	RF
Fluoranthene	BRL	0.10		ug/L	238785	1	03/01/2017 18:16	RF
Pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 18:16	RF
Benz(a)anthracene	BRL	0.050		ug/L	238785	1	03/01/2017 18:16	RF
Chrysene	BRL	0.050		ug/L	238785	1	03/01/2017 18:16	RF
Benzo(b)fluoranthene	BRL	0.10		ug/L	238785	1	03/01/2017 18:16	RF
Benzo(k)fluoranthene	BRL	0.050		ug/L	238785	1	03/01/2017 18:16	RF
Benzo(a)pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 18:16	RF
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 18:16	RF
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238785	1	03/01/2017 18:16	RF
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238785	1	03/01/2017 18:16	RF
Surr: 4-Terphenyl-d14	85.7	58.5-125		%REC	238785	1	03/01/2017 18:16	RF
Semivolatile Org. Comp. by GC/MS SW	/8270D			(SW	3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238787	1	03/02/2017 20:12	YH
2-Methylphenol	BRL	10		ug/L	238787	1	03/02/2017 20:12	YH
3,4-Methylphenol	BRL	10		ug/L	238787	1	03/02/2017 20:12	YH
Phenol	BRL	10		ug/L	238787	1	03/02/2017 20:12	YH
Surr: 2,4,6-Tribromophenol	80.2	50-142		%REC	238787	1	03/02/2017 20:12	YH
Surr: 2-Fluorobiphenyl	69.2	46-124		%REC	238787	1	03/02/2017 20:12	YH
Surr: 2-Fluorophenol	47.1	25.3-120		%REC	238787	1	03/02/2017 20:12	YH
Surr: 4-Terphenyl-d14	88.1	45.1-133		%REC	238787	1	03/02/2017 20:12	YH
Surr: Nitrobenzene-d5	67.7	40.1-121		%REC	238787	1	03/02/2017 20:12	YH
Surr: Phenol-d5	33.8	16.3-120		%REC	238787	1	03/02/2017 20:12	YH

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

J Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-12IR-20170224-01Project Name:AGLC MaconCollection Date:2/24/2017 10:00:00 AM

Date:

9-Mar-17

Lab ID: 1702M96-025 Matrix: Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS S	W8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238923	1	03/03/2017 06:35	NP
Carbon disulfide	BRL	5.0		ug/L	238923	1	03/03/2017 06:35	NP
Ethylbenzene	BRL	5.0		ug/L	238923	1	03/03/2017 06:35	NP
Toluene	BRL	5.0		ug/L	238923	1	03/03/2017 06:35	NP
Xylenes, Total	BRL	5.0		ug/L	238923	1	03/03/2017 06:35	NP
Surr: 4-Bromofluorobenzene	94.3	66.1-129		%REC	238923	1	03/03/2017 06:35	NP
Surr: Dibromofluoromethane	95.5	83.6-123		%REC	238923	1	03/03/2017 06:35	NP
Surr: Toluene-d8	97.2	81.8-118		%REC	238923	1	03/03/2017 06:35	NP
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	7.9	0.50		ug/L	238785	1	03/01/2017 18:43	RF
Acenaphthylene	BRL	1.0		ug/L	238785	1	03/01/2017 18:43	RF
Acenaphthene	1.6	0.50		ug/L	238785	1	03/01/2017 18:43	RF
Fluorene	3.6	0.10		ug/L	238785	1	03/01/2017 18:43	RF
Phenanthrene	0.25	0.050		ug/L	238785	1	03/01/2017 18:43	RF
Anthracene	0.24	0.050		ug/L	238785	1	03/01/2017 18:43	RF
Fluoranthene	3.1	0.10		ug/L	238785	1	03/01/2017 18:43	RF
Pyrene	4.2	0.050		ug/L	238785	1	03/01/2017 18:43	RF
Benz(a)anthracene	0.26	0.050		ug/L	238785	1	03/01/2017 18:43	RF
Chrysene	0.17	0.050		ug/L	238785	1	03/01/2017 18:43	RF
Benzo(b)fluoranthene	BRL	0.10		ug/L	238785	1	03/01/2017 18:43	RF
Benzo(k)fluoranthene	BRL	0.050		ug/L	238785	1	03/01/2017 18:43	RF
Benzo(a)pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 18:43	RF
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 18:43	RF
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238785	1	03/01/2017 18:43	RF
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238785	1	03/01/2017 18:43	RF
Surr: 4-Terphenyl-d14	77.6	58.5-125		%REC	238785	1	03/01/2017 18:43	RF
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238787	1	03/03/2017 23:13	YH
2-Methylphenol	BRL	10		ug/L	238787	1	03/03/2017 23:13	YH
3,4-Methylphenol	BRL	10		ug/L	238787	1	03/03/2017 23:13	YH
Phenol	BRL	10		ug/L	238787	1	03/03/2017 23:13	YH
Surr: 2,4,6-Tribromophenol	84.3	50-142		%REC	238787	1	03/03/2017 23:13	YH
Surr: 2-Fluorobiphenyl	68.1	46-124		%REC	238787	1	03/03/2017 23:13	YH
Surr: 2-Fluorophenol	50.6	25.3-120		%REC	238787	1	03/03/2017 23:13	YH
Surr: 4-Terphenyl-d14	84	45.1-133		%REC	238787	1	03/03/2017 23:13	YH
Surr: Nitrobenzene-d5	66.3	40.1-121		%REC	238787	1	03/03/2017 23:13	YH
Surr: Phenol-d5	36.5	16.3-120		%REC	238787	1	03/03/2017 23:13	YH

Qualifiers:

BRL Below reporting limit

<sup>\*</sup> Value exceeds maximum contaminant level

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

J Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-12R-20170224-01Project Name:AGLC MaconCollection Date:2/24/2017 11:05:00 AM

Date:

9-Mar-17

Lab ID:1702M96-026Matrix:Aqueous

Volatile Organic Compounds by GC/MS					Factor	Date Analyzed	
volatile Organic Compounds by GC/MS	S SW8260B		(SW	(5030B)			
Benzene	BRL	5.0	ug/L	238923	1	03/03/2017 07:01	NP
Carbon disulfide	BRL	5.0	ug/L	238923	1	03/03/2017 07:01	NP
Ethylbenzene	BRL	5.0	ug/L	238923	1	03/03/2017 07:01	NP
Toluene	BRL	5.0	ug/L	238923	1	03/03/2017 07:01	NP
Xylenes, Total	BRL	5.0	ug/L	238923	1	03/03/2017 07:01	NP
Surr: 4-Bromofluorobenzene	96.6	66.1-129	%REC	238923	1	03/03/2017 07:01	NP
Surr: Dibromofluoromethane	96.8	83.6-123	%REC	238923	1	03/03/2017 07:01	NP
Surr: Toluene-d8	97.5	81.8-118	%REC	238923	1	03/03/2017 07:01	NP
SIM Polynuclear Aromatic Hydrocarbo	ns SW8270D		(SW	/3510C)			
Naphthalene	BRL	0.50	ug/L	238785	1	03/01/2017 19:10	RF
Acenaphthylene	BRL	1.0	ug/L	238785	1	03/01/2017 19:10	RF
Acenaphthene	BRL	0.50	ug/L	238785	1	03/01/2017 19:10	RF
Fluorene	BRL	0.10	ug/L	238785	1	03/01/2017 19:10	RF
Phenanthrene	BRL	0.050	ug/L	238785	1	03/01/2017 19:10	RF
Anthracene	0.072	0.050	ug/L	238785	1	03/01/2017 19:10	RF
Fluoranthene	BRL	0.10	ug/L	238785	1	03/01/2017 19:10	RF
Pyrene	0.18	0.050	ug/L	238785	1	03/01/2017 19:10	RF
Benz(a)anthracene	BRL	0.050	ug/L	238785	1	03/01/2017 19:10	RF
Chrysene	BRL	0.050	ug/L	238785	1	03/01/2017 19:10	RF
Benzo(b)fluoranthene	BRL	0.10	ug/L	238785	1	03/01/2017 19:10	RF
Benzo(k)fluoranthene	BRL	0.050	ug/L	238785	1	03/01/2017 19:10	RF
Benzo(a)pyrene	BRL	0.050	ug/L	238785	1	03/01/2017 19:10	RF
Indeno(1,2,3-cd)pyrene	BRL	0.050	ug/L	238785	1	03/01/2017 19:10	RF
Dibenz(a,h)anthracene	BRL	0.10	ug/L	238785	1	03/01/2017 19:10	RF
Benzo(g,h,i)perylene	BRL	0.10	ug/L	238785	1	03/01/2017 19:10	RF
Surr: 4-Terphenyl-d14	78.5	58.5-125	%REC	238785	1	03/01/2017 19:10	RF
Semivolatile Org. Comp. by GC/MS S	W8270D		(SW	3510C)			
2,4-Dimethylphenol	BRL	10	ug/L	238787	1	03/03/2017 23:38	YH
2-Methylphenol	BRL	10	ug/L	238787	1	03/03/2017 23:38	YH
3,4-Methylphenol	BRL	10	ug/L	238787	1	03/03/2017 23:38	YH
Phenol	BRL	10	ug/L	238787	1	03/03/2017 23:38	YH
Surr: 2,4,6-Tribromophenol	88.6	50-142	%REC	238787	1	03/03/2017 23:38	YH
Surr: 2-Fluorobiphenyl	68.2	46-124	%REC	238787	1	03/03/2017 23:38	YH
Surr: 2-Fluorophenol	49	25.3-120	%REC	238787	1	03/03/2017 23:38	YH
Surr: 4-Terphenyl-d14	85.6	45.1-133	%REC	238787	1	03/03/2017 23:38	YH
Surr: Nitrobenzene-d5	64.1	40.1-121	%REC	238787	1	03/03/2017 23:38	YH
Surr: Phenol-d5	35	16.3-120	%REC	238787	1	03/03/2017 23:38	YH

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

Client: ERM-Southeast Client Sample ID: DUP-05-20170224-01

Date:

9-Mar-17

Project Name:AGLC MaconCollection Date:2/24/2017Lab ID:1702M96-027Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS S	W8260B			(SW	/5030B)			
Benzene	4300	250		ug/L	238923	50	03/03/2017 03:36	NP
Carbon disulfide	BRL	5.0		ug/L	238923	1	03/03/2017 08:05	NP
Ethylbenzene	950	250		ug/L	238923	50	03/03/2017 03:36	NP
Toluene	14	5.0		ug/L	238923	1	03/03/2017 08:05	NP
Xylenes, Total	420	250		ug/L	238923	50	03/03/2017 03:36	NP
Surr: 4-Bromofluorobenzene	96.9	66.1-129		%REC	238923	50	03/03/2017 03:36	NP
Surr: 4-Bromofluorobenzene	103	66.1-129		%REC	238923	1	03/03/2017 08:05	NP
Surr: Dibromofluoromethane	96	83.6-123		%REC	238923	50	03/03/2017 03:36	NP
Surr: Dibromofluoromethane	89.3	83.6-123		%REC	238923	1	03/03/2017 08:05	NP
Surr: Toluene-d8	97.8	81.8-118		%REC	238923	50	03/03/2017 03:36	NP
Surr: Toluene-d8	95.5	81.8-118		%REC	238923	1	03/03/2017 08:05	NP
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	3700	250		ug/L	238785	500	03/02/2017 10:18	RF
Acenaphthylene	BRL	1.0		ug/L	238785	1	03/01/2017 19:37	RF
Acenaphthene	140	50		ug/L	238785	100	03/02/2017 09:51	RF
Fluorene	34	10		ug/L	238785	100	03/02/2017 09:51	RF
Phenanthrene	37	5.0		ug/L	238785	100	03/02/2017 09:51	RF
Anthracene	4.9	0.050		ug/L	238785	1	03/01/2017 19:37	RF
Fluoranthene	1.6	0.10		ug/L	238785	1	03/01/2017 19:37	RF
Pyrene	1.5	0.050		ug/L	238785	1	03/01/2017 19:37	RF
Benz(a)anthracene	BRL	0.050		ug/L	238785	1	03/01/2017 19:37	RF
Chrysene	BRL	0.050		ug/L	238785	1	03/01/2017 19:37	RF
Benzo(b)fluoranthene	BRL	0.10		ug/L	238785	1	03/01/2017 19:37	RF
Benzo(k)fluoranthene	BRL	0.050		ug/L	238785	1	03/01/2017 19:37	RF
Benzo(a)pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 19:37	RF
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 19:37	RF
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238785	1	03/01/2017 19:37	RF
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238785	1	03/01/2017 19:37	RF
Surr: 4-Terphenyl-d14	79.7	58.5-125		%REC	238785	1	03/01/2017 19:37	RF
Semivolatile Org. Comp. by GC/MS SW3	8270D			(SW	/3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238787	1	03/04/2017 00:04	YH
2-Methylphenol	BRL	10		ug/L	238787	1	03/04/2017 00:04	YH
3,4-Methylphenol	BRL	10		ug/L	238787	1	03/04/2017 00:04	YH
Phenol	BRL	10		ug/L	238787	1	03/04/2017 00:04	YH
Surr: 2,4,6-Tribromophenol	94.1	50-142		%REC	238787	1	03/04/2017 00:04	YH
Surr: 2-Fluorobiphenyl	73.8	46-124		%REC	238787	1	03/04/2017 00:04	YH
Surr: 2-Fluorophenol	51.5	25.3-120		%REC	238787	1	03/04/2017 00:04	YH
Surr: 4-Terphenyl-d14	89.3	45.1-133		%REC	238787	1	03/04/2017 00:04	YH
Surr: Nitrobenzene-d5	81.5	40.1-121		%REC	238787	1	03/04/2017 00:04	YH

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

J Estimated value detected below Reporting Limit

Client: ERM-Southeast Client Sample ID: DUP-05-20170224-01

Project Name:AGLC MaconCollection Date:2/24/2017Lab ID:1702M96-027Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Semivolatile Org. Comp. by GC/MS	SW8270D			(SV	W3510C)			
Surr: Phenol-d5	37.7	16.3-120		%REC	238787	1	03/04/2017 00:04	YH

Date:

9-Mar-17

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

< Less than Result value

Client:ERM-SoutheastClient Sample ID:MW-104-20170224-01Project Name:AGLC MaconCollection Date:2/24/2017 2:35:00 PM

Date:

9-Mar-17

**Lab ID:** 1702M96-028 **Matrix:** Aqueous

Seminaria   Parameta	analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Carbon disulfide	olatile Organic Compounds by GC/MS	SW8260B			(SW	/5030B)			
Ethylbenzene	Benzene	BRL	5.0		ug/L	238923	1	03/03/2017 07:27	NP
Toluene BRL 5.0 wg-L 238923 1 03/03/2017 07:27 Xylenes, Total BRL 5.0 wg-L 238923 1 03/03/2017 07:27 Xylenes, Total BRL 5.0 wg-L 238923 1 03/03/2017 07:27 Surr: 4-Bromofluorobenzene 94.4 66.1-129 %REC 238923 1 03/03/2017 07:27 Surr: Dibromofluoromethane 95 83.6-123 %REC 238923 1 03/03/2017 07:27 Surr: Toluene-d8 97.8 81.8-118 %REC 238923 1 03/03/2017 07:27 Surr: Toluene-d8 97.8 81.8-118 %REC 238923 1 03/03/2017 07:27 Surr: Toluene-d8 97.8 81.8-118 %REC 238923 1 03/03/2017 07:27 STM Polynuclear Aromatic Hydrocarbons SW8270D (SW3510C)  Naphthalene BRL 0.50 wg-L 238785 1 03/02/2017 08:57 Acenaphthylene BRL 1.0 wg-L 238785 1 03/02/2017 08:57 Fluorene BRL 0.50 wg-L 238785 1 03/02/2017 08:57 Fluorene BRL 0.10 wg-L 238785 1 03/02/2017 08:57 Phenamthrene BRL 0.050 wg-L 238785 1 03/02/2017 08:57 Phenamthrene BRL 0.050 wg-L 238785 1 03/02/2017 08:57 Pyrene BRL 0.050 wg-L 238785 1 03/02/2017 08:57 Benzo(b)fluoranthene BRL 0.050 wg-L 238785 1 03/02/2017 08:57 Benzo(b)fluoranthene BRL 0.050 wg-L 238785 1 03/02/2017 08:57 Benzo(b)fluoranthene BRL 0.050 wg-L 238785 1 03/02/2017 08:57 Benzo(a)pyrene BRL 0.050 wg-L 238785 1 03/02/2017 08:57 Benzo(a)pyrene BRL 0.050 wg-L 238785 1 03/02/2017 08:57 Dibenz(a,h)anthracene BRL 0.050 wg-L 238785 1 03/02/2017	Carbon disulfide	BRL	5.0		ug/L	238923	1	03/03/2017 07:27	NP
Toluene	Ethylbenzene	BRL	5.0		ug/L	238923	1	03/03/2017 07:27	NP
Surr: 4-Bromofluorobenzene         94.4         66.1-129         %REC         238923         1         03/03/2017 07:27           Surr: Dibromofluoromethane         95         83.6-123         %REC         238923         1         03/03/2017 07:27           Surr: Toluene-d8         97.8         81.8-118         %REC         238923         1         03/03/2017 07:27           SIM Polynuclear Aromatic Hydrocar-bons         SW8270D         CSW3510C)         SW3510C)           Naphthalene         BRL         0.50         ug/L         238785         1         03/02/2017 08:57           Acenaphthylene         BRL         1.0         ug/L         238785         1         03/02/2017 08:57           Acenaphthene         BRL         0.50         ug/L         238785         1         03/02/2017 08:57           Pluorene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Pluoranthene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Fluoranthene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Pyrene         BRL         0.050         ug/L         238785	-	BRL	5.0		ug/L	238923	1	03/03/2017 07:27	NP
Surr: 4-Bromofluorobenzene         94.4         66.1-129         %REC         23.8923         1         03/03/2017 07:27           Surr: Dibromofluoromethane         95         83.6-123         %REC         23.8923         1         03/03/2017 07:27           SURT: Toluene-d8         97.8         81.8-118         %REC         23.8923         1         03/03/2017 07:27           SIM Polynuclear Aromatic Hydrocarbon         SW8270D         CSW3510C)           Naphthalene         BRL         0.50         ug/L         238785         1         03/02/2017 08:57           Acenaphthylene         BRL         1.0         ug/L         238785         1         03/02/2017 08:57           Acenaphthene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Phenanthrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Phenanthrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Fluoranthene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Pyrene         BRL         0.010         ug/L         238785         1<	Xylenes, Total	BRL	5.0		ug/L	238923	1	03/03/2017 07:27	NP
Surr: Toluene-d8		94.4	66.1-129		%REC	238923	1	03/03/2017 07:27	NP
Naphthalen	Surr: Dibromofluoromethane	95	83.6-123		%REC	238923	1	03/03/2017 07:27	NP
Naphthalene	Surr: Toluene-d8	97.8	81.8-118		%REC	238923	1	03/03/2017 07:27	NP
Acenaphthylene         BRL         1.0         ug/L         238785         1         03/02/2017 08:57           Acenaphthene         BRL         0.50         ug/L         238785         1         03/02/2017 08:57           Fluorene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Phenanthrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Anthracene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Fluoranthene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Pyrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Pyrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Benzo(a)prine         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Benzo(b)fluoranthene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Benzo(a)pyrene         BRL         0.050         ug/L         238785	M Polynuclear Aromatic Hydrocarbons	s SW8270D			(SW	/3510C)			
Acenaphthylene         BRL         1.0         ug/L         238785         1         03/02/2017 08:57           Acenaphthene         BRL         0.50         ug/L         238785         1         03/02/2017 08:57           Fluorene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Phenanthrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Anthracene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Fluoranthene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Pyrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Benza(a)anthracene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Benzo(b)fluoranthene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Benzo(a)pyrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Benzo(a)pyrene         BRL         0.050         ug/L         238	Naphthalene	BRL	0.50		ug/L	238785	1	03/02/2017 08:57	RF
Acenaphthene         BRL         0.50         ug/L         238785         1         03/02/2017 08:57           Fluorene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Phenanthrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Anthracene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Fluoranthene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Pyrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Pyrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Chrysene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Chrysene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Benzo(b)fluoranthene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Benzo(a)pyrene         BRL         0.050         ug/L         238785         1<	-	BRL	1.0		ug/L	238785	1	03/02/2017 08:57	RF
Fluorene   BRL   0.10   ug/L   238785   1   03/02/2017 08:57     Phenanthrene   BRL   0.050   ug/L   238785   1   03/02/2017 08:57     Anthracene   BRL   0.050   ug/L   238785   1   03/02/2017 08:57     Fluoranthene   BRL   0.050   ug/L   238785   1   03/02/2017 08:57     Fluoranthene   BRL   0.050   ug/L   238785   1   03/02/2017 08:57     Pyrene   BRL   0.050   ug/L   238785   1   03/02/2017 08:57     Benz(a)anthracene   BRL   0.050   ug/L   238785   1   03/02/2017 08:57     Benz(b)fluoranthene   BRL   0.050   ug/L   238785   1   03/02/2017 08:57     Benzo(b)fluoranthene   BRL   0.050   ug/L   238785   1   03/02/2017 08:57     Benzo(b)fluoranthene   BRL   0.050   ug/L   238785   1   03/02/2017 08:57     Benzo(a)pyrene   BRL   0.050   ug/L   238785   1   03/02/2017 08:57     Benzo(a)pyrene   BRL   0.050   ug/L   238785   1   03/02/2017 08:57     Benzo(a)pyrene   BRL   0.050   ug/L   238785   1   03/02/2017 08:57     Dibenz(a,h)anthracene   BRL   0.050   ug/L   238785   1   03/02/2017 08:57     Benzo(g,h,i)perylene   BRL   0.10   ug/L   238785   1   03/02/2017 08:57     Benzo(g,h,i)perylene   BRL   0.10   ug/L   238785   1   03/02/2017 08:57     Benzo(g,h,i)perylene   BRL   0.10   ug/L   238785   1   03/02/2017 08:57     Surr: 4-Terphenyl-d14   75.8   58.5-125   %REC   238787   1   03/04/2017 00:30     2,4-Dimethylphenol   BRL   10   ug/L   238787   1   03/04/2017 00:30     2,4-Dimethylphenol   BRL   10   ug/L   238787   1   03/04/2017 00:30     3,4-Methylphenol   BRL   10   ug/L   238787   1   03/04/2017 00:30     Surr: 2,4,6-Tribromophenol   86.8   50-142   %REC   238787   1   03/04/2017 00:30     Surr: 2-Fluorobiphenyl   72.5   46-124   %REC   238787   1   03/04/2017 00:30     Surr: 2-Fluorobiphenyl   72.5   46-124   %REC   238787   1   03/04/2017 00:30     Surr: 4-Terphenyl-d14   99.5   45.1-133   %REC   238787   1   03/04/2017 00:30     Surr: 4-Terphenyl-d14   99.5   45.1-133   %REC   238787   1   03/04/2017 00:30     Surr: 4-Terphenyl-d14   99.5   45.1-133   %REC   238787   1   03/04/2017 00:30     Surr		BRL	0.50		ug/L	238785	1	03/02/2017 08:57	RF
Anthracene BRL 0.050 ug/L 238785 1 03/02/2017 08:57 Fluoranthene BRL 0.10 ug/L 238785 1 03/02/2017 08:57 Pyrene BRL 0.050 ug/L 238785 1 03/02/2017 08:57 Benz(a)anthracene BRL 0.050 ug/L 238785 1 03/02/2017 08:57 Benz(a)anthracene BRL 0.050 ug/L 238785 1 03/02/2017 08:57 Benzo(b)fluoranthene BRL 0.050 ug/L 238785 1 03/02/2017 08:57 Benzo(b)fluoranthene BRL 0.10 ug/L 238785 1 03/02/2017 08:57 Benzo(b)fluoranthene BRL 0.050 ug/L 238785 1 03/02/2017 08:57 Benzo(a)pyrene BRL 0.050 ug/L 238785 1 03/02/2017 08:57 Benzo(a)pyrene BRL 0.050 ug/L 238785 1 03/02/2017 08:57 Benzo(a)pyrene BRL 0.050 ug/L 238785 1 03/02/2017 08:57 Indeno(1,2,3-cd)pyrene BRL 0.050 ug/L 238785 1 03/02/2017 08:57 Dibenz(a,h)anthracene BRL 0.050 ug/L 238785 1 03/02/2017 08:57 Dibenz(a,h)anthracene BRL 0.10 ug/L 238785 1 03/02/2017 08:57 Benzo(g,h,i)perylene BRL 0.10 ug/L 238785 1 03/02/2017 08:57 Surr: 4-Terphenyl-d14 75.8 58.5-125 %REC 238785 1 03/02/2017 08:57 Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)  2,4-Dimethylphenol BRL 10 ug/L 238787 1 03/04/2017 00:30 2-Methylphenol BRL 10 ug/L 238787 1 03/04/2017 00:30 3,4-Methylphenol BRL 10 ug/L 238787 1 03/04/2017 00:30 Surr: 2-Fluorophenol 86.8 50-142 %REC 238787 1 03/04/2017 00:30 Surr: 2-Fluorophenol 54.5 25.3-120 %REC 238787 1 03/04/2017 00:30 Surr: 2-Fluorophenol 54.5 25.3-120 %REC 238787 1 03/04/2017 00:30 Surr: 2-Fluorophenol 54.5 25.3-120 %REC 238787 1 03/04/2017 00:30 Surr: 2-Fluorophenol 54.5 25.3-120 %REC 238787 1 03/04/2017 00:30 Surr: 2-Fluorophenol 54.5 25.3-120 %REC 238787 1 03/04/2017 00:30 Surr: 2-Fluorophenol 54.5 25.3-120 %REC 238787 1 03/04/2017 00:30 Surr: 2-Fluorophenol 54.5 25.3-120 %REC 238787 1 03/04/2017 00:30 Surr: 2-Fluorophenol 54.5 25.3-120 %REC 238787 1 03/04/2017 00:30 Surr: 4-Terphenyl-d14 90.5 45.1-133 %REC 238787 1 03/04/2017 00:30 Surr: 4-Terphenyl-d14 90.5 45.1-133 %REC 238787 1 03/04/2017 00:30 Surr: 4-Terphenyl-d14 90.5 45.1-133 %REC 238787 1 03/04/2017 00:30 Surr: 4-Terphenyl-d14 90.5 45.1-133 %REC 238787 1 03/04/2017 00:30 Surr: 4-Terphenyl-d14 90.5 4	-	BRL	0.10		ug/L	238785	1	03/02/2017 08:57	RF
Fluoranthene	Phenanthrene	BRL	0.050		ug/L	238785	1	03/02/2017 08:57	RF
Pyrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Benz(a)anthracene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Chrysene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Benzo(b)fluoranthene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Benzo(a)pyrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Benzo(a)pyrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Benzo(a,h)anthracene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238787	Anthracene	BRL	0.050		ug/L	238785	1	03/02/2017 08:57	RF
Benz(a)anthracene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Chrysene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Benzo(b)fluoranthene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Benzo(a)pyrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Benzo(a)pyrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Surr: 4-Terphenyl-d14         75.8         58.5-125         %REC         238785         1         03/02/2017 08:57           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)           2,4-Dimethylphenol         BRL         10	Fluoranthene	BRL	0.10		ug/L	238785	1	03/02/2017 08:57	RF
Chrysene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Benzo(b)fluoranthene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Benzo(k)fluoranthene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Benzo(a)pyrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Surr: 4-Terphenyl-d14         75.8         58.5-125         %REC         238785         1         03/02/2017 08:57           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           2-Methylphenol         BRL         10         ug/L <t< td=""><td>Pyrene</td><td>BRL</td><td>0.050</td><td></td><td>ug/L</td><td>238785</td><td>1</td><td>03/02/2017 08:57</td><td>RF</td></t<>	Pyrene	BRL	0.050		ug/L	238785	1	03/02/2017 08:57	RF
Benzo(b)fluoranthene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Benzo(k)fluoranthene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Benzo(a)pyrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Surr: 4-Terphenyl-d14         75.8         58.5-125         %REC         238785         1         03/02/2017 08:57           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           2-Methylphenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           Phenol         BRL         10 <t< td=""><td>Benz(a)anthracene</td><td>BRL</td><td>0.050</td><td></td><td>ug/L</td><td>238785</td><td>1</td><td>03/02/2017 08:57</td><td>RF</td></t<>	Benz(a)anthracene	BRL	0.050		ug/L	238785	1	03/02/2017 08:57	RF
Benzo(k)fluoranthene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Benzo(a)pyrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Surr: 4-Terphenyl-d14         75.8         58.5-125         %REC         238785         1         03/02/2017 08:57           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)         Ug/L         238785         1         03/02/2017 08:57           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)         Ug/L         238787         1         03/04/2017 00:30           2,4-Dimethylphenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           2-Methylphenol         BRL         10         ug/L         238787         1	Chrysene	BRL	0.050		ug/L	238785	1	03/02/2017 08:57	RF
Benzo(a)pyrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238785         1         03/02/2017 08:57           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Surr: 4-Terphenyl-d14         75.8         58.5-125         %REC         238785         1         03/02/2017 08:57           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)         1         03/02/2017 08:57           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         1         03/04/2017 08:57           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         1         03/04/2017 08:57           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         1         03/04/2017 08:57           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         1         03/04/2017 00:30           2,4-Dimethylphenol         BRL         10         ug/L         238787         1 </td <td>Benzo(b)fluoranthene</td> <td>BRL</td> <td>0.10</td> <td></td> <td>ug/L</td> <td>238785</td> <td>1</td> <td>03/02/2017 08:57</td> <td>RF</td>	Benzo(b)fluoranthene	BRL	0.10		ug/L	238785	1	03/02/2017 08:57	RF
Indeno(1,2,3-cd)pyrene	Benzo(k)fluoranthene	BRL	0.050		ug/L	238785	1	03/02/2017 08:57	RF
Dibenz(a,h)anthracene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Surr: 4-Terphenyl-d14         75.8         58.5-125         %REC         238785         1         03/02/2017 08:57           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           2-Methylphenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           3,4-Methylphenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           Phenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           Surr: 2,4,6-Tribromophenol         86.8         50-142         %REC         238787         1         03/04/2017 00:30           Surr: 2-Fluorobiphenyl         72.5         46-124         %REC         238787         1         03/04/2017 00:30           Surr: 4-Terphenyl-d14         90.5         45.1-133         %REC	Benzo(a)pyrene	BRL	0.050		ug/L	238785	1	03/02/2017 08:57	RF
Benzo(g,h,i)perylene         BRL         0.10         ug/L         238785         1         03/02/2017 08:57           Surr: 4-Terphenyl-d14         75.8         58.5-125         %REC         238785         1         03/02/2017 08:57           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           2-Methylphenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           3,4-Methylphenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           Phenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           Surr: 2,4,6-Tribromophenol         86.8         50-142         %REC         238787         1         03/04/2017 00:30           Surr: 2-Fluorobiphenyl         72.5         46-124         %REC         238787         1         03/04/2017 00:30           Surr: 2-Fluorophenol         54.5         25.3-120         %REC         238787         1         03/04/2017 00:30           Surr: 4-Terphenyl-d14         90.5         45.1-133         %REC	Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238785	1	03/02/2017 08:57	RF
Surr: 4-Terphenyl-d14         75.8         58.5-125         %REC         238785         1         03/02/2017 08:57           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           2-Methylphenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           3,4-Methylphenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           Phenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           Surr: 2,4,6-Tribromophenol         86.8         50-142         %REC         238787         1         03/04/2017 00:30           Surr: 2-Fluorobiphenyl         72.5         46-124         %REC         238787         1         03/04/2017 00:30           Surr: 2-Fluorophenol         54.5         25.3-120         %REC         238787         1         03/04/2017 00:30           Surr: 4-Terphenyl-d14         90.5         45.1-133         %REC         238787         1         03/04/2017 00:30           Surr: Nitrobenzene-d5         74.9         40.1-121         %REC         23878	Dibenz(a,h)anthracene	BRL	0.10		ug/L	238785	1	03/02/2017 08:57	RF
Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           2-Methylphenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           3,4-Methylphenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           Phenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           Surr: 2,4,6-Tribromophenol         86.8         50-142         %REC         238787         1         03/04/2017 00:30           Surr: 2-Fluorobiphenyl         72.5         46-124         %REC         238787         1         03/04/2017 00:30           Surr: 2-Fluorophenol         54.5         25.3-120         %REC         238787         1         03/04/2017 00:30           Surr: 4-Terphenyl-d14         90.5         45.1-133         %REC         238787         1         03/04/2017 00:30           Surr: Nitrobenzene-d5         74.9         40.1-121         %REC         238787         1         03/04/2017 00:30	Benzo(g,h,i)perylene	BRL	0.10		ug/L	238785	1	03/02/2017 08:57	RF
2,4-Dimethylphenol       BRL       10       ug/L       238787       1       03/04/2017 00:30         2-Methylphenol       BRL       10       ug/L       238787       1       03/04/2017 00:30         3,4-Methylphenol       BRL       10       ug/L       238787       1       03/04/2017 00:30         Phenol       BRL       10       ug/L       238787       1       03/04/2017 00:30         Surr: 2,4,6-Tribromophenol       86.8       50-142       %REC       238787       1       03/04/2017 00:30         Surr: 2-Fluorobiphenyl       72.5       46-124       %REC       238787       1       03/04/2017 00:30         Surr: 2-Fluorophenol       54.5       25.3-120       %REC       238787       1       03/04/2017 00:30         Surr: 4-Terphenyl-d14       90.5       45.1-133       %REC       238787       1       03/04/2017 00:30         Surr: Nitrobenzene-d5       74.9       40.1-121       %REC       238787       1       03/04/2017 00:30	Surr: 4-Terphenyl-d14	75.8	58.5-125		%REC	238785	1	03/02/2017 08:57	RF
2-Methylphenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           3,4-Methylphenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           Phenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           Surr: 2,4,6-Tribromophenol         86.8         50-142         %REC         238787         1         03/04/2017 00:30           Surr: 2-Fluorobiphenyl         72.5         46-124         %REC         238787         1         03/04/2017 00:30           Surr: 2-Fluorophenol         54.5         25.3-120         %REC         238787         1         03/04/2017 00:30           Surr: 4-Terphenyl-d14         90.5         45.1-133         %REC         238787         1         03/04/2017 00:30           Surr: Nitrobenzene-d5         74.9         40.1-121         %REC         238787         1         03/04/2017 00:30	emivolatile Org. Comp. by GC/MS SV	V8270D			(SW	/3510C)			
2-Methylphenol       BRL       10       ug/L       238787       1       03/04/2017 00:30         3,4-Methylphenol       BRL       10       ug/L       238787       1       03/04/2017 00:30         Phenol       BRL       10       ug/L       238787       1       03/04/2017 00:30         Surr: 2,4,6-Tribromophenol       86.8       50-142       %REC       238787       1       03/04/2017 00:30         Surr: 2-Fluorobiphenyl       72.5       46-124       %REC       238787       1       03/04/2017 00:30         Surr: 2-Fluorophenol       54.5       25.3-120       %REC       238787       1       03/04/2017 00:30         Surr: 4-Terphenyl-d14       90.5       45.1-133       %REC       238787       1       03/04/2017 00:30         Surr: Nitrobenzene-d5       74.9       40.1-121       %REC       238787       1       03/04/2017 00:30	2,4-Dimethylphenol	BRL	10		ug/L	238787	1	03/04/2017 00:30	YH
3,4-Methylphenol       BRL       10       ug/L       238787       1       03/04/2017 00:30         Phenol       BRL       10       ug/L       238787       1       03/04/2017 00:30         Surr: 2,4,6-Tribromophenol       86.8       50-142       %REC       238787       1       03/04/2017 00:30         Surr: 2-Fluorobiphenyl       72.5       46-124       %REC       238787       1       03/04/2017 00:30         Surr: 2-Fluorophenol       54.5       25.3-120       %REC       238787       1       03/04/2017 00:30         Surr: 4-Terphenyl-d14       90.5       45.1-133       %REC       238787       1       03/04/2017 00:30         Surr: Nitrobenzene-d5       74.9       40.1-121       %REC       238787       1       03/04/2017 00:30		BRL	10		ug/L	238787	1	03/04/2017 00:30	YH
Phenol         BRL         10         ug/L         238787         1         03/04/2017 00:30           Surr: 2,4,6-Tribromophenol         86.8         50-142         %REC         238787         1         03/04/2017 00:30           Surr: 2-Fluorobiphenyl         72.5         46-124         %REC         238787         1         03/04/2017 00:30           Surr: 2-Fluorophenol         54.5         25.3-120         %REC         238787         1         03/04/2017 00:30           Surr: 4-Terphenyl-d14         90.5         45.1-133         %REC         238787         1         03/04/2017 00:30           Surr: Nitrobenzene-d5         74.9         40.1-121         %REC         238787         1         03/04/2017 00:30		BRL	10		ug/L	238787	1	03/04/2017 00:30	YH
Surr: 2,4,6-Tribromophenol       86.8       50-142       %REC       238787       1       03/04/2017 00:30         Surr: 2-Fluorobiphenyl       72.5       46-124       %REC       238787       1       03/04/2017 00:30         Surr: 2-Fluorophenol       54.5       25.3-120       %REC       238787       1       03/04/2017 00:30         Surr: 4-Terphenyl-d14       90.5       45.1-133       %REC       238787       1       03/04/2017 00:30         Surr: Nitrobenzene-d5       74.9       40.1-121       %REC       238787       1       03/04/2017 00:30		BRL	10		ug/L	238787	1	03/04/2017 00:30	YH
Surr: 2-Fluorobiphenyl       72.5       46-124       %REC       238787       1       03/04/2017 00:30         Surr: 2-Fluorophenol       54.5       25.3-120       %REC       238787       1       03/04/2017 00:30         Surr: 4-Terphenyl-d14       90.5       45.1-133       %REC       238787       1       03/04/2017 00:30         Surr: Nitrobenzene-d5       74.9       40.1-121       %REC       238787       1       03/04/2017 00:30		86.8	50-142		%REC	238787	1	03/04/2017 00:30	YH
Surr: 2-Fluorophenol       54.5       25.3-120       %REC       238787       1       03/04/2017 00:30         Surr: 4-Terphenyl-d14       90.5       45.1-133       %REC       238787       1       03/04/2017 00:30         Surr: Nitrobenzene-d5       74.9       40.1-121       %REC       238787       1       03/04/2017 00:30		72.5	46-124		%REC	238787	1	03/04/2017 00:30	YH
Surr: 4-Terphenyl-d14       90.5       45.1-133       %REC       238787       1       03/04/2017 00:30         Surr: Nitrobenzene-d5       74.9       40.1-121       %REC       238787       1       03/04/2017 00:30	* *	54.5	25.3-120		%REC	238787	1	03/04/2017 00:30	YH
Surr: Nitrobenzene-d5 74.9 40.1-121 %REC 238787 1 03/04/2017 00:30					%REC		1	03/04/2017 00:30	YH
					%REC		1		YH
Suit. 1 henor-u.5 57 10.5-120 /urce 250707 1 05/04/2017 00.50	Surr: Phenol-d5	39	16.3-120		%REC	238787	1	03/04/2017 00:30	YH

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

Client: ERM-Southeast Client Sample ID: TB-01-20170224-01

Project Name:AGLC MaconCollection Date:2/24/2017Lab ID:1702M96-029Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/N	MS SW8260B			(SW	V5030B)			
Benzene	BRL	5.0		ug/L	238923	1	03/03/2017 00:35	NP
Carbon disulfide	BRL	5.0		ug/L	238923	1	03/03/2017 00:35	NP
Ethylbenzene	BRL	5.0		ug/L	238923	1	03/03/2017 00:35	NP
Toluene	BRL	5.0		ug/L	238923	1	03/03/2017 00:35	NP
Xylenes, Total	BRL	5.0		ug/L	238923	1	03/03/2017 00:35	NP
Surr: 4-Bromofluorobenzene	94.7	66.1-129		%REC	238923	1	03/03/2017 00:35	NP
Surr: Dibromofluoromethane	97	83.6-123		%REC	238923	1	03/03/2017 00:35	NP
Surr: Toluene-d8	97	81.8-118		%REC	238923	1	03/03/2017 00:35	NP

Date:

9-Mar-17

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative NC Not confirmed

< Less than Result value

Client: ERM-Southeast Client Sample ID: TB-02-20170224-01

Project Name:AGLC MaconCollection Date:2/24/2017Lab ID:1702M96-030Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/M	MS SW8260B			(SW	V5030B)			
Benzene	BRL	5.0		ug/L	238923	1	03/03/2017 01:01	NP
Carbon disulfide	BRL	5.0		ug/L	238923	1	03/03/2017 01:01	NP
Ethylbenzene	BRL	5.0		ug/L	238923	1	03/03/2017 01:01	NP
Toluene	BRL	5.0		ug/L	238923	1	03/03/2017 01:01	NP
Xylenes, Total	BRL	5.0		ug/L	238923	1	03/03/2017 01:01	NP
Surr: 4-Bromofluorobenzene	94.2	66.1-129		%REC	238923	1	03/03/2017 01:01	NP
Surr: Dibromofluoromethane	97.1	83.6-123		%REC	238923	1	03/03/2017 01:01	NP
Surr: Toluene-d8	97	81.8-118		%REC	238923	1	03/03/2017 01:01	NP

Date:

9-Mar-17

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative NC Not confirmed

< Less than Result value

Client: ERM-Southeast Client Sample ID: TB-03-20170224-01

Project Name:AGLC MaconCollection Date:2/24/2017Lab ID:1702M96-031Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/N	MS SW8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238923	1	03/03/2017 01:27	NP
Carbon disulfide	BRL	5.0		ug/L	238923	1	03/03/2017 01:27	NP
Ethylbenzene	BRL	5.0		ug/L	238923	1	03/03/2017 01:27	NP
Toluene	BRL	5.0		ug/L	238923	1	03/03/2017 01:27	NP
Xylenes, Total	BRL	5.0		ug/L	238923	1	03/03/2017 01:27	NP
Surr: 4-Bromofluorobenzene	93.7	66.1-129		%REC	238923	1	03/03/2017 01:27	NP
Surr: Dibromofluoromethane	97.3	83.6-123		%REC	238923	1	03/03/2017 01:27	NP
Surr: Toluene-d8	97.2	81.8-118		%REC	238923	1	03/03/2017 01:27	NP

Date:

9-Mar-17

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative

NC Not confirmed

< Less than Result value

Client: ERM-Southeast Client Sample ID: TB-04-20170224-01

Project Name:AGLC MaconCollection Date:2/24/2017Lab ID:1702M96-032Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/N	MS SW8260B			(SW	V5030B)			
Benzene	BRL	5.0		ug/L	238923	1	03/03/2017 01:52	NP
Carbon disulfide	BRL	5.0		ug/L	238923	1	03/03/2017 01:52	NP
Ethylbenzene	BRL	5.0		ug/L	238923	1	03/03/2017 01:52	NP
Toluene	BRL	5.0		ug/L	238923	1	03/03/2017 01:52	NP
Xylenes, Total	BRL	5.0		ug/L	238923	1	03/03/2017 01:52	NP
Surr: 4-Bromofluorobenzene	94.7	66.1-129		%REC	238923	1	03/03/2017 01:52	NP
Surr: Dibromofluoromethane	97.8	83.6-123		%REC	238923	1	03/03/2017 01:52	NP
Surr: Toluene-d8	98.6	81.8-118		%REC	238923	1	03/03/2017 01:52	NP

Date:

9-Mar-17

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative NC Not confirmed

< Less than Result value

Client: ERM-Southeast Client Sample ID: TB-05-20170224-01

Project Name:AGLC MaconCollection Date:2/24/2017Lab ID:1702M96-033Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/M	1S SW8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238923	1	03/03/2017 02:18	NP
Carbon disulfide	BRL	5.0		ug/L	238923	1	03/03/2017 02:18	NP
Ethylbenzene	BRL	5.0		ug/L	238923	1	03/03/2017 02:18	NP
Toluene	BRL	5.0		ug/L	238923	1	03/03/2017 02:18	NP
Xylenes, Total	BRL	5.0		ug/L	238923	1	03/03/2017 02:18	NP
Surr: 4-Bromofluorobenzene	95	66.1-129		%REC	238923	1	03/03/2017 02:18	NP
Surr: Dibromofluoromethane	95.9	83.6-123		%REC	238923	1	03/03/2017 02:18	NP
Surr: Toluene-d8	96.8	81.8-118		%REC	238923	1	03/03/2017 02:18	NP

Date:

9-Mar-17

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative NC Not confirmed

< Less than Result value

Client: ERM-Southeast Client Sample ID: TB-06-20170224-01

Project Name:AGLC MaconCollection Date:2/24/2017Lab ID:1702M96-034Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/N	MS SW8260B			(SW	V5030B)			
Benzene	BRL	5.0		ug/L	238923	1	03/03/2017 02:44	NP
Carbon disulfide	BRL	5.0		ug/L	238923	1	03/03/2017 02:44	NP
Ethylbenzene	BRL	5.0		ug/L	238923	1	03/03/2017 02:44	NP
Toluene	BRL	5.0		ug/L	238923	1	03/03/2017 02:44	NP
Xylenes, Total	BRL	5.0		ug/L	238923	1	03/03/2017 02:44	NP
Surr: 4-Bromofluorobenzene	94.2	66.1-129		%REC	238923	1	03/03/2017 02:44	NP
Surr: Dibromofluoromethane	95.1	83.6-123		%REC	238923	1	03/03/2017 02:44	NP
Surr: Toluene-d8	97.6	81.8-118		%REC	238923	1	03/03/2017 02:44	NP

Date:

9-Mar-17

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative NC Not confirmed

< Less than Result value

Client: ERM-Southeast Client Sample ID: TB-07-20170224-01

Project Name:AGLC MaconCollection Date:2/24/2017Lab ID:1702M96-035Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/N	MS SW8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238923	1	03/03/2017 03:10	NP
Carbon disulfide	BRL	5.0		ug/L	238923	1	03/03/2017 03:10	NP
Ethylbenzene	BRL	5.0		ug/L	238923	1	03/03/2017 03:10	NP
Toluene	BRL	5.0		ug/L	238923	1	03/03/2017 03:10	NP
Xylenes, Total	BRL	5.0		ug/L	238923	1	03/03/2017 03:10	NP
Surr: 4-Bromofluorobenzene	93.7	66.1-129		%REC	238923	1	03/03/2017 03:10	NP
Surr: Dibromofluoromethane	97	83.6-123		%REC	238923	1	03/03/2017 03:10	NP
Surr: Toluene-d8	97.9	81.8-118		%REC	238923	1	03/03/2017 03:10	NP

Date:

9-Mar-17

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative NC Not confirmed

< Less than Result value



## SAMPLE/COOLER RECEIPT CHECKLIST

1. Client Name:				AES Work Order Numbe	.r:
2. Carrier: FedEx UPS USPS Client Courier Other					
	Yes	No	N/A	Details	Comments
3. Shipping container/cooler received in good condition?	$\top$		1	damaged leaking other	1
4. Custody seals present on shipping container?	+				1
5. Custody seals intact on shipping container?					
6. Temperature blanks present?					
Cooler temperature(s) within limits of 0-6°C? [See item 13 and 14 for				Cooling initiated for recently collected samples / ice	
7. temperature recordings.]				present	
8. Chain of Custody (COC) present?					
9. Chain of Custody signed, dated, and timed when relinquished and received	?				
10. Sampler name and/or signature on COC?					
11. Were all samples received within holding time?					
12. TAT marked on the COC?	1			If no TAT indicated, proceeded with standard TAT per To	erms & Conditions.
13. Cooler 1 Temperature °C Cooler 2 Temperature  Cooler 5 Temperature °C Cooler 6 Temperature			°C		er 4 Temperature°C
Cooler 5 Temperature °C Cooler 6 Temperature		0(	С	Cooler 7 Temperature °C Cooler	r 8 Temperature °C
<del></del>					
15. Comments:					
				I certify that I have co	ompleted sections 1-15 (dated initials).
	Yes	Na	NI/A	, Details	Comments
16. Were sample containers intact upon receipt?		No	N/A	Details	Comments
17. Custody seals present on sample containers?	+		1		-
18. Custody seals intact on sample containers?	+				
18. Custody seals intact on sample containers:	+-		1	incomplete info   illegible	+
19. Do sample container labels match the COC?				incomplete info illegible info label other	
20. Are analyses requested indicated on the COC?	+-			no label	+
20. Are analyses requested indicated on the coc:	+-			samples received but not listed on COC	
21. Were all of the samples listed on the COC received?				samples listed on COC not received	
22. Was the sample collection date/time noted?	+-			samples listed on COC not received	
23. Did we receive sufficient sample volume for indicated analyses?	+-				
24. Were samples received in appropriate containers?	+-				
25. Were VOA samples received without headspace (< 1/4" bubble)?	+-				
26. Were trip blanks submitted?	+-			listed on COC not listed on COC	
20. Were trip blanks submitted:		<u> </u>		instea on coc not instea on coc	<u> </u>
27. Comments:					
				I certify that I have co	ompleted sections 16-27 (dated initials).
	Yes	No	N/A	Details	Comments
28. Have containers needing chemical preservation been checked?	T	INU	IN/A	Details	Comments
29. Containers meet preservation guidelines?	+-				+
30. Was pH adjusted?	+				+
ou. was pri aujusteu:					

I certify that I have completed sections 28-30 (dated initials).

Date: 9-Mar-17

Client: ERM-Southeast
Project Name: AGLC Macon
Workorder: 1702M96

# ANALYTICAL QC SUMMARY REPORT

BatchID: 238726

Sample ID: MB-238726 Sample Type: MBLK	Client ID: TestCode: Sem	ivolatile Org. Comp.	by GC/MS SW	/8270D	Uni Bat	ts: <b>ug/L</b> chID: <b>238726</b>		Date:	02/28/2017 03/02/2017	Run No: <b>337652</b> Seq No: <b>7377492</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	f Val %RPI	RPD Limit Qu
2,4-Dimethylphenol	BRL	10								
2-Methylphenol	BRL	10								
3,4-Methylphenol	BRL	10								
Phenol	BRL	10								
Surr: 2,4,6-Tribromophenol	97.59	0	100.0		97.6	50	142			
Surr: 2-Fluorobiphenyl	40.54	0	50.00		81.1	46	124			
Surr: 2-Fluorophenol	38.00	0	100.0		38.0	25.3	120			
Surr: 4-Terphenyl-d14	51.26	0	50.00		103	45.1	133			
Surr: Nitrobenzene-d5	37.66	0	50.00		75.3	40.1	121			
Surr: Phenol-d5	22.11	0	100.0		22.1	16.3	120			
Sample ID: LCS-238726 SampleType: LCS	Client ID: TestCode: Sem	ivolatile Org. Comp.	by GC/MS SW	/8270D	Uni Bat	its: <b>ug/L</b> chID: <b>238726</b>		Date:	02/28/2017 03/02/2017	Run No: <b>337652</b> Seq No: <b>7377498</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	f Val %RPI	RPD Limit Qu
Phenol	30.25	10	100.0		30.2	25	120			
Surr: 2,4,6-Tribromophenol	103.0	0	100.0		103	50	142			
Surr: 2-Fluorobiphenyl	42.13	0	50.00		84.3	46	124			
Surr: 2-Fluorophenol	51.87	0	100.0		51.9	25.3	120			
Surr: 4-Terphenyl-d14	52.97	0	50.00		106	45.1	133			
Surr: Nitrobenzene-d5	40.27	0	50.00		80.5	40.1	121			
Surr: Phenol-d5	32.65	0	100.0		32.6	16.3	120			
Sample ID: 1702M34-012BMS SampleType: MS	Client ID: TestCode: Sem	ivolatile Org. Comp.	by GC/MS SW	/8270D	Uni Bat	its: ug/L chID: 238726		Date:	02/28/2017 03/05/2017	Run No: <b>337855</b> Seq No: <b>7382539</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	f Val %RPI	RPD Limit Qu
Phenol	25.44	10	100.0		25.4	31.5	120			S
Qualifiers: > Greater than Result value  BRL Below reporting limit  J Estimated value detect  Rpt Lim Reporting Limit	ue ed below Reporting Limit		E Estim N Analy	than Result value ated (value above quantit te not NELAC certified Recovery outside limits o	•		Н	•	in the associated method r preparation or analysis its due to matrix	

**Client: ERM-Southeast** 

**Project Name:** AGLC Macon Workorder: 1702M96

# ANALYTICAL QC SUMMARY REPORT

Date:

9-Mar-17

BatchID: 238726

Sample ID: 1702M34-012BMS	Client ID:				Uni	its: ug/L	Prep	Date: 02/28	8/2017	Run No: 33785	55
SampleType: MS	TestCode:	Semivolatile Org. Comp.	by GC/MS SW	/8270D	Bat	chID: 238726	Ana	lysis Date: 03/05	5/2017	Seq No: <b>73825</b>	539
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: 2,4,6-Tribromophenol	79.48	0	100.0		79.5	50	142				
Surr: 2-Fluorobiphenyl	30.31	0	50.00		60.6	46	124				
Surr: 2-Fluorophenol	37.06	0	100.0		37.1	25.3	120				
Surr: 4-Terphenyl-d14	43.80	0	50.00		87.6	45.1	133				
Surr: Nitrobenzene-d5	28.18	0	50.00		56.4	40.1	121				
Surr: Phenol-d5	27.21	0	100.0		27.2	16.3	120				
Sample ID: 1702M34-012BMSD	Client ID:				Uni	its: ug/L	Prep	Date: 02/28	<b>3/2017</b>	Run No: <b>33785</b>	55
SampleType: MSD	TestCode:	Semivolatile Org. Comp.	by GC/MS SW	/8270D	Bat	chID: 238726	Ana	lysis Date: 03/05	5/2017	Seq No: <b>73825</b>	540
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Phenol	34.95	10	100.0		35.0	31.5	120	25.44	31.5	28.5	R
Surr: 2,4,6-Tribromophenol	94.34	0	100.0		94.3	50	142	79.48	0	0	
Surr: 2-Fluorobiphenyl	38.27	0	50.00		76.5	46	124	30.31	0	0	
Surr: 2-Fluorophenol	54.56	0	100.0		54.6	25.3	120	37.06	0	0	
Surr: 4-Terphenyl-d14	49.66	0	50.00		99.3	45.1	133	43.80	0	0	
Surr: Nitrobenzene-d5	37.36	0	50.00		74.7	40.1	121	28.18	0	0	
Surr: Phenol-d5	39.75	0	100.0		39.8	16.3	120	27.21	0	0	

Qualifiers: Greater than Result value

> BRL Below reporting limit

Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

1702M96

Client: ERM-Southeast Project Name: AGLC Macon

Workorder:

ANALYTICAL QC SUMMARY REPORT

Date:

9-Mar-17

BatchID: 238741

Sample ID: MB-238741 SampleType: MBLK	Client ID: TestCode:	SIM Polynuclear Aromat	ic Hydrocarbons	SW8270D	Uni Bat	its: <b>ug/L</b> chID: <b>238741</b>		ep Date: 02 alysis Date: 03		Run No: <b>337414</b> Seq No: <b>7373740</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Va	ıl %RPD	RPD Limit Qual
Acenaphthene	BRL	0.50								
Acenaphthylene	BRL	1.0								
Anthracene	BRL	0.050								
Benz(a)anthracene	BRL	0.050								
Benzo(a)pyrene	BRL	0.050								
Benzo(b)fluoranthene	BRL	0.10								
Benzo(g,h,i)perylene	BRL	0.10								
Benzo(k)fluoranthene	BRL	0.050								
Chrysene	BRL	0.050								
Dibenz(a,h)anthracene	BRL	0.10								
Fluoranthene	BRL	0.10								
Fluorene	BRL	0.10								
Indeno(1,2,3-cd)pyrene	BRL	0.050								
Naphthalene	BRL	0.50								
Phenanthrene	BRL	0.050								
Pyrene	BRL	0.050								
Surr: 4-Terphenyl-d14	1.797	0	2.000		89.8	58.5	125			
Sample ID: LCS-238741	Client ID:				Uni	its: ug/L	Pre	p Date: 02	2/28/2017	Run No: <b>337414</b>
SampleType: LCS	TestCode:	SIM Polynuclear Aromat	ic Hydrocarbons	SW8270D	Bat	chID: 238741	An	alysis Date: 03	3/01/2017	Seq No: <b>7374583</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Va	al %RPD	RPD Limit Qual
Acenaphthene	1.819	0.50	2.000		90.9	69.1	117			
Acenaphthylene	1.809	1.0	2.000		90.4	59.7	118			
Anthracene	1.955	0.050	2.000		97.7	64.7	121			
Benz(a)anthracene	2.377	0.050	2.000		119	61.7	139			
Benzo(a)pyrene	1.886	0.050	2.000		94.3	65.1	124			
Benzo(b)fluoranthene	1.852	0.10	2.000		92.6	60.8	129			
Qualifiers: > Greater than Result	value		< Less	than Result value			В	Analyte detected in the	e associated method l	blank
BRL Below reporting limit				ated (value above quantit	ation range)			Holding times for prep	-	xceeded
	tected below Reporting	Limit	-	te not NELAC certified			R	RPD outside limits du	ue to matrix	
Rpt Lim Reporting Limit			S Spike	Recovery outside limits	due to matrix					Daga 40 of 50

ANALYTICAL QC SUMMARY REPORT

Date:

9-Mar-17

BatchID: 238741

Client:	ERM-Southeast
<b>Project Name:</b>	AGLC Macon
Workorder:	1702M96

Sample ID: LCS-238741 SampleType: LCS	Client ID: TestCode:	SIM Polynuclear Aromatic Hydroc	arbons SW8270D		its: <b>ug/L</b> tchID: <b>238741</b>		p Date: 02/alysis Date: 03/		Run No: <b>337414</b> Seq No: <b>7374583</b>
Analyte	Result	RPT Limit SPK v	alue SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Va	l %RPD	RPD Limit Qual
Benzo(g,h,i)perylene	1.766	0.10 2.00	00	88.3	60.1	129			
Benzo(k)fluoranthene	1.692	0.050 2.00	00	84.6	69.6	130			
Chrysene	1.972	0.050 2.00	00	98.6	76.5	127			
Dibenz(a,h)anthracene	1.833	0.10 2.00	00	91.7	55.2	126			
Fluoranthene	2.056	0.10 2.00	00	103	66.5	133			
Fluorene	1.866	0.10 2.00	00	93.3	66.1	122			
Indeno(1,2,3-cd)pyrene	1.912	0.050 2.00	00	95.6	58.8	132			
Naphthalene	1.801	0.50 2.00	00	90.0	60.6	120			
Phenanthrene	1.805	0.050 2.00	00	90.3	65.9	118			
Pyrene	1.927	0.050 2.00	00	96.3	70.2	129			
Surr: 4-Terphenyl-d14	1.789	0 2.00	00	89.4	58.5	125			
Sample ID: 1702M96-001BMS	Client ID:	MW-207D-20170223-01		Un	its: ug/L	Pre	p Date: 02	/28/2017	Run No: <b>337414</b>
SampleType: MS	TestCode:	SIM Polynuclear Aromatic Hydroc	arbons SW8270D	Ba	tchID: 238741	Ana	alysis Date: 03	/02/2017	Seq No: 7375197
Analyte	Result	RPT Limit SPK v	alue SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Va	l %RPD	RPD Limit Qual
Acenaphthene	2.389	0.50 2.00	00 1.359	51.5	49.7	118			
Acenaphthylene	1.512	1.0 2.00	0.3002	60.6	56.7	120			
Anthracene	1.441	0.050 2.00	0.02733	70.7	54.4	117			
Benz(a)anthracene	1.776	0.050 2.00	0.02735	87.4	52.4	135			
Benzo(a)pyrene	1.414	0.050 2.00	00	70.7	51.5	117			
Benzo(b)fluoranthene	1.297	0.10 2.00	00	64.8	45.6	124			
Benzo(g,h,i)perylene	1.275	0.10 2.00	00	63.7	45.9	120			
Benzo(k)fluoranthene	1.381	0.050 2.00	00	69.1	51.8	122			
Chrysene	1.523	0.050 2.00	0.02371	75.0	59.9	120			
Dibenz(a,h)anthracene	1.209	0.10 2.00	00	60.4	41.6	120			
Fluoranthene	2.569	0.10 2.00	00 1.149	71.0	59.7	122			
Fluorene	1.783	0.10 2.00	0.5425	62.0	57.9	117			
Qualifiers: > Greater than Result val			Less than Result value				Analyte detected in the		

Qualifiers:

Greater than Result value

BRLBelow reporting limit

Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

< Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

Cliente ERM-Southeast ANALYTICAL QC SUMMARY REPORT

Date:

9-Mar-17

BatchID: 238741

Chent:	EKWI-Southeas
<b>Project Name:</b>	AGLC Macon
Workorder:	1702M96

Sample ID: 1702M96-001BMS SampleType: MS		MW-207D-20170223- SIM Polynuclear Aromatic		SW8270D	Un Bat	its: <b>ug/L</b> tchID: <b>238741</b>		Date: 02/28 lysis Date: 03/02		Run No: <b>33741</b> Seq No: <b>73751</b>	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Indeno(1,2,3-cd)pyrene	1.335	0.050	2.000		66.7	45.5	120				
Naphthalene	1.351	0.50	2.000	0.1394	60.6	53.9	120				
Phenanthrene	1.357	0.050	2.000		67.9	58.1	120				
Pyrene	3.186	0.050	2.000	1.991	59.7	61.6	120				S
Surr: 4-Terphenyl-d14	1.436	0	2.000		71.8	58.5	125				
Sample ID: 1702M96-001BMSD SampleType: MSD		MW-207D-20170223- SIM Polynuclear Aromatic		SW8270D	Un: Bat	its: <b>ug/L</b> tchID: <b>238741</b>		Date: <b>02/28</b> lysis Date: <b>03/06</b>		Run No: <b>33787</b> Seq No: <b>7383</b> 0	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Acenaphthene	3.093	0.50	2.000	1.359	86.7	49.7	118	2.389	25.7	17.4	R
Acenaphthylene	1.933	1.0	2.000	0.3002	81.6	56.7	120	1.512	24.4	19.5	R
Anthracene	1.752	0.050	2.000	0.02733	86.2	54.4	117	1.441	19.5	24.5	
Benz(a)anthracene	2.149	0.050	2.000	0.02735	106	52.4	135	1.776	19.0	30.2	
Benzo(a)pyrene	1.680	0.050	2.000		84.0	51.5	117	1.414	17.2	25.6	
Benzo(b)fluoranthene	1.624	0.10	2.000		81.2	45.6	124	1.297	22.5	20.9	R
Benzo(g,h,i)perylene	1.552	0.10	2.000		77.6	45.9	120	1.275	19.6	28.6	
Benzo(k)fluoranthene	1.620	0.050	2.000		81.0	51.8	122	1.381	15.9	28.6	
Chrysene	1.817	0.050	2.000	0.02371	89.7	59.9	120	1.523	17.6	26.4	
Dibenz(a,h)anthracene	1.485	0.10	2.000		74.2	41.6	120	1.209	20.5	17.8	R
Fluoranthene	3.123	0.10	2.000	1.149	98.7	59.7	122	2.569	19.5	22.1	
Fluorene	2.299	0.10	2.000	0.5425	87.8	57.9	117	1.783	25.3	20.8	R
Indeno(1,2,3-cd)pyrene	1.647	0.050	2.000		82.4	45.5	120	1.335	21.0	19.3	R
Naphthalene	1.712	0.50	2.000	0.1394	78.6	53.9	120	1.351	23.6	20.6	R
Phenanthrene	1.648	0.050	2.000		82.4	58.1	120	1.357	19.3	19.4	
Pyrene	3.819	0.050	2.000	1.991	91.4	61.6	120	3.186	18.1	21.2	
Surr: 4-Terphenyl-d14	1.679	0	2.000		84.0	58.5	125	1.436	0	0	

Qualifiers:

Greater than Result value

BRL Below reporting limit

Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

**Client:** ERM-Southeast

ANALYTICAL QC SUMMARY REPORT

Date:

9-Mar-17

**Project Name:** AGLC Macon **Workorder:** 1702M96

BatchID: 238785

Sample ID: MB-238785 SampleType: MBLK	Client ID: TestCode: SIM	I Polynuclear Aroma	tic Hydrocarbons	SW8270D	Uni Bat	ts: <b>ug/L</b> chID: <b>238785</b>		ep Date: alysis Date:	03/01/2017 03/01/2017	Run No: <b>337521</b> Seq No: <b>7373956</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC		High Limit	-		•
			51 K value	SI K KCI vai	701000	Low Limit	Trigii Elliit	KI D KC	701011	, Ki D Ellilli Qual
Acenaphthene	BRL	0.50								
Acenaphthylene	BRL	1.0								
Anthracene	BRL	0.050								
Benz(a)anthracene	BRL	0.050								
Benzo(a)pyrene	BRL	0.050								
Benzo(b)fluoranthene	BRL	0.10								
Benzo(g,h,i)perylene	BRL	0.10								
Benzo(k)fluoranthene	BRL	0.050								
Chrysene	BRL	0.050								
Dibenz(a,h)anthracene	BRL	0.10								
Fluoranthene	BRL	0.10								
Fluorene	BRL	0.10								
ndeno(1,2,3-cd)pyrene	BRL	0.050								
Naphthalene	BRL	0.50								
Phenanthrene	BRL	0.050								
Pyrene	BRL	0.050								
Surr: 4-Terphenyl-d14	1.780	0	2.000		89.0	58.5	125			
Sample ID: LCS-238785	Client ID:				Uni	its: ug/L	Pre	ep Date:	03/01/2017	Run No: <b>337521</b>
SampleType: LCS	TestCode: SIM	I Polynuclear Aromat	tic Hydrocarbons	SW8270D	Bat	chID: 238785	An	alysis Date:	03/01/2017	Seq No: <b>7374026</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Re	f Val %RPI	RPD Limit Qual
Acenaphthene	1.532	0.50	2.000		76.6	69.1	117			
Acenaphthylene	1.491	1.0	2.000		74.5	59.7	118			
Anthracene	1.566	0.050	2.000		78.3	64.7	121			
Benz(a)anthracene	1.595	0.050	2.000	0.01968	78.8	61.7	139			
Benzo(a)pyrene	1.644	0.050	2.000		82.2	65.1	124			
Benzo(b)fluoranthene	1.771	0.10	2.000	0.02664	87.2	60.8	129			
Qualifiers: > Greater than Resi	ult value		< Less t	han Result value			В	Analyte detected	in the associated method	d blank
BRL Below reporting l	limit		E Estima	ted (value above quantita	ation range)		Н	Holding times fo	r preparation or analysis	exceeded
J Estimated value	detected below Reporting Limit	t	N Analy	te not NELAC certified			R	RPD outside lim	its due to matrix	
Rpt Lim Reporting Limit			S Spike	Recovery outside limits of	lue to matrix					Page 51 of 59

1702M96

Below reporting limit

Rpt Lim Reporting Limit

Estimated value detected below Reporting Limit

Client: ERM-Southeast Project Name: AGLC Macon

Workorder:

ERM-Southeast
AGLC Macon

BatchID: 238785

Date:

9-Mar-17

Sample ID: LCS-238785 Sample Type: LCS	Client ID: TestCode:	SIM Polynuclear Aromat	ic Hydrocarbons	SW8270D	Uni Bat	ts: <b>ug/L</b> chID: <b>238785</b>		Date: alysis Date:	03/01/2017 03/01/2017	Run No: <b>337521</b> Seq No: <b>7374026</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	f Val %RPD	RPD Limit Qual
Benzo(g,h,i)perylene	1.781	0.10	2.000		89.0	60.1	129			
Benzo(k)fluoranthene	1.797	0.050	2.000	0.03083	88.3	69.6	130			
Chrysene	1.623	0.050	2.000	0.01833	80.3	76.5	127			
Dibenz(a,h)anthracene	1.638	0.10	2.000		81.9	55.2	126			
Fluoranthene	1.662	0.10	2.000	0.02468	81.9	66.5	133			
Fluorene	1.571	0.10	2.000		78.6	66.1	122			
Indeno(1,2,3-cd)pyrene	1.635	0.050	2.000	0.01925	80.8	58.8	132			
Naphthalene	1.429	0.50	2.000		71.4	60.6	120			
Phenanthrene	1.571	0.050	2.000		78.6	65.9	118			
Pyrene	1.494	0.050	2.000	0.02836	73.3	70.2	129			
Surr: 4-Terphenyl-d14	1.549	0	2.000		77.4	58.5	125			
Sample ID: 1702O89-003BMS	Client ID:				Uni	ts: ug/L	Prej	Date:	03/01/2017	Run No: <b>337521</b>
SampleType: MS	TestCode:	SIM Polynuclear Aromat	ic Hydrocarbons	SW8270D	Bat	chID: 238785	Ana	llysis Date:	03/01/2017	Seq No: <b>7375399</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	f Val %RPD	RPD Limit Qual
Acenaphthene	1.728	0.50	2.000		86.4	49.7	118			
Acenaphthene Acenaphthylene	1.728 1.625	0.50 1.0	2.000 2.000		86.4 81.3	49.7 56.7	118 120			
Acenaphthylene										
Acenaphthylene Anthracene	1.625	1.0	2.000		81.3	56.7	120			
Acenaphthylene Anthracene Benz(a)anthracene	1.625 1.702	1.0 0.050	2.000 2.000		81.3 85.1	56.7 54.4	120 117			
Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene	1.625 1.702 1.835	1.0 0.050 0.050	2.000 2.000 2.000		81.3 85.1 91.8	56.7 54.4 52.4	120 117 135			
Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene	1.625 1.702 1.835 1.741	1.0 0.050 0.050 0.050	2.000 2.000 2.000 2.000		81.3 85.1 91.8 87.0	56.7 54.4 52.4 51.5	120 117 135 117			
Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene	1.625 1.702 1.835 1.741 1.970	1.0 0.050 0.050 0.050 0.10	2.000 2.000 2.000 2.000 2.000		81.3 85.1 91.8 87.0 98.5	56.7 54.4 52.4 51.5 45.6	120 117 135 117 124			
Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene	1.625 1.702 1.835 1.741 1.970 1.721	1.0 0.050 0.050 0.050 0.10 0.10	2.000 2.000 2.000 2.000 2.000 2.000		81.3 85.1 91.8 87.0 98.5 86.1	56.7 54.4 52.4 51.5 45.6 45.9	120 117 135 117 124 120			
•	1.625 1.702 1.835 1.741 1.970 1.721 1.707	1.0 0.050 0.050 0.050 0.10 0.10 0.050	2.000 2.000 2.000 2.000 2.000 2.000 2.000		81.3 85.1 91.8 87.0 98.5 86.1 85.4	56.7 54.4 52.4 51.5 45.6 45.9 51.8	120 117 135 117 124 120 122			
Acenaphthylene Anthracene Benz(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene	1.625 1.702 1.835 1.741 1.970 1.721 1.707	1.0 0.050 0.050 0.050 0.10 0.10 0.050 0.050	2.000 2.000 2.000 2.000 2.000 2.000 2.000 2.000		81.3 85.1 91.8 87.0 98.5 86.1 85.4 86.8	56.7 54.4 52.4 51.5 45.6 45.9 51.8 59.9	120 117 135 117 124 120 122 120			

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

N Analyte not NELAC certified

H Holding times for preparation or analysis exceeded

**Client: ERM-Southeast Project Name:** 

Workorder:

AGLC Macon

1702M96

ANALYTICAL QC SUMMARY REPORT

Date:

9-Mar-17

BatchID: 238785

Sample ID: 1702O89-003BMS SampleType: MS	Client ID: TestCode:	SIM Polynuclear Aromat	ic Hydrocarbons	SW8270D	Uni Bat	its: ug/L chID: 238785		Date: <b>03</b> / lysis Date: <b>03</b> /	/01/2017 /01/2017	Run No: <b>337521</b> Seq No: <b>7375399</b>	)
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	l %RPD	RPD Limit Q	Qual
Indeno(1,2,3-cd)pyrene	1.641	0.050	2.000		82.0	45.5	120				
Naphthalene	1.600	0.50	2.000		80.0	53.9	120				
Phenanthrene	1.716	0.050	2.000		85.8	58.1	120				
Pyrene	1.818	0.050	2.000		90.9	61.6	120				
Surr: 4-Terphenyl-d14	1.639	0	2.000		81.9	58.5	125				
Sample ID: 1702O89-003BMSD SampleType: MSD	Client ID: TestCode:	SIM Polynuclear Aromat	ic Hydrocarbons	SW8270D	Uni Bat	its: <b>ug/L</b> chID: <b>238785</b>		Date: 03/	/01/2017 /01/2017	Run No: <b>337521</b> Seq No: <b>7375400</b>	1
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	l %RPD	RPD Limit Q	Qual
Acenaphthene	1.666	0.50	2.000		83.3	49.7	118	1.728	3.65	17.4	
Acenaphthylene	1.589	1.0	2.000		79.5	56.7	120	1.625	2.26	19.5	
Anthracene	1.627	0.050	2.000		81.3	54.4	117	1.702	4.51	24.5	
Benz(a)anthracene	1.743	0.050	2.000		87.1	52.4	135	1.835	5.17	30.2	
Benzo(a)pyrene	1.620	0.050	2.000		81.0	51.5	117	1.741	7.20	25.6	
Benzo(b)fluoranthene	1.838	0.10	2.000		91.9	45.6	124	1.970	6.93	20.9	
Benzo(g,h,i)perylene	1.647	0.10	2.000		82.3	45.9	120	1.721	4.42	28.6	
Benzo(k)fluoranthene	1.797	0.050	2.000		89.8	51.8	122	1.707	5.09	28.6	
Chrysene	1.703	0.050	2.000		85.2	59.9	120	1.737	1.92	26.4	
Dibenz(a,h)anthracene	1.586	0.10	2.000		79.3	41.6	120	1.661	4.59	17.8	
Fluoranthene	1.755	0.10	2.000		87.8	59.7	122	1.815	3.37	22.1	
Fluorene	1.741	0.10	2.000		87.0	57.9	117	1.721	1.16	20.8	
Indeno(1,2,3-cd)pyrene	1.576	0.050	2.000		78.8	45.5	120	1.641	4.04	19.3	
Naphthalene	1.531	0.50	2.000		76.5	53.9	120	1.600	4.40	20.6	
Phenanthrene	1.662	0.050	2.000		83.1	58.1	120	1.716	3.17	19.4	
Pyrene	1.555	0.050	2.000		77.7	61.6	120	1.818	15.6	21.2	
Surr: 4-Terphenyl-d14	1.635	0	2.000		81.8	58.5	125	1.639	0	0	

Qualifiers:

Greater than Result value

BRL Below reporting limit

Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

Date: 9-Mar-17

ERM-Southeast **Client: Project Name:** AGLC Macon Workorder: 1702M96

# ANALYTICAL QC SUMMARY REPORT

BatchID: 238787

Sample ID: MB-238787 SampleType: MBLK	Client ID:	Semivolatile Org. Comp.	by GC/MS SV	V8270D	Un	its: <b>ug/L</b>		p Date:	03/01/2017 03/02/2017	Run No: <b>337631</b> Seq No: <b>7377210</b>
Sample Type. WIBLK	resicoue.	semivomine org. comp	, by GO/1125 51	.02.02	Da	CIIID. 230707	Allo	arysis Date.	03/02/2017	3eq 110. 7377210
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Re	f Val %	RPD RPD Limit Qua
2,4-Dimethylphenol	BRL	10								
-Methylphenol	BRL	10								
,4-Methylphenol	BRL	10								
henol	BRL	10								
Surr: 2,4,6-Tribromophenol	125.1	0	100.0		125	50	142			
Surr: 2-Fluorobiphenyl	50.50	0	50.00		101	46	124			
Surr: 2-Fluorophenol	49.95	0	100.0		50.0	25.3	120			
Surr: 4-Terphenyl-d14	54.48	0	50.00		109	45.1	133			
Surr: Nitrobenzene-d5	48.64	0	50.00		97.3	40.1	121			
Surr: Phenol-d5	30.19	0	100.0		30.2	16.3	120			
Sample ID: LCS-238787 SampleType: LCS	Client ID: TestCode:	Semivolatile Org. Comp.	by GC/MS SW	V8270D	Un Ba	its: <b>ug/L</b> tchID: <b>238787</b>		p Date: alysis Date:	03/01/2017 03/02/2017	Run No: <b>337631</b> Seq No: <b>7377211</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Re	f Val %	RPD RPD Limit Qua
Phenol	41.32	10	100.0		41.3	25	120			
Surr: 2,4,6-Tribromophenol	137.6	0	100.0		138	50	142			
Surr: 2-Fluorobiphenyl	51.79	0	50.00		104	46	124			
Surr: 2-Fluorophenol	62.56	0	100.0		62.6	25.3	120			
Surr: 4-Terphenyl-d14	57.57	0	50.00		115	45.1	133			
Surr: Nitrobenzene-d5	46.92	0	50.00		93.8	40.1	121			
Surr: Phenol-d5	44.53	0	100.0		44.5	16.3	120			
Sample ID: 1702N65-001AMS SampleType: MS	Client ID: TestCode:	Semivolatile Org. Comp.	by GC/MS SW	V8270D	Un Ba	its: <b>ug/L</b> tchID: <b>238787</b>		p Date: alysis Date:	03/01/2017 03/02/2017	Run No: <b>337631</b> Seq No: <b>7377213</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Re	f Val %	RPD RPD Limit Qua
Phenol	32.32	10	100.0		32.3	31.5	120			
Dualifiers: > Greater than Result val  BRL Below reporting limit	lue			than Result value	tation range)			•	in the associated n	
J Estimated value detec	ted below Reporting	Limit		yte not NELAC certified				RPD outside lim		, 0.000000
Rpt Lim Reporting Limit				Recovery outside limits	due to matrix					Page 54 of 59

**Client: ERM-Southeast**  ANALYTICAL QC SUMMARY REPORT

**Project Name:** AGLC Macon Workorder: 1702M96

BatchID: 238787

Date:

9-Mar-17

Sample ID: 1702N65-001AMS	Client ID:				Uni	its: ug/L	Prep	Date: 03/01	/ <b>2017</b> R	Run No: 33763	1
SampleType: MS	TestCode: So	emivolatile Org. Comp.	by GC/MS SW	/8270D	Bate	chID: 238787	Ana	lysis Date: 03/02	/ <b>2017</b> S	Seq No: 73772	213
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Surr: 2,4,6-Tribromophenol	86.85	0	100.0		86.8	50	142				
Surr: 2-Fluorobiphenyl	45.65	0	50.00		91.3	46	124				
Surr: 2-Fluorophenol	45.62	0	100.0		45.6	25.3	120				
Surr: 4-Terphenyl-d14	49.10	0	50.00		98.2	45.1	133				
Surr: Nitrobenzene-d5	41.52	0	50.00		83.0	40.1	121				
Surr: Phenol-d5	32.98	0	100.0		33.0	16.3	120				
Sample ID: 1702N65-001AMSD	Client ID:				Uni	its: ug/L	Prep	Date: 03/01	/ <b>2017</b> R	Run No: 33763	1
SampleType: MSD	TestCode: Se	emivolatile Org. Comp.	by GC/MS SW	/8270D	Bate	chID: 238787	Ana	lysis Date: 03/02	/ <b>2017</b> S	Seq No: 73772	214
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Phenol	31.07	10	100.0		31.1	31.5	120	32.32	3.94	28.5	S
Surr: 2,4,6-Tribromophenol	78.94	0	100.0		78.9	50	142	86.85	0	0	
Surr: 2-Fluorobiphenyl	42.33	0	50.00		84.7	46	124	45.65	0	0	
Surr: 2-Fluorophenol	42.93	0	100.0		42.9	25.3	120	45.62	0	0	
Surr: 4-Terphenyl-d14	47.32	0	50.00		94.6	45.1	133	49.10	0	0	
Surr: Nitrobenzene-d5	39.10	0	50.00		78.2	40.1	121	41.52	0	0	
Surr: Phenol-d5	32.45	0	100.0		32.4	16.3	120	32.98	0	0	

Qualifiers: Greater than Result value

> BRL Below reporting limit

Estimated value detected below Reporting Limit

Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

ERM-Southeast

AGLC Macon

1702M96

**Client:** 

**Project Name:** 

Workorder:

ANALYTICAL QC SUMMARY REPORT

BatchID: 238923

Sample ID: MB-238923 SampleType: MBLK	Client ID: TestCode:	Volatile Organic Compo	unds by GC/MS	SW8260B	Uni Bat	its: ug/L chID: 238923		ep Date: nalysis Date:	03/02/2017 03/02/2017	Run No: <b>337667</b> Seq No: <b>7377832</b>	2
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	f Val %RP	D RPD Limit (	Qua!
Benzene	BRL	5.0									
Carbon disulfide	BRL	5.0									
Ethylbenzene	BRL	5.0									
Coluene	BRL	5.0									
Kylenes, Total	BRL	5.0									
Surr: 4-Bromofluorobenzene	47.00	0	50.00		94.0	66.1	129				
Surr: Dibromofluoromethane	47.63	0	50.00		95.3	83.6	123				
Surr: Toluene-d8	48.50	0	50.00		97.0	81.8	118				
Sample ID: LCS-238923 SampleType: LCS	Client ID: TestCode:	Volatile Organic Compo	unds by GC/MS	SW8260B	Uni Bat	its: <b>ug/L</b> chID: <b>238923</b>		ep Date: nalysis Date:	03/02/2017 03/02/2017	Run No: <b>337667</b> Seq No: <b>7377831</b>	 [
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	f Val %RP	D RPD Limit (	Qua!
Benzene	50.89	5.0	50.00		102	74	125				
Toluene	52.34	5.0	50.00		105	75.9	126				
Surr: 4-Bromofluorobenzene	47.12	0	50.00		94.2	66.1	129				
Surr: Dibromofluoromethane	47.27	0	50.00		94.5	83.6	123				
Surr: Toluene-d8	48.74	0	50.00		97.5	81.8	118				
Sample ID: 1702M96-027AMS SampleType: MS	Client ID: TestCode:	DUP-05-20170224-0 Volatile Organic Compo		SW8260B	Uni Bat	its: ug/L chID: 238923		ep Date: nalysis Date:	03/02/2017 03/03/2017	Run No: <b>337667</b> Seq No: <b>7377847</b>	7
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	f Val %RP	D RPD Limit (	Qual
Benzene	6774	250	2500	4330	97.8	71.6	132				
Coluene	2462	250	2500		98.5	72.5	135				
Surr: 4-Bromofluorobenzene	2350	0	2500		94.0	66.1	129				
Surr: Dibromofluoromethane	2339	0	2500		93.6	83.6	123				
Surr: Toluene-d8	2431	0	2500		97.2	81.8	118				
Qualifiers: > Greater than Result value	ue		< Less	than Result value			В	Analyte detected	in the associated meth	od blank	—
BRL Below reporting limit			E Estim	nated (value above quantit	ation range)		Н	•	r preparation or analys		
J Estimated value detect	ed below Reporting	g Limit	N Analy	yte not NELAC certified			R	RPD outside lim	its due to matrix		
Rpt Lim Reporting Limit			S Spike	Recovery outside limits	due to matrix					Page 56 of 59	

Date:

9-Mar-17

**Client: ERM-Southeast**  ANALYTICAL QC SUMMARY REPORT

Date:

9-Mar-17

BatchID: 238923

#### **Project Name:** AGLC Macon Workorder: 1702M96

Sample ID: 1702M96-027AMSD	Client ID:	DUP-05-20170224-0	1		Uni	its: ug/L	Prep	Date: 03/02/	/2017	Run No: <b>337667</b>
SampleType: MSD	TestCode:	Volatile Organic Compou	inds by GC/MS S	SW8260B	Bat	chID: 238923	Ana	lysis Date: 03/03/	2017	Seq No: <b>7377848</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Benzene	6730	250	2500	4330	96.0	71.6	132	6774	0.652	20.7
Toluene	2469	250	2500		98.8	72.5	135	2462	0.264	23.2
Surr: 4-Bromofluorobenzene	2318	0	2500		92.7	66.1	129	2350	0	0
Surr: Dibromofluoromethane	2338	0	2500		93.5	83.6	123	2339	0	0
Surr: Toluene-d8	2428	0	2500		97.1	81.8	118	2431	0	0

Qualifiers: Greater than Result value

> BRL Below reporting limit

Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

**Date:** 9-Mar-17

ERM-Southeast **Client: Project Name:** AGLC Macon Workorder: 1702M96

# ANALYTICAL QC SUMMARY REPORT

BatchID: 238968

Sample ID: MB-238968	Client ID:				Un	its: ug/L	Pr	ep Date:	03/02/2	017	Run No: 337661
SampleType: MBLK	TestCode:	Volatile Organic Compo	unds by GC/MS	SW8260B	Bat	tchID: 238968	Aı	nalysis Date:	03/02/2	017	Seq No: <b>7378914</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Re	f Val	%RPD	RPD Limit Qua
Benzene	BRL	5.0									
Carbon disulfide	BRL	5.0									
Ethylbenzene	BRL	5.0									
Toluene	BRL	5.0									
Xylenes, Total	BRL	5.0									
Surr: 4-Bromofluorobenzene	40.01	0	50.00		80.0	66.1	129				
Surr: Dibromofluoromethane	46.63	0	50.00		93.3	83.6	123				
Surr: Toluene-d8	45.66	0	50.00		91.3	81.8	118				
Sample ID: LCS-238968 SampleType: LCS	Client ID: TestCode:	Volatile Organic Compo	unds by GC/MS	SW8260B	Un: Bat	its: <b>ug/L</b> tchID: <b>238968</b>		ep Date: nalysis Date:	03/02/2 03/02/2		Run No: <b>337661</b> Seq No: <b>7378915</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Re	f Val	%RPD	RPD Limit Qua
Benzene	51.48	5.0	50.00		103	74	125				
Toluene	50.71	5.0	50.00		101	75.9	126				
Surr: 4-Bromofluorobenzene	42.72	0	50.00		85.4	66.1	129				
Surr: Dibromofluoromethane	45.23	0	50.00		90.5	83.6	123				
Surr: Toluene-d8	45.71	0	50.00		91.4	81.8	118				
Sample ID: 1702M96-002AMS SampleType: MS	Client ID: TestCode:			SW8260B	Un Bat	its: <b>ug/L</b> tchID: <b>238968</b>		ep Date: nalysis Date:	03/02/2 03/02/2		Run No: <b>337661</b> Seq No: <b>7378921</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Re	f Val	%RPD	RPD Limit Qua
Benzene	2381	250	2500		95.2	71.6	132				
Toluene	2323	250	2500		92.9	72.5	135				
Surr: 4-Bromofluorobenzene	2312	0	2500		92.5	66.1	129				
Surr: Dibromofluoromethane	2218	0	2500		88.7	83.6	123				
Surr: Toluene-d8	2336	0	2500		93.5	81.8	118				
Qualifiers: > Greater than Result val	ue		< Less	than Result value			В	Analyte detected	in the associ	ated method l	blank
BRL Below reporting limit			E Estim	nated (value above quantit	tation range)		Н	Holding times fo			
J Estimated value detect	ted below Reportin	g Limit	N Anal	yte not NELAC certified			R	RPD outside lin	nits due to ma	trix	
Rpt Lim Reporting Limit			S Spike	Recovery outside limits	due to matrix						Page 58 of 59

**Client: ERM-Southeast**  ANALYTICAL QC SUMMARY REPORT

Date:

9-Mar-17

BatchID: 238968

#### **Project Name:** AGLC Macon Workorder: 1702M96

Sample ID: 1702M96-002AMSD SampleType: MSD		MW-302DD-201702 Volatile Organic Compou		SW8260B	Uni Bate	ts: <b>ug/L</b> chID: <b>238968</b>		Date: 03/02 lysis Date: 03/02		Run No: <b>337661</b> Seq No: <b>7378922</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Benzene	2260	250	2500		90.4	71.6	132	2381	5.24	20.7
Toluene	2224	250	2500		89.0	72.5	135	2323	4.35	23.2
Surr: 4-Bromofluorobenzene	2093	0	2500		83.7	66.1	129	2312	0	0
Surr: Dibromofluoromethane	2336	0	2500		93.4	83.6	123	2218	0	0
Surr: Toluene-d8	2252	0	2500		90.1	81.8	118	2336	0	0

Qualifiers: Greater than Result value

> BRL Below reporting limit

Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

# ANALYTICAL ENVIRONMENTAL SERVICES, INC.



March 09, 2017

Adria Reimer ERM-Southeast 3200 Windy Hill Rd Atlanta GA

30339

TEL: (678) 486-2700 FAX: (404) 745-0103

RE: AGLC Macon

Dear Adria Reimer: Order No: 1702O89

Analytical Environmental Services, Inc. received 7 samples on February 28, 2017 5:30 pm for the analyses presented in following report.

No problems were encountered during the analyses. Additionally, all results for the associated Quality Control samples were within EPA and/or AES established limits. Any discrepancies associated with the analyses contained herein will be noted and submitted in the form of a project Case Narrative.

AES's accreditations are as follows:

- -NELAC/Florida State Laboratory ID E87582 for analysis of Non-Potable Water, Solid & Chemical Materials, and Drinking Water Microbiology, effective 07/01/16-06/30/17.
- -NELAC/Louisiana Agency Interest No. 100818 for or analysis of Non-Potable Water and Solid & Chemical Materials, effective 07/01/16-06/30/17.
- -AIHA-LAP, LLC Laboratory ID: 100671 for Industrial Hygiene samples (Organics, Metals, PCM Asbestos, Gravimetric), Environmental Lead (Paint, Soil, Dust Wipes, Air), and Environmental Microbiology (Fungal) Direct Examination, effective until 09/01/17.

These results relate only to the items tested. This report may only be reproduced in full.

Mirzeta Kararic

Project Manager

ANALYTICAL ENVIRONMENTAL SERVICES, INC

3080 Presidential Drive, Atlanta GA 30340-3704

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

AES

**4**£

1702089 Work Order:

CHAIN OF CUSTODY

32 No # of Containers 1 Ţ 1 # your results, place bottle Same Day Rush (auth req.) to check on the status of www.aesatlanta.com Tumaround Time Request Standard 5 Business Days Next Business Day Rush Visit our website 2 Business Day Rush Total # of Containers RECEIPT orders, etc. REMARKS ×000 erm.com ANALYSIS REQUESTED SEND REPORT TO: advia. Veimer D PRESERVATION (See codes) PROJECT INFORMATION Macon SITE ADDRESS: Walnut H N N A GL PROJECT NAME INVOICE TO: ROJECT #: 至 W Ч M N d 天にを DATE/TIME Matrix (See codes) <u>ર</u> 3200 Windy Fi ATL, 6A 30339 Composite SHIPMENT METHOD Grab 1030 1200 1000 000 1300 JO 101 TIME SAMPLED RECEIVED BY 7/28/1 SIGNATURE 2/28/17 2/182/2 DATE 27 D-20, 7027-01 206 D-20170227-0 MW-240-201702-28-01 MW-21-20170227-01 0022-984-829 02-20,70227-TB-02-20170228-01 TB-01-20170228-01 SAMPLED BY: KS, RR, C# SAMPLE ID SPECIAL INSTRUCTIONS/COMMENTS 365 RELINQUISHED BY ~ M/W-1 > <

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7

12 Π

SAMPLES RECEIVED AFTER 3PM OR ON SATURDAY ARE CONSIDERED RECEIVED THE NEXT BUSINESS DAY. IF TURNAROUND TIME IS NOT INDICATED, AES WILL PROCEED WITH STANDARD TAT OF SAMPLES. GW = Groundwater SE = Sediment SO = Soil SW = Surface Water W = Water (Blanks) DW = Drinking Water (Blanks) O = Other (specify) WW = Waste Water MATRIX CODES: A = Air

CLIENT FedEx UPS MAIL COURIER

**OKE YHOUND** 

VIA:

OUT

PRESERVATIVE CODES:

O = Other (specify) NA = None
White Copy - Original; Yellow Copy - Client

 $\geq$ 

Fax? Y/N

E-mail? Y/N;

PO# 036666

TF DIFFERENT FROM ABOVE)

STATE PROGRAM (if any):

Client: ERM-Southeast Project: AGLC Macon

Lab ID:

AGLC Macon
1702O89

Case Narrative

Date:

9-Mar-17

Volatile Organic Compounds Analysis by Method 8260B:

Due to sample matrix, sample 1702O89-005 A required dilution during preparation and/or analysis resulting in elevated reporting limits.

 Client:
 ERM-Southeast
 Client Sample ID:
 MW-24D-20170228-01

 Project Name:
 AGLC Macon
 Collection Date:
 2/28/2017 10:00:00 AM

 Lab ID:
 1702O89-001
 Matrix:
 Groundwater

Date:

9-Mar-17

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS S	W8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238866	1	03/03/2017 20:53	NP
Carbon disulfide	BRL	5.0		ug/L	238866	1	03/03/2017 20:53	NP
Ethylbenzene	BRL	5.0		ug/L	238866	1	03/03/2017 20:53	NP
Toluene	BRL	5.0		ug/L	238866	1	03/03/2017 20:53	NP
Xylenes, Total	BRL	5.0		ug/L	238866	1	03/03/2017 20:53	NP
Surr: 4-Bromofluorobenzene	94.3	66.1-129		%REC	238866	1	03/03/2017 20:53	NP
Surr: Dibromofluoromethane	98.1	83.6-123		%REC	238866	1	03/03/2017 20:53	NP
Surr: Toluene-d8	99.1	81.8-118		%REC	238866	1	03/03/2017 20:53	NP
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Naphthalene	BRL	0.50		ug/L	238785	1	03/01/2017 20:31	RF
Acenaphthylene	BRL	1.0		ug/L	238785	1	03/01/2017 20:31	RF
Acenaphthene	BRL	0.50		ug/L	238785	1	03/01/2017 20:31	RF
Fluorene	BRL	0.10		ug/L	238785	1	03/01/2017 20:31	RF
Phenanthrene	BRL	0.050		ug/L	238785	1	03/01/2017 20:31	RF
Anthracene	0.17	0.050		ug/L	238785	1	03/01/2017 20:31	RF
Fluoranthene	BRL	0.10		ug/L	238785	1	03/01/2017 20:31	RF
Pyrene	0.055	0.050		ug/L	238785	1	03/01/2017 20:31	RF
Benz(a)anthracene	0.56	0.050		ug/L	238785	1	03/01/2017 20:31	RF
Chrysene	0.53	0.050		ug/L	238785	1	03/01/2017 20:31	RF
Benzo(b)fluoranthene	1.1	0.10		ug/L	238785	1	03/01/2017 20:31	RF
Benzo(k)fluoranthene	1.0	0.050		ug/L	238785	1	03/01/2017 20:31	RF
Benzo(a)pyrene	0.98	0.050		ug/L	238785	1	03/01/2017 20:31	RF
Indeno(1,2,3-cd)pyrene	1.0	0.050		ug/L	238785	1	03/01/2017 20:31	RF
Dibenz(a,h)anthracene	1.0	0.10		ug/L	238785	1	03/01/2017 20:31	RF
Benzo(g,h,i)perylene	1.1	0.10		ug/L	238785	1	03/01/2017 20:31	RF
Surr: 4-Terphenyl-d14	80.5	58.5-125		%REC	238785	1	03/01/2017 20:31	RF
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238858	1	03/04/2017 00:55	YH
2-Methylphenol	BRL	10		ug/L	238858	1	03/04/2017 00:55	YH
3,4-Methylphenol	BRL	10		ug/L	238858	1	03/04/2017 00:55	YH
Phenol	BRL	10		ug/L	238858	1	03/04/2017 00:55	YH
Surr: 2,4,6-Tribromophenol	84.3	50-142		%REC	238858	1	03/04/2017 00:55	YH
Surr: 2-Fluorobiphenyl	71.4	46-124		%REC	238858	1	03/04/2017 00:55	YH
Surr: 2-Fluorophenol	50.2	25.3-120		%REC	238858	1	03/04/2017 00:55	YH
Surr: 4-Terphenyl-d14	83.4	45.1-133		%REC	238858	1	03/04/2017 00:55	YH
Surr: Nitrobenzene-d5	72.2	40.1-121		%REC	238858	1	03/04/2017 00:55	YH
Surr: Phenol-d5	32.8	16.3-120		%REC	238858	1	03/04/2017 00:55	YH

Qualifiers:

BRL Below reporting limit

<sup>\*</sup> Value exceeds maximum contaminant level

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

J Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-21-20170227-01Project Name:AGLC MaconCollection Date:2/27/2017 1:00:00 PMLab ID:1702089-002Matrix:Groundwater

Reporting Dilution Result Qual Units BatchID Analyses Date Analyzed Analyst Limit Factor Volatile Organic Compounds by GC/MS SW8260B (SW5030B) BRL ug/L 5.0 238866 03/03/2017 21:18 NP Benzene ug/L Carbon disulfide BRL 5.0 238866 03/03/2017 21:18 NP ug/L Ethylbenzene BRL 5.0 238866 03/03/2017 21:18 NP Toluene BRL 5.0 ug/L 238866 1 03/03/2017 21:18 NP ug/L Xylenes, Total **BRL** 5.0 238866 03/03/2017 21:18 NP 95.5 66.1-129 %REC 238866 03/03/2017 21:18 NP Surr: 4-Bromofluorobenzene %REC 99.8 83.6-123 238866 03/03/2017 21:18 NP Surr: Dibromofluoromethane %REC 81.8-118 238866 03/03/2017 21:18 NP Surr: Toluene-d8 101 **SIM Polynuclear Aromatic Hydrocarbons** SW8270D (SW3510C) Naphthalene BRL 0.50 ug/L 238785 03/01/2017 20:59 RF ug/L BRL 238785 03/01/2017 20:59 RF Acenaphthylene 1.0 BRL 0.50 ug/L 238785 1 03/01/2017 20:59 RF Acenaphthene Fluorene **BRL** 0.10 ug/L 238785 03/01/2017 20:59 RF BRL 0.050 ug/L 238785 03/01/2017 20:59 RF Phenanthrene ug/L Anthracene **BRL** 0.050 238785 03/01/2017 20:59 RF BRL 0.10 ug/L 238785 03/01/2017 20:59 RF Fluoranthene BRL 0.050 ug/L 238785 03/01/2017 20:59 RF Pyrene ug/L Benz(a)anthracene **BRL** 0.050238785 1 03/01/2017 20:59 RF BRL 0.050 ug/L 238785 03/01/2017 20:59 Chrysene RF ug/L 238785 **BRL** 0.10 03/01/2017 20:59 RF Benzo(b)fluoranthene Benzo(k)fluoranthene BRL 0.050 ug/L 238785 03/01/2017 20:59 RF ug/L BRL 238785 Benzo(a)pyrene 0.05003/01/2017 20:59 RF ug/L Indeno(1,2,3-cd)pyrene BRL 0.050 238785 03/01/2017 20:59 RF ug/L Dibenz(a,h)anthracene **BRL** 0.10 238785 03/01/2017 20:59 RF BRL ug/L 238785 03/01/2017 20:59 RF 0.10 1 Benzo(g,h,i)perylene %REC Surr: 4-Terphenyl-d14 92.9 58.5-125 238785 03/01/2017 20:59 RF Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C) ug/L BRL 10 238858 03/04/2017 01:21 YΗ 2,4-Dimethylphenol BRL 10 ug/L 238858 03/04/2017 01:21 YH 2-Methylphenol ug/L **BRL** 10 238858 03/04/2017 01:21 YH 3,4-Methylphenol Phenol BRL 10 ug/L 238858 03/04/2017 01:21 YH %REC Surr: 2,4,6-Tribromophenol 79.9 50-142 238858 1 03/04/2017 01:21 ΥH 65.2 46-124 %REC 238858 03/04/2017 01:21 YH Surr: 2-Fluorobiphenyl %REC Surr: 2-Fluorophenol 50 25.3-120 238858 03/04/2017 01:21 YH %REC 79.7 45.1-133 238858 03/04/2017 01:21 YH Surr: 4-Terphenyl-d14 %REC Surr: Nitrobenzene-d5 66 40.1-121 238858 03/04/2017 01:21 YH 03/04/2017 01:21 %REC Surr: Phenol-d5 33.9 16.3-120 238858 YH

Qualifiers:

BRL Below reporting limit

Date:

9-Mar-17

<sup>\*</sup> Value exceeds maximum contaminant level

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

 Client:
 ERM-Southeast
 Client Sample ID:
 MW-102-20170227-01

 Project Name:
 AGLC Macon
 Collection Date:
 2/27/2017 10:10:00 AM

Date:

9-Mar-17

Lab ID: 1702O89-003 Matrix: Groundwater

Carbon disulfide  BRL 5.0	Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analys
Carbon disulfide  BRL 5.0	Volatile Organic Compounds by GC/MS S	W8260B			(SW	/5030B)			
Ethylbenzene	Benzene	BRL	5.0		ug/L	238866	1	03/03/2017 19:37	NP
Toluene Toluene Toluene Toluene Toluenes, Total Sylenes, Total BRL 5.0  ##L 238866 1 03/03/2017 19:37 NP Surr: 4-Bromofluorobenzene 94.5 66.1-129 ##REC 238866 1 03/03/2017 19:37 NP Surr: Dibromofluoromethane 98.7 83.6-123 ##REC 238866 1 03/03/2017 19:37 NP Surr: Toluene-d8 99.3 81.8-118 ##REC 238866 1 03/03/2017 19:37 NP SURT Dibromofluoromethane 98.7 83.6-123 ##REC 238866 1 03/03/2017 19:37 NP SURT Toluene-d8 99.3 81.8-118 ##REC 238866 1 03/03/2017 19:37 NP SURT Toluene-d8 99.3 81.8-118 ##REC 238866 1 03/03/2017 19:37 NP SURT Toluene-d8 99.3 81.8-118 ##REC 238866 1 03/03/2017 19:37 NP SURT Toluene-d8 99.3 81.8-118 ##REC 238866 1 03/03/2017 19:37 NP SURT Toluene-d8 99.3 81.8-118 ##REC 238866 1 03/03/2017 19:37 NP SURT Toluene-d8 99.3 81.8-118 ##REC 238866 1 03/03/2017 19:37 NP SURT Toluene-d8 99.3 81.8-118 ##REC 238866 1 03/03/2017 19:37 NP SURT Toluene-d8 99.3 81.8-118 ##REC 238866 1 03/03/2017 19:37 NP SURT Toluene-d8 99.3 81.8-118 ##REC 238866 1 03/03/2017 19:37 NP SURT Toluene-d8 99.3 81.8-118 ##REC 238866 1 03/03/2017 19:37 NP SURT Toluene-d8 99.3 81.8-118 ##REC 2388785 1 03/01/2017 21:27 REP Accenaphthylene BRL 0.50 ##REC 238785 1 03/01/2017 21:27 REP Fluoranthene BRL 0.050 ##REC 238785 1 03/01/2017 21:27 REP Fluoranthene BRL 0.050 ##REC 238785 1 03/01/2017 21:27 REP Fluoranthene BRL 0.050 ##REC 238785 1 03/01/2017 21:27 REP Fluoranthene BRL 0.050 ##REC 238785 1 03/01/2017 21:27 REP Benzo(a)pytene BRL 0.050 ##REC 238785 1 03/01/2017 21:27 REP Benzo(b)fluoranthene BRL 0.050 ##REC 238785 1 03/01/2017 21:27 REP Benzo(a)pytene BRL 0.050 ##REC 238785 1 03/01/2017 21:27 REP Benzo(a)pytene BRL 0.050 ##REC 238785 1 03/01/2017 21:27 REP Benzo(a)pytene BRL 0.050 ##REC 238785 1 03/01/2017 21:27 REP Benzo(a)pytene BRL 0.050 ##REC 238785 1 03/01/2017 21:27 REP Benzo(a)pytene BRL 0.050 ##REC 238858 1 03/04/2017 01:47 YEP Surr: 4-Ferphenyl-d14 89.8 #\$45.1-133 ##REC 238858 1 03/04/2017 01:47 YEP Surr: 2-Fluorobiphenol BRL 0.050 ##REC 238858 1 03/04/2017 01:47 YEP Surr: 2-Fluorobiphenol BRL 0.050 ##REC 238858 1 03/04/2017	Carbon disulfide	BRL	5.0		ug/L	238866	1	03/03/2017 19:37	NP
Toluene	Ethylbenzene	BRL	5.0		ug/L	238866	1	03/03/2017 19:37	NP
Surr: 4-Bromofluorobenzene		BRL	5.0		ug/L	238866	1	03/03/2017 19:37	NP
Surr: 4-Bromofluorobenzene   94.5   66.1-129   %REC   238866   1   03/03/2017 19:37   NP	Xylenes, Total	BRL	5.0		ug/L	238866	1	03/03/2017 19:37	NP
Surr: Toluene-d8		94.5	66.1-129		%REC	238866	1	03/03/2017 19:37	NP
SIM Polynuclear Aromatic Hydrocarbons   SW8270D   SW3510C	Surr: Dibromofluoromethane	98.7	83.6-123		%REC	238866	1	03/03/2017 19:37	NP
Naphthalene	Surr: Toluene-d8	99.3	81.8-118		%REC	238866	1	03/03/2017 19:37	NP
Acenaphthylene	SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	/3510C)			
Acenaphthylene         BRL         1.0         ug/L         238785         1         03/01/2017 21:27         RF           Acenaphthene         BRL         0.50         ug/L         238785         1         03/01/2017 21:27         RF           Fluorene         BRL         0.10         ug/L         238785         1         03/01/2017 21:27         RF           Phenanthrene         BRL         0.050         ug/L         238785         1         03/01/2017 21:27         RF           Anthracene         BRL         0.050         ug/L         238785         1         03/01/2017 21:27         RF           Fluoranthene         BRL         0.10         ug/L         238785         1         03/01/2017 21:27         RF           Benzo(a)anthracene         BRL         0.050         ug/L         238785         1         03/01/2017 21:27         RF           Benzo(a)anthracene         BRL         0.050         ug/L         238785         1         03/01/2017 21:27         RF           Benzo(b)fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 21:27         RF           Benzo(b)fluoranthene         BRL         0.050         ug/L	Naphthalene	BRL	0.50		ug/L	238785	1	03/01/2017 21:27	RF
Acenaphthene         BRL         0.50         ug/L         238785         1         03/01/2017 21:27         RF           Fluorene         BRL         0.10         ug/L         238785         1         03/01/2017 21:27         RF           Phenanthrene         BRL         0.050         ug/L         238785         1         03/01/2017 21:27         RF           Anthracene         BRL         0.050         ug/L         238785         1         03/01/2017 21:27         RF           Fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 21:27         RF           Pyrene         BRL         0.050         ug/L         238785         1         03/01/2017 21:27         RF           Benzo(a)anthracene         BRL         0.050         ug/L         238785         1         03/01/2017 21:27         RF           Benzo(b)fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 21:27         RF           Benzo(b)fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 21:27         RF           Benzo(b)fluoranthene         BRL         0.050         ug/L         238	-	BRL	1.0		ug/L	238785	1	03/01/2017 21:27	RF
Fluorene		BRL	0.50		ug/L	238785	1	03/01/2017 21:27	RF
Anthracene BRL 0.050 ug/L 238785 1 03/01/2017 21:27 RF Fluoranthene BRL 0.10 ug/L 238785 1 03/01/2017 21:27 RF Pyrene BRL 0.050 ug/L 238785 1 03/01/2017 21:27 RF Benz(a)anthracene BRL 0.050 ug/L 238785 1 03/01/2017 21:27 RF Benz(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 21:27 RF Benzo(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 21:27 RF Benzo(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 21:27 RF Benzo(b)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 21:27 RF Benzo(a)apyrene BRL 0.050 ug/L 238785 1 03/01/2017 21:27 RF Benzo(a)apyrene BRL 0.050 ug/L 238785 1 03/01/2017 21:27 RF Indeno(1,2,3-cd)pyrene BRL 0.050 ug/L 238785 1 03/01/2017 21:27 RF Dibenz(a,h)anthracene BRL 0.050 ug/L 238785 1 03/01/2017 21:27 RF Benzo(g,h,i)perylene BRL 0.10 ug/L 238785 1 03/01/2017 21:27 RF Benzo(g,h,i)perylene BRL 0.10 ug/L 238785 1 03/01/2017 21:27 RF Surr: 4-Terphenyl-d14 84.4 58.5-125 %REC 238785 1 03/01/2017 21:27 RF Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)  2,4-Dimethylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 2-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 2-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 2-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 2-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 2-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 2-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 2-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 2-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 2-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 2-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 2-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 2-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 2-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 2-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 2-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 2-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 2-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 2-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 0	-	BRL	0.10		ug/L	238785	1	03/01/2017 21:27	RF
Fluoranthene	Phenanthrene	BRL	0.050		ug/L	238785	1	03/01/2017 21:27	RF
Pyrene	Anthracene	BRL	0.050		ug/L	238785	1	03/01/2017 21:27	RF
Benz(a)anthracene         BRL         0.050         ug/L         238785         1         03/01/2017 21:27         RF           Chrysene         BRL         0.050         ug/L         238785         1         03/01/2017 21:27         RF           Benzo(b)fluoranthene         BRL         0.10         ug/L         238785         1         03/01/2017 21:27         RF           Benzo(k)fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 21:27         RF           Benzo(a)pyrene         BRL         0.050         ug/L         238785         1         03/01/2017 21:27         RF           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238785         1         03/01/2017 21:27         RF           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238785         1         03/01/2017 21:27         RF           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238785         1         03/01/2017 21:27         RF           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3510C)         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238858 <td>Fluoranthene</td> <td>BRL</td> <td>0.10</td> <td></td> <td>ug/L</td> <td>238785</td> <td>1</td> <td>03/01/2017 21:27</td> <td>RF</td>	Fluoranthene	BRL	0.10		ug/L	238785	1	03/01/2017 21:27	RF
Chrysene BRL 0.050 ug/L 238785 1 03/01/2017 21:27 RF Benzo(b)fluoranthene BRL 0.10 ug/L 238785 1 03/01/2017 21:27 RF Benzo(k)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 21:27 RF Benzo(a)pyrene BRL 0.050 ug/L 238785 1 03/01/2017 21:27 RF Benzo(a)pyrene BRL 0.050 ug/L 238785 1 03/01/2017 21:27 RF Indeno(1,2,3-cd)pyrene BRL 0.050 ug/L 238785 1 03/01/2017 21:27 RF Dibenz(a,h)anthracene BRL 0.10 ug/L 238785 1 03/01/2017 21:27 RF Benzo(g,h,i)perylene BRL 0.10 ug/L 238785 1 03/01/2017 21:27 RF Benzo(g,h,i)perylene BRL 0.10 ug/L 238785 1 03/01/2017 21:27 RF Surr: 4-Terphenyl-d14 84.4 58.5-125 %REC 238785 1 03/01/2017 21:27 RF Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)  2,4-Dimethylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 2-Methylphenol B	Pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 21:27	RF
Benzo(b)fluoranthene         BRL         0.10         ug/L         238785         1         03/01/2017 21:27         RF           Benzo(k)fluoranthene         BRL         0.050         ug/L         238785         1         03/01/2017 21:27         RF           Benzo(a)pyrene         BRL         0.050         ug/L         238785         1         03/01/2017 21:27         RF           Indeno(1,2,3-cd)pyrene         BRL         0.050         ug/L         238785         1         03/01/2017 21:27         RF           Dibenz(a,h)anthracene         BRL         0.10         ug/L         238785         1         03/01/2017 21:27         RF           Benzo(g,h,i)perylene         BRL         0.10         ug/L         238785         1         03/01/2017 21:27         RF           Surr: 4-Terphenyl-d14         84.4         58.5-125         %REC         238785         1         03/01/2017 21:27         RF           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)         (SW3	Benz(a)anthracene	BRL	0.050		ug/L	238785	1	03/01/2017 21:27	RF
Benzo(k)fluoranthene BRL 0.050 ug/L 238785 1 03/01/2017 21:27 RF Benzo(a)pyrene BRL 0.050 ug/L 238785 1 03/01/2017 21:27 RF Indeno(1,2,3-ed)pyrene BRL 0.050 ug/L 238785 1 03/01/2017 21:27 RF Dibenz(a,h)anthracene BRL 0.10 ug/L 238785 1 03/01/2017 21:27 RF Benzo(g,h,i)perylene BRL 0.10 ug/L 238785 1 03/01/2017 21:27 RF Benzo(g,h,i)perylene BRL 0.10 ug/L 238785 1 03/01/2017 21:27 RF Surr: 4-Terphenyl-d14 84.4 58.5-125 %REC 238785 1 03/01/2017 21:27 RF Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)  2,4-Dimethylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YE 2-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YE 3,4-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YE 3,4-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YE Surr: 2,4,6-Tribromophenol 86.3 50-142 %REC 238858 1 03/04/2017 01:47 YE Surr: 2-Fluorobiphenyl 74.2 46-124 %REC 238858 1 03/04/2017 01:47 YE Surr: 2-Fluorobiphenol 56.4 25.3-120 %REC 238858 1 03/04/2017 01:47 YE Surr: 2-Fluorophenol 56.4 25.3-120 %REC 238858 1 03/04/2017 01:47 YE Surr: 4-Terphenyl-d14 89.8 45.1-133 %REC 238858 1 03/04/2017 01:47 YE Surr: Nitrobenzene-d5 74.6 40.1-121 %REC 238858 1 03/04/2017 01:47 YE Surr: Nitrobenzene-d5 74.6 40.1-121 %REC 238858 1 03/04/2017 01:47 YE Surr: Nitrobenzene-d5	Chrysene	BRL	0.050		ug/L	238785	1	03/01/2017 21:27	RF
Benzo(a)pyrene BRL 0.050 ug/L 238785 1 03/01/2017 21:27 RF Indeno(1,2,3-ed)pyrene BRL 0.050 ug/L 238785 1 03/01/2017 21:27 RF Dibenz(a,h)anthracene BRL 0.10 ug/L 238785 1 03/01/2017 21:27 RF Benzo(g,h,i)perylene BRL 0.10 ug/L 238785 1 03/01/2017 21:27 RF Surr: 4-Terphenyl-d14 84.4 58.5-125 %REC 238785 1 03/01/2017 21:27 RF Surr: 4-Terphenyl-d14 84.4 58.5-125 %REC 238785 1 03/01/2017 21:27 RF Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)  2,4-Dimethylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YE 2-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YE 3,4-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YE 3,4-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YE Surr: 2,4,6-Tribromophenol 86.3 50-142 %REC 238858 1 03/04/2017 01:47 YE Surr: 2-Fluorobiphenyl 74.2 46-124 %REC 238858 1 03/04/2017 01:47 YE Surr: 2-Fluorobiphenyl 74.2 46-124 %REC 238858 1 03/04/2017 01:47 YE Surr: 2-Fluorophenol 56.4 25.3-120 %REC 238858 1 03/04/2017 01:47 YE Surr: 4-Terphenyl-d14 89.8 45.1-133 %REC 238858 1 03/04/2017 01:47 YE Surr: Nitrobenzene-d5 74.6 40.1-121 %REC 238858 1 03/04/2017 01:47 YE Surr: Nitrobenzene-d5	Benzo(b)fluoranthene	BRL	0.10		ug/L	238785	1	03/01/2017 21:27	RF
Indeno(1,2,3-cd)pyrene	Benzo(k)fluoranthene	BRL	0.050		ug/L	238785	1	03/01/2017 21:27	RF
Dibenz(a,h)anthracene   BRL   0.10   ug/L   238785   1   03/01/2017 21:27   RF	Benzo(a)pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 21:27	RF
Benzo(g,h,i)perylene BRL 0.10 ug/L 238785 1 03/01/2017 21:27 RF Surr: 4-Terphenyl-d14 84.4 58.5-125 %REC 238785 1 03/01/2017 21:27 RF Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C)  2,4-Dimethylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 2-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 3,4-Methylphenol BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 10.00 BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 10.00 BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 10.00 BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 10.00 BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 10.00 BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 10.00 BRL 10 ug/L 238858 1 03/04/2017 01:47 YF 10.00 BRL 10 Ug/L 238858 1 03/04/2017 01:	Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 21:27	RF
Surr: 4-Terphenyl-d14         84.4         58.5-125         %REC         238785         1         03/01/2017 21:27         RF           Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238858         1         03/04/2017 01:47         YE           2-Methylphenol         BRL         10         ug/L         238858         1         03/04/2017 01:47         YE           3,4-Methylphenol         BRL         10         ug/L         238858         1         03/04/2017 01:47         YE           Phenol         BRL         10         ug/L         238858         1         03/04/2017 01:47         YE           Surr: 2,4,6-Tribromophenol         86.3         50-142         %REC         238858         1         03/04/2017 01:47         YE           Surr: 2-Fluorobiphenyl         74.2         46-124         %REC         238858         1         03/04/2017 01:47         YE           Surr: 2-Fluorophenol         56.4         25.3-120         %REC         238858         1         03/04/2017 01:47         YE           Surr: 4-Terphenyl-d14         89.8         45.1-133         %REC         238858         1         03/04/2	Dibenz(a,h)anthracene	BRL	0.10		ug/L	238785	1	03/01/2017 21:27	RF
Semivolatile Org. Comp. by GC/MS         SW8270D         (SW3510C)           2,4-Dimethylphenol         BRL         10         ug/L         238858         1         03/04/2017 01:47         YE           2-Methylphenol         BRL         10         ug/L         238858         1         03/04/2017 01:47         YE           3,4-Methylphenol         BRL         10         ug/L         238858         1         03/04/2017 01:47         YE           Phenol         BRL         10         ug/L         238858         1         03/04/2017 01:47         YE           Surr: 2,4,6-Tribromophenol         86.3         50-142         %REC         238858         1         03/04/2017 01:47         YE           Surr: 2-Fluorobiphenyl         74.2         46-124         %REC         238858         1         03/04/2017 01:47         YE           Surr: 2-Fluorophenol         56.4         25.3-120         %REC         238858         1         03/04/2017 01:47         YE           Surr: 4-Terphenyl-d14         89.8         45.1-133         %REC         238858         1         03/04/2017 01:47         YE           Surr: Nitrobenzene-d5         74.6         40.1-121         %REC         238858         1         03/04/2	Benzo(g,h,i)perylene	BRL	0.10		ug/L	238785	1	03/01/2017 21:27	RF
2,4-Dimethylphenol       BRL       10       ug/L       238858       1       03/04/2017 01:47       YE         2-Methylphenol       BRL       10       ug/L       238858       1       03/04/2017 01:47       YE         3,4-Methylphenol       BRL       10       ug/L       238858       1       03/04/2017 01:47       YE         Phenol       BRL       10       ug/L       238858       1       03/04/2017 01:47       YE         Surr: 2,4,6-Tribromophenol       86.3       50-142       %REC       238858       1       03/04/2017 01:47       YE         Surr: 2-Fluorobiphenyl       74.2       46-124       %REC       238858       1       03/04/2017 01:47       YE         Surr: 2-Fluorophenol       56.4       25.3-120       %REC       238858       1       03/04/2017 01:47       YE         Surr: 4-Terphenyl-d14       89.8       45.1-133       %REC       238858       1       03/04/2017 01:47       YE         Surr: Nitrobenzene-d5       74.6       40.1-121       %REC       238858       1       03/04/2017 01:47       YE	Surr: 4-Terphenyl-d14	84.4	58.5-125		%REC	238785	1	03/01/2017 21:27	RF
2-Methylphenol         BRL         10         ug/L         238858         1         03/04/2017 01:47         YE           3,4-Methylphenol         BRL         10         ug/L         238858         1         03/04/2017 01:47         YE           Phenol         BRL         10         ug/L         238858         1         03/04/2017 01:47         YE           Surr: 2,4,6-Tribromophenol         86.3         50-142         %REC         238858         1         03/04/2017 01:47         YE           Surr: 2-Fluorobiphenyl         74.2         46-124         %REC         238858         1         03/04/2017 01:47         YE           Surr: 2-Fluorophenol         56.4         25.3-120         %REC         238858         1         03/04/2017 01:47         YE           Surr: 4-Terphenyl-d14         89.8         45.1-133         %REC         238858         1         03/04/2017 01:47         YE           Surr: Nitrobenzene-d5         74.6         40.1-121         %REC         238858         1         03/04/2017 01:47         YE	Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	/3510C)			
3,4-Methylphenol         BRL         10         ug/L         238858         1         03/04/2017 01:47         YE           Phenol         BRL         10         ug/L         238858         1         03/04/2017 01:47         YE           Surr: 2,4,6-Tribromophenol         86.3         50-142         %REC         238858         1         03/04/2017 01:47         YE           Surr: 2-Fluorobiphenyl         74.2         46-124         %REC         238858         1         03/04/2017 01:47         YE           Surr: 2-Fluorophenol         56.4         25.3-120         %REC         238858         1         03/04/2017 01:47         YE           Surr: 4-Terphenyl-d14         89.8         45.1-133         %REC         238858         1         03/04/2017 01:47         YE           Surr: Nitrobenzene-d5         74.6         40.1-121         %REC         238858         1         03/04/2017 01:47         YE	2,4-Dimethylphenol	BRL	10		ug/L	238858	1	03/04/2017 01:47	YH
Phenol         BRL         10         ug/L         238858         1         03/04/2017 01:47         YE           Surr: 2,4,6-Tribromophenol         86.3         50-142         %REC         238858         1         03/04/2017 01:47         YE           Surr: 2-Fluorobiphenyl         74.2         46-124         %REC         238858         1         03/04/2017 01:47         YE           Surr: 2-Fluorophenol         56.4         25.3-120         %REC         238858         1         03/04/2017 01:47         YE           Surr: 4-Terphenyl-d14         89.8         45.1-133         %REC         238858         1         03/04/2017 01:47         YE           Surr: Nitrobenzene-d5         74.6         40.1-121         %REC         238858         1         03/04/2017 01:47         YE	2-Methylphenol	BRL	10		ug/L	238858	1	03/04/2017 01:47	YH
Surr: 2,4,6-Tribromophenol       86.3       50-142       %REC       238858       1       03/04/2017 01:47       YE         Surr: 2-Fluorobiphenyl       74.2       46-124       %REC       238858       1       03/04/2017 01:47       YE         Surr: 2-Fluorophenol       56.4       25.3-120       %REC       238858       1       03/04/2017 01:47       YE         Surr: 4-Terphenyl-d14       89.8       45.1-133       %REC       238858       1       03/04/2017 01:47       YE         Surr: Nitrobenzene-d5       74.6       40.1-121       %REC       238858       1       03/04/2017 01:47       YE	3,4-Methylphenol	BRL	10		ug/L	238858	1	03/04/2017 01:47	YH
Surr: 2-Fluorobiphenyl       74.2       46-124       %REC       238858       1       03/04/2017 01:47       YE         Surr: 2-Fluorophenol       56.4       25.3-120       %REC       238858       1       03/04/2017 01:47       YE         Surr: 4-Terphenyl-d14       89.8       45.1-133       %REC       238858       1       03/04/2017 01:47       YE         Surr: Nitrobenzene-d5       74.6       40.1-121       %REC       238858       1       03/04/2017 01:47       YE	Phenol	BRL	10		ug/L	238858	1	03/04/2017 01:47	YH
Surr: 2-Fluorophenol       56.4       25.3-120       %REC       238858       1       03/04/2017 01:47       YE         Surr: 4-Terphenyl-d14       89.8       45.1-133       %REC       238858       1       03/04/2017 01:47       YE         Surr: Nitrobenzene-d5       74.6       40.1-121       %REC       238858       1       03/04/2017 01:47       YE	Surr: 2,4,6-Tribromophenol	86.3	50-142		%REC	238858	1	03/04/2017 01:47	YH
Surr: 4-Terphenyl-d14       89.8       45.1-133       %REC       238858       1       03/04/2017 01:47       YE         Surr: Nitrobenzene-d5       74.6       40.1-121       %REC       238858       1       03/04/2017 01:47       YE	Surr: 2-Fluorobiphenyl	74.2	46-124		%REC	238858	1	03/04/2017 01:47	YH
Surr: Nitrobenzene-d5 74.6 40.1-121 %REC 238858 1 03/04/2017 01:47 YE	Surr: 2-Fluorophenol	56.4	25.3-120		%REC	238858	1	03/04/2017 01:47	YH
	Surr: 4-Terphenyl-d14	89.8	45.1-133		%REC	238858	1	03/04/2017 01:47	YH
Surr: Phenol-d5 39 16.3-120 %REC 238858 1 03/04/2017 01:47 YE	Surr: Nitrobenzene-d5	74.6	40.1-121		%REC	238858	1	03/04/2017 01:47	YH
	Surr: Phenol-d5	39	16.3-120		%REC	238858	1	03/04/2017 01:47	YH

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

J Estimated value detected below Reporting Limit

**Client Sample ID: Client: ERM-Southeast** MW-206D-20170227-01 **Collection Date:** 2/27/2017 10:30:00 AM Project Name: AGLC Macon Lab ID:

Date:

9-Mar-17

1702O89-004 Matrix: Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/MS S	SW8260B			(SW	(5030B)			
Benzene	19	5.0		ug/L	238866	1	03/06/2017 14:18	NP
Carbon disulfide	BRL	5.0		ug/L	238866	1	03/06/2017 14:18	NP
Ethylbenzene	89	5.0		ug/L	238866	1	03/06/2017 14:18	NP
Toluene	6.3	5.0		ug/L	238866	1	03/06/2017 14:18	NP
Xylenes, Total	11	5.0		ug/L	238866	1	03/06/2017 14:18	NP
Surr: 4-Bromofluorobenzene	93.9	66.1-129		%REC	238866	1	03/06/2017 14:18	NP
Surr: Dibromofluoromethane	99.7	83.6-123		%REC	238866	1	03/06/2017 14:18	NP
Surr: Toluene-d8	98.9	81.8-118		%REC	238866	1	03/06/2017 14:18	NP
SIM Polynuclear Aromatic Hydrocarbons	SW8270D			(SW	3510C)			
Naphthalene	530	5.0		ug/L	238785	100	03/02/2017 09:24	RF
Acenaphthylene	1.5	1.0		ug/L	238785	1	03/01/2017 22:51	RF
Acenaphthene	30	5.0		ug/L	238785	100	03/02/2017 09:24	RF
Fluorene	9.5	0.10		ug/L	238785	1	03/01/2017 22:51	RF
Phenanthrene	3.5	0.050		ug/L	238785	1	03/01/2017 22:51	RF
Anthracene	0.55	0.050		ug/L	238785	1	03/01/2017 22:51	RF
Fluoranthene	1.3	0.10		ug/L	238785	1	03/01/2017 22:51	RF
Pyrene	3.3	0.050		ug/L	238785	1	03/01/2017 22:51	RF
Benz(a)anthracene	0.081	0.050		ug/L	238785	1	03/01/2017 22:51	RF
Chrysene	0.057	0.050		ug/L	238785	1	03/01/2017 22:51	RF
Benzo(b)fluoranthene	BRL	0.10		ug/L	238785	1	03/01/2017 22:51	RF
Benzo(k)fluoranthene	BRL	0.050		ug/L	238785	1	03/01/2017 22:51	RF
Benzo(a)pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 22:51	RF
Indeno(1,2,3-cd)pyrene	BRL	0.050		ug/L	238785	1	03/01/2017 22:51	RF
Dibenz(a,h)anthracene	BRL	0.10		ug/L	238785	1	03/01/2017 22:51	RF
Benzo(g,h,i)perylene	BRL	0.10		ug/L	238785	1	03/01/2017 22:51	RF
Surr: 4-Terphenyl-d14	77.5	58.5-125		%REC	238785	1	03/01/2017 22:51	RF
Semivolatile Org. Comp. by GC/MS SW	8270D			(SW	3510C)			
2,4-Dimethylphenol	BRL	10		ug/L	238858	1	03/04/2017 02:13	YH
2-Methylphenol	BRL	10		ug/L	238858	1	03/04/2017 02:13	YH
3,4-Methylphenol	BRL	10		ug/L	238858	1	03/04/2017 02:13	YH
Phenol	BRL	10		ug/L	238858	1	03/04/2017 02:13	YH
Surr: 2,4,6-Tribromophenol	87.1	50-142		%REC	238858	1	03/04/2017 02:13	YH
Surr: 2-Fluorobiphenyl	71.1	46-124		%REC	238858	1	03/04/2017 02:13	YH
Surr: 2-Fluorophenol	49.8	25.3-120		%REC	238858	1	03/04/2017 02:13	YH
Surr: 4-Terphenyl-d14	77.6	45.1-133		%REC	238858	1	03/04/2017 02:13	YH
Surr: Nitrobenzene-d5	67.4	40.1-121		%REC	238858	1	03/04/2017 02:13	YH
Surr: Phenol-d5	34.2	16.3-120		%REC	238858	1	03/04/2017 02:13	YH

Qualifiers:

Value exceeds maximum contaminant level

BRL Below reporting limit

Н Holding times for preparation or analysis exceeded

Analyte not NELAC certified

Analyte detected in the associated method blank

Greater than Result value

E Estimated (value above quantitation range)

Spike Recovery outside limits due to matrix

Estimated value detected below Reporting Limit

Client:ERM-SoutheastClient Sample ID:MW-305D-20170227-01Project Name:AGLC MaconCollection Date:2/27/2017 12:00:00 PMLab ID:1702O89-005Matrix:Groundwater

Date:

9-Mar-17

Reporting Dilution Qual Units BatchID Analyses Result Date Analyzed Analyst Limit Factor Volatile Organic Compounds by GC/MS SW8260B (SW5030B) ug/L 9600 2500 238866 500 03/03/2017 18:45 NP Benzene BRL 250 ug/L 238866 50 03/06/2017 13:52 NP Carbon disulfide ug/L Ethylbenzene 250 250 238866 50 03/06/2017 13:52 NP Toluene 5000 250 ug/L 238866 50 03/06/2017 13:52 NP ug/L Xylenes, Total 960 250 238866 50 03/06/2017 13:52 NP 238866 94.9 66.1-129 %REC 50 03/06/2017 13:52 NP Surr: 4-Bromofluorobenzene %REC 97.7 66.1-129 238866 500 03/03/2017 18:45 NP Surr: 4-Bromofluorobenzene %REC 238866 Surr: Dibromofluoromethane 96.2 83.6-123 500 03/03/2017 18:45 NP %REC Surr: Dibromofluoromethane 98 83.6-123 238866 03/06/2017 13:52 NP 97.5 %REC 238866 81.8-118 50 03/06/2017 13:52 NP Surr: Toluene-d8 Surr: Toluene-d8 99.5 81.8-118 %REC 238866 03/03/2017 18:45 NP SW8270D **SIM Polynuclear Aromatic Hydrocarbons** (SW3510C) Naphthalene 3500 250 ug/L 238785 500 03/02/2017 11:11 RF 51 10 ug/L 238785 03/02/2017 10:44 RF Acenaphthylene 10 ug/L Acenaphthene 3.3 0.50 238785 03/01/2017 23:19 RF 9.0 0.10 ug/L 238785 03/01/2017 23:19 RF Fluorene 1 9.3 ug/L 238785 10 03/02/2017 10:44 RF Phenanthrene 0.50 1.5 ug/L 0.050 238785 1 03/01/2017 23:19 RF Anthracene ug/L 238785 03/01/2017 23:19 Fluoranthene 1.1 0.10 RF ug/L 238785 1.1 0.050 03/01/2017 23:19 RF Pyrene 0.099 0.050 ug/L 238785 03/01/2017 23:19 RF Benz(a)anthracene ug/L 0.076 238785 Chrysene 0.05003/01/2017 23:19 RF Benzo(b)fluoranthene 0.12 0.10 ug/L 238785 03/01/2017 23:19 RF ug/L Benzo(k)fluoranthene BRL 0.050 238785 03/01/2017 23:19 RF BRL 0.050 ug/L 238785 RF 1 03/01/2017 23:19 Benzo(a)pyrene ug/L Indeno(1,2,3-cd)pyrene **BRL** 0.050 238785 03/01/2017 23:19 RF BRL 0.10 ug/L 238785 03/01/2017 23:19 RF Dibenz(a,h)anthracene Benzo(g,h,i)perylene BRL 0.10 ug/L 238785 03/01/2017 23:19 RF %REC 238785 03/01/2017 23:19 RF Surr: 4-Terphenyl-d14 75.2 58.5-125 Semivolatile Org. Comp. by GC/MS SW8270D (SW3510C) 2,4-Dimethylphenol BRL 10 ug/L 238858 03/04/2017 02:38 YH ug/L 2-Methylphenol BRL 10 238858 1 03/04/2017 02:38 ΥH 3,4-Methylphenol BRL 10 ug/L 238858 03/04/2017 02:38 YH 1 ug/L Phenol BRL 10 238858 03/04/2017 02:38 YH %REC 94.8 50-142 238858 03/04/2017 02:38 YH Surr: 2,4,6-Tribromophenol %REC Surr: 2-Fluorobiphenyl 76.1 46-124 238858 03/04/2017 02:38 YH %REC Surr: 2-Fluorophenol 55.3 25.3-120 238858 03/04/2017 02:38 YH Surr: 4-Terphenyl-d14 77.1 45.1-133 %REC 238858 03/04/2017 02:38 ΥH %REC 83.4 40.1-121 238858 03/04/2017 02:38 ΥH Surr: Nitrobenzene-d5

Qualifiers:

<sup>\*</sup> Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

<sup>&</sup>gt; Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

J Estimated value detected below Reporting Limit

**Client Sample ID: Client: ERM-Southeast** MW-305D-20170227-01 **Collection Date:** 2/27/2017 12:00:00 PM Project Name: AGLC Macon Lab ID: 1702O89-005 Matrix: Groundwater

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Semivolatile Org. Comp. by GC/MS	SW8270D			(SV	V3510C)			
Surr: Phenol-d5	41.2	16.3-120		%REC	238858	1	03/04/2017 02:38	YH

Date:

9-Mar-17

Qualifiers:

Value exceeds maximum contaminant level

BRL Below reporting limit

Н Holding times for preparation or analysis exceeded

Analyte not NELAC certified

Analyte detected in the associated method blank

Greater than Result value

E Estimated (value above quantitation range)

Spike Recovery outside limits due to matrix

Narr See case narrative Not confirmed

Less than Result value

Client: ERM-Southeast Client Sample ID: TB-01-20170228-01

Project Name:AGLC MaconCollection Date:2/28/2017Lab ID:1702O89-006Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/N	MS SW8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238866	1	03/03/2017 17:54	NP
Carbon disulfide	BRL	5.0		ug/L	238866	1	03/03/2017 17:54	NP
Ethylbenzene	BRL	5.0		ug/L	238866	1	03/03/2017 17:54	NP
Toluene	BRL	5.0		ug/L	238866	1	03/03/2017 17:54	NP
Xylenes, Total	BRL	5.0		ug/L	238866	1	03/03/2017 17:54	NP
Surr: 4-Bromofluorobenzene	96.4	66.1-129		%REC	238866	1	03/03/2017 17:54	NP
Surr: Dibromofluoromethane	98.2	83.6-123		%REC	238866	1	03/03/2017 17:54	NP
Surr: Toluene-d8	98.8	81.8-118		%REC	238866	1	03/03/2017 17:54	NP

Date:

9-Mar-17

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative NC Not confirmed

< Less than Result value

Client: ERM-Southeast Client Sample ID: TB-02-20170228-01

Project Name:AGLC MaconCollection Date:2/28/2017Lab ID:1702O89-007Matrix:Aqueous

Analyses	Result	Reporting Limit	Qual	Units	BatchID	Dilution Factor	Date Analyzed	Analyst
Volatile Organic Compounds by GC/N	MS SW8260B			(SW	/5030B)			
Benzene	BRL	5.0		ug/L	238866	1	03/03/2017 18:20	NP
Carbon disulfide	BRL	5.0		ug/L	238866	1	03/03/2017 18:20	NP
Ethylbenzene	BRL	5.0		ug/L	238866	1	03/03/2017 18:20	NP
Toluene	BRL	5.0		ug/L	238866	1	03/03/2017 18:20	NP
Xylenes, Total	BRL	5.0		ug/L	238866	1	03/03/2017 18:20	NP
Surr: 4-Bromofluorobenzene	94.9	66.1-129		%REC	238866	1	03/03/2017 18:20	NP
Surr: Dibromofluoromethane	97.2	83.6-123		%REC	238866	1	03/03/2017 18:20	NP
Surr: Toluene-d8	98.5	81.8-118		%REC	238866	1	03/03/2017 18:20	NP

Date:

9-Mar-17

Qualifiers:

\* Value exceeds maximum contaminant level

BRL Below reporting limit

H Holding times for preparation or analysis exceeded

N Analyte not NELAC certified

B Analyte detected in the associated method blank

> Greater than Result value

E Estimated (value above quantitation range)

S Spike Recovery outside limits due to matrix

Narr See case narrative NC Not confirmed

< Less than Result value



### SAMPLE/COOLER RECEIPT CHECKLIST

1	. Client Name:				AES Work Order Numbe	rr:
2.	Carrier: FedEx UPS USPS Client Courier Other					
		Yes	No	N/A	Details	Comments
3	. Shipping container/cooler received in good condition?				damaged leaking other	
4	. Custody seals present on shipping container?					
5	Custody seals intact on shipping container?					
6	. Temperature blanks present?					
_	Cooler temperature(s) within limits of 0-6°C? [See item 13 and 14 for				Cooling initiated for recently collected samples / ice	
7	temperature recordings.]				present	
8	. Chain of Custody (COC) present?					
9	Chain of Custody signed, dated, and timed when relinquished and received?					
10	. Sampler name and/or signature on COC?					
11	. Were all samples received within holding time?					
12	. TAT marked on the COC?				If no TAT indicated, proceeded with standard TAT per To	erms & Conditions.
					•	
13	Cooler 1 Temperature °C Cooler 2 Temperature Cooler 5 Temperature °C Cooler 6 Temperature			°C		er 4 Temperature°C
	Cooler 5 Temperature °C Cooler 6 Temperature		0(	С	Cooler 7 Temperature °C Cooler	r 8 Temperature °C
	<del></del>					
15	. Comments:					
					I certify that I have co	ompleted sections 1-15 (dated initials).
					•	•
	h	Yes	No	N/A	Details T	Comments
	. Were sample containers intact upon receipt?	<b>├</b>				
	. Custody seals present on sample containers?					<u> </u>
18	Custody seals intact on sample containers?	<u> </u>				
19	. Do sample container labels match the COC?				incomplete info illegible	
		<u> </u>			no label other	<u> </u>
20	Are analyses requested indicated on the COC?					<u> </u>
21	. Were all of the samples listed on the COC received?				samples received but not listed on COC	
		<u> </u>			samples listed on COC not received	_
	. Was the sample collection date/time noted?	<u> </u>				
	. Did we receive sufficient sample volume for indicated analyses?	<u> </u>				
	Were samples received in appropriate containers?	<u> </u>				
	. Were VOA samples received without headspace (< 1/4" bubble)?	<u> </u>				
26	. Were trip blanks submitted?				listed on COC not listed on COC	
27	. Comments:					
					I certify that I have co	ompleted sections 16-27 (dated initials).
		Yes	No	N/A	, Details	Comments
28	Have containers needing chemical preservation been checked?		I		1	T
	Containers meet preservation guidelines?	<b>—</b>	<del>                                     </del>			<del> </del>
	. Was pH adjusted?	<b>—</b>	<del>                                     </del>			<del> </del>
50						

I certify that I have completed sections 28-30 (dated initials).

1702O89

Client: ERM-Southeast Project Name: AGLC Macon

Workorder:

# ANALYTICAL QC SUMMARY REPORT

Date:

9-Mar-17

BatchID: 238785

Sample ID: MB-238785 SampleType: MBLK	Client ID: TestCode: SIM	I Polynuclear Aroma	tic Hydrocarbons	SW8270D	Uni Bat	ts: <b>ug/L</b> chID: <b>238785</b>		ep Date: alysis Date:	03/01/2017 03/01/2017	Run No: <b>337521</b> Seq No: <b>7373956</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	`Val %RPD	RPD Limit Qual
Acenaphthene	BRL	0.50								
Acenaphthylene	BRL	1.0								
Anthracene	BRL	0.050								
Benz(a)anthracene	BRL	0.050								
Benzo(a)pyrene	BRL	0.050								
Benzo(b)fluoranthene	BRL	0.10								
Benzo(g,h,i)perylene	BRL	0.10								
Benzo(k)fluoranthene	BRL	0.050								
Chrysene	BRL	0.050								
Dibenz(a,h)anthracene	BRL	0.10								
Fluoranthene	BRL	0.10								
Fluorene	BRL	0.10								
Indeno(1,2,3-cd)pyrene	BRL	0.050								
Naphthalene	BRL	0.50								
Phenanthrene	BRL	0.050								
Pyrene	BRL	0.050								
Surr: 4-Terphenyl-d14	1.780	0	2.000		89.0	58.5	125			
Sample ID: LCS-238785	Client ID:				Uni	its: ug/L	Pre	ep Date:	03/01/2017	Run No: <b>337521</b>
SampleType: LCS	TestCode: SIM	I Polynuclear Aroma	tic Hydrocarbons	SW8270D	Bat	chID: 238785	An	alysis Date:	03/01/2017	Seq No: <b>7374026</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref	`Val %RPD	RPD Limit Qual
Acenaphthene	1.532	0.50	2.000		76.6	69.1	117			
Acenaphthylene	1.491	1.0	2.000		74.5	59.7	118			
Anthracene	1.566	0.050	2.000		78.3	64.7	121			
Benz(a)anthracene	1.595	0.050	2.000	0.01968	78.8	61.7	139			
Benzo(a)pyrene	1.644	0.050	2.000		82.2	65.1	124			
Qualifiers: > Greater than Resul	t value		< Less	han Result value			В	Analyte detected i	in the associated method	blank
BRL Below reporting lin				ated (value above quantit	ation range)		Н	•	preparation or analysis	
	etected below Reporting Limi	t		te not NELAC certified			R	RPD outside limi		
Rpt Lim Reporting Limit			S Spike	Recovery outside limits of	due to matrix					Page 13 of 10

Client: FRM-Southeast

# ANALYTICAL QC SUMMARY REPORT

Date:

9-Mar-17

BatchID: 238785

EKWI-Southeast
AGLC Macon
1702O89

Sample ID: LCS-238785 SampleType: LCS	Client ID: TestCode:	SIM Polynuclear Aromatic	Hydrocarbons	SW8270D	Uni Bat	its: <b>ug/L</b> schID: <b>238785</b>		Date: (alysis Date: (		Run No: <b>337521</b> Seq No: <b>7374026</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref V	/al %RPD	RPD Limit Qual
Benzo(b)fluoranthene	1.771	0.10	2.000	0.02664	87.2	60.8	129			
Benzo(g,h,i)perylene	1.781	0.10	2.000		89.0	60.1	129			
Benzo(k)fluoranthene	1.797	0.050	2.000	0.03083	88.3	69.6	130			
Chrysene	1.623	0.050	2.000	0.01833	80.3	76.5	127			
Dibenz(a,h)anthracene	1.638	0.10	2.000		81.9	55.2	126			
Fluoranthene	1.662	0.10	2.000	0.02468	81.9	66.5	133			
Fluorene	1.571	0.10	2.000		78.6	66.1	122			
Indeno(1,2,3-cd)pyrene	1.635	0.050	2.000	0.01925	80.8	58.8	132			
Naphthalene	1.429	0.50	2.000		71.4	60.6	120			
Phenanthrene	1.571	0.050	2.000		78.6	65.9	118			
Pyrene	1.494	0.050	2.000	0.02836	73.3	70.2	129			
Surr: 4-Terphenyl-d14	1.549	0	2.000		77.4	58.5	125			
Sample ID: 1702O89-003BMS		MW-102-20170227-01			Uni	its: ug/L	Prep	Date: (	03/01/2017	Run No: <b>337521</b>
SampleType: MS	TestCode:	SIM Polynuclear Aromatic	Hydrocarbons	SW8270D	Bat	chID: 238785	Ana	llysis Date: (	03/01/2017	Seq No: <b>7375399</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref V	/al %RPD	RPD Limit Qual
Acenaphthene	1.728	0.50	2.000		86.4	49.7	118			
Acenaphthylene	1.625	1.0	2.000		81.3	56.7	120			
Anthracene	1.702	0.050	2.000		85.1	54.4	117			
Benz(a)anthracene	1.835	0.050	2.000		91.8	52.4	135			
Benzo(a)pyrene	1.741	0.050	2.000		87.0	51.5	117			
Benzo(b)fluoranthene	1.970	0.10	2.000		98.5	45.6	124			
Benzo(g,h,i)perylene	1.721	0.10	2.000		86.1	45.9	120			
Benzo(k)fluoranthene	1.707	0.050	2.000		85.4	51.8	122			
Chrysene	1.737	0.050	2.000		86.8	59.9	120			
Dibenz(a,h)anthracene	1.661	0.10	2.000		83.1	41.6	120			
Fluoranthene	1.815	0.10	2.000		90.8	59.7	122			

BRL Below reporting limit

Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

R RPD outside limits due to matrix

**Client: ERM-Southeast Project Name:** 

Workorder:

AGLC Macon

1702O89

ANALYTICAL QC SUMMARY REPORT

BatchID: 238785

Date:

9-Mar-17

Sample ID: 1702O89-003BMS Sample Type: MS		MW-102-20170227-01 SIM Polynuclear Aromatic H	Iydrocarbons	SW8270D	Uni Bat	ts: <b>ug/L</b> chID: <b>238785</b>	•	Date: 03/01 lysis Date: 03/01		Run No: <b>337521</b> Seq No: <b>7375399</b>
Analyte	Result	RPT Limit S	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Fluorene	1.721	0.10	2.000		86.0	57.9	117			
Indeno(1,2,3-cd)pyrene	1.641	0.050	2.000		82.0	45.5	120			
Naphthalene	1.600	0.50	2.000		80.0	53.9	120			
Phenanthrene	1.716	0.050	2.000		85.8	58.1	120			
Pyrene	1.818	0.050	2.000		90.9	61.6	120			
Surr: 4-Terphenyl-d14	1.639	0	2.000		81.9	58.5	125			
Sample ID: 1702O89-003BMSD SampleType: MSD		MW-102-20170227-01 SIM Polynuclear Aromatic H	lydrocarbons	SW8270D	Uni Bat	ts: <b>ug/L</b> chID: <b>238785</b>		Date: <b>03/01</b> lysis Date: <b>03/01</b>		Run No: <b>337521</b> Seq No: <b>7375400</b>
Analyte	Result	RPT Limit S	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Acenaphthene	1.666	0.50	2.000		83.3	49.7	118	1.728	3.65	17.4
Acenaphthylene	1.589	1.0	2.000		79.5	56.7	120	1.625	2.26	19.5
Anthracene	1.627	0.050	2.000		81.3	54.4	117	1.702	4.51	24.5
Benz(a)anthracene	1.743	0.050	2.000		87.1	52.4	135	1.835	5.17	30.2
Benzo(a)pyrene	1.620	0.050	2.000		81.0	51.5	117	1.741	7.20	25.6
Benzo(b)fluoranthene	1.838	0.10	2.000		91.9	45.6	124	1.970	6.93	20.9
Benzo(g,h,i)perylene	1.647	0.10	2.000		82.3	45.9	120	1.721	4.42	28.6
Benzo(k)fluoranthene	1.797	0.050	2.000		89.8	51.8	122	1.707	5.09	28.6
Chrysene	1.703	0.050	2.000		85.2	59.9	120	1.737	1.92	26.4
Dibenz(a,h)anthracene	1.586	0.10	2.000		79.3	41.6	120	1.661	4.59	17.8
Fluoranthene	1.755	0.10	2.000		87.8	59.7	122	1.815	3.37	22.1
Fluorene	1.741	0.10	2.000		87.0	57.9	117	1.721	1.16	20.8
Indeno(1,2,3-cd)pyrene	1.576	0.050	2.000		78.8	45.5	120	1.641	4.04	19.3
Naphthalene	1.531	0.50	2.000		76.5	53.9	120	1.600	4.40	20.6
Phenanthrene	1.662	0.050	2.000		83.1	58.1	120	1.716	3.17	19.4
Pyrene	1.555	0.050	2.000		77.7	61.6	120	1.818	15.6	21.2
Surr: 4-Terphenyl-d14	1.635	0	2.000		81.8	58.5	125	1.639	0	0

Qualifiers:

Greater than Result value

BRL Below reporting limit

Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

Holding times for preparation or analysis exceeded

R RPD outside limits due to matrix

### **Analytical Environmental Services, Inc**

**Client: ERM-Southeast Project Name:** 

Workorder:

**Project Name:** 

Workorder:

**Client:** 

AGLC Macon 1702O89

ANALYTICAL QC SUMMARY REPORT

Date:

9-Mar-17

9-Mar-17

BatchID: 238785

### **Analytical Environmental Services, Inc**

**ERM-Southeast** 

AGLC Macon 1702O89

## ANALYTICAL QC SUMMARY REPORT

Date:

BatchID: 238858

Sample ID: MB-238858 SampleType: MBLK	Client ID: TestCode: Ser	Gemivolatile Org. Comp. by GC/MS SW8270D			Units: ug/L BatchID: 238858			Date: 03/02 lysis Date: 03/03		Run No: <b>337760</b> Seq No: <b>7380146</b>	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual	
2,4-Dimethylphenol	BRL	10									
2-Methylphenol	BRL	10									
3,4-Methylphenol	BRL	10									
Phenol	BRL	10									
Surr: 2,4,6-Tribromophenol	80.43	0	100.0		80.4	50	142				
Surr: 2-Fluorobiphenyl	34.84	0	50.00		69.7	46	124				
Surr: 2-Fluorophenol	37.73	0	100.0		37.7	25.3	120				
Surr: 4-Terphenyl-d14	40.91	0	50.00		81.8	45.1	133				
Surr: Nitrobenzene-d5	34.85	0	50.00		69.7	40.1	121				
Surr: Phenol-d5	21.62	0	100.0		21.6	16.3	120				
Sample ID: LCS-238858	Client ID:				Uni	its: ug/L	Prep	Date: 03/02	2/2017	Run No: <b>337760</b>	
SampleType: LCS	TestCode: Ser	nivolatile Org. Comp.	by GC/MS SW	/8270D	Bat	chID: 238858	Ana	lysis Date: 03/03	3/2017	Seq No: <b>7380147</b>	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual	
Phenol	29.60	10	100.0		29.6	25	120				
Surr: 2,4,6-Tribromophenol	98.18	0	100.0		98.2	50	142				
Surr: 2-Fluorobiphenyl	41.37	0	50.00		82.7	46	124				
Surr: 2-Fluorophenol	53.57	0	100.0		53.6	25.3	120				
Surr: 4-Terphenyl-d14	47.94	0	50.00		95.9	45.1	133				
Surr: Nitrobenzene-d5	40.46	0	50.00		80.9	40.1	121				
Surr: Phenol-d5	33.15	0	100.0		33.2	16.3	120				
Qualifiers: > Greater than Result	value			than Result value			В	Analyte detected in the ass	sociated method l	olank	

Below reporting limit

Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

H Holding times for preparation or analysis exceeded

R RPD outside limits due to matrix

**Client: ERM-Southeast Project Name:** 

AGLC Macon

Workorder: 1702O89

# ANALYTICAL QC SUMMARY REPORT

Date:

9-Mar-17

BatchID: 238858

Sample ID: 1702O89-003BMS Client ID: MW-102-20170227-01				Units: ug/L Prep Date: 03/02/201					No: 337874		
SampleType: MS	TestCode:	Semivolatile Org. Comp.	by GC/MS SW	/8270D	Bat	chID: 238858	Ana	lysis Date: 03/06	/2017	Seq No: <b>738310</b>	)4
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Phenol	37.99	10	100.0		38.0	31.5	120				
Surr: 2,4,6-Tribromophenol	89.58	0	100.0		89.6	50	142				
Surr: 2-Fluorobiphenyl	36.48	0	50.00		73.0	46	124				
Surr: 2-Fluorophenol	57.88	0	100.0		57.9	25.3	120				
Surr: 4-Terphenyl-d14	42.27	0	50.00		84.5	45.1	133				
Surr: Nitrobenzene-d5	38.26	0	50.00		76.5	40.1	121				
Surr: Phenol-d5	42.04	0	100.0		42.0	16.3	120				
Sample ID: 1702O89-003BMSD		MW-102-20170227-0			Uni	ts: ug/L	Prep	Date: 03/02	/2017	Run No: <b>337874</b>	1
SampleType: MSD	TestCode:	Semivolatile Org. Comp.	by GC/MS SW	/8270D	Bat	chID: 238858	Ana	lysis Date: 03/06	/2017	Seq No: <b>738310</b>	)5
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit	Qual
Phenol	35.81	10	100.0		35.8	31.5	120	37.99	5.91	28.5	
Surr: 2,4,6-Tribromophenol	89.70	0	100.0		89.7	50	142	89.58	0	0	
Surr: 2-Fluorobiphenyl	35.10	0	50.00		70.2	46	124	36.48	0	0	
Surr: 2-Fluorophenol	55.61	0	100.0		55.6	25.3	120	57.88	0	0	
Surr: 4-Terphenyl-d14	41.87	0	50.00		83.7	45.1	133	42.27	0	0	
Surr: Nitrobenzene-d5	37.14	0	50.00		74.3	40.1	121	38.26	0	0	
Surr: Phenol-d5	39.29	0	100.0		39.3	16.3	120	42.04	0	0	

Qualifiers: Greater than Result value

> BRL Below reporting limit

Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

R RPD outside limits due to matrix

ERM-Southeast **Project Name:** 

Client:

Workorder:

ANALYTICAL QC SUMMARY REPORT

Date:

9-Mar-17

AGLC Macon 1702O89

BatchID: 238866

Sample ID: MB-238866 SampleType: MBLK	Client ID: TestCode:	Volatile Organic Compo	unds by GC/MS	SW8260B	Uni Bat	its: ug/L chID: 238866		ep Date: alysis Date:	03/02/2017 03/02/2017	Run No: <b>337619</b> Seq No: <b>7376176</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Re	f Val %RPD	RPD Limit Qua
Benzene	BRL	5.0								
Carbon disulfide	BRL	5.0								
Ethylbenzene	BRL	5.0								
Coluene	BRL	5.0								
Yylenes, Total	BRL	5.0								
Surr: 4-Bromofluorobenzene	47.47	0	50.00		94.9	66.1	129			
Surr: Dibromofluoromethane	46.84	0	50.00		93.7	83.6	123			
Surr: Toluene-d8	47.17	0	50.00		94.3	81.8	118			
Sample ID: LCS-238866	Client ID:				Uni	its: ug/L	Pre	ep Date:	03/02/2017	Run No: <b>337619</b>
SampleType: LCS	TestCode:	Volatile Organic Compo	unds by GC/MS	SW8260B	Bat	chID: 238866	An	alysis Date:	03/02/2017	Seq No: <b>7376175</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Re	f Val %RPD	RPD Limit Qua
Benzene	49.44	5.0	50.00		98.9	74	125			
Coluene	50.00	5.0	50.00		100	75.9	126			
Surr: 4-Bromofluorobenzene	46.61	0	50.00		93.2	66.1	129			
Surr: Dibromofluoromethane	46.85	0	50.00		93.7	83.6	123			
Surr: Toluene-d8	46.15	0	50.00		92.3	81.8	118			
Sample ID: 1702M33-008AMS	Client ID:				Uni	its: ug/L	Pre	ep Date:	03/02/2017	Run No: <b>337619</b>
SampleType: MS	TestCode:	Volatile Organic Compo	unds by GC/MS	SW8260B	Bat	chID: 238866	An	alysis Date:	03/02/2017	Seq No: <b>7377797</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Re	f Val %RPD	RPD Limit Qua
Benzene	49200	5000	50000		98.4	71.6	132			
oluene	50590	5000	50000		101	72.5	135			
Surr: 4-Bromofluorobenzene	47690	0	50000		95.4	66.1	129			
Surr: Dibromofluoromethane	50510	0	50000		101	83.6	123			
Surr: Toluene-d8	48260	0	50000		96.5	81.8	118			
Qualifiers: > Greater than Result value	ıe		< Less	than Result value			В	Analyte detected	in the associated method	l blank
BRL Below reporting limit			E Estim	ated (value above quantit	ation range)		Н	H Holding times for preparation or analysis exceeded		
J Estimated value detect	ed below Reporting	g Limit	N Analy	te not NELAC certified			R	RPD outside lim	its due to matrix	
Rpt Lim Reporting Limit			S Spike	Recovery outside limits	due to matrix					Page 18 of 19

**Client: ERM-Southeast Project Name:** 

Workorder:

AGLC Macon

1702O89

ANALYTICAL QC SUMMARY REPORT

Date:

9-Mar-17

BatchID: 238866

Sample ID: 1702O89-003AMS Client ID: MW-102-20170227-01 SampleType: MS TestCode: Volatile Organic Compounds by GC/MS SW8260B			SW8260B	Units: ug/L BatchID: 238866			Date: <b>03/02</b> lysis Date: <b>03/03</b>		Run No: <b>337705</b> Seq No: <b>7379070</b>	
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Benzene	46.83	5.0	50.00		93.7	71.6	132			
Гoluene	47.36	5.0	50.00		94.7	72.5	135			
Surr: 4-Bromofluorobenzene	47.73	0	50.00		95.5	66.1	129			
Surr: Dibromofluoromethane	47.92	0	50.00		95.8	83.6	123			
Surr: Toluene-d8	49.33	0	50.00		98.7	81.8	118			
Sample ID: 1702M33-008AMSD SampleType: MSD	Client ID: TestCode:	Volatile Organic Compo	ands by GC/MS	SW8260B	Uni Bat	its: <b>ug/L</b> chID: <b>238866</b>		Date: 03/02 lysis Date: 03/02		Run No: <b>337619</b> Seq No: <b>7377798</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Benzene	48310	5000	50000		96.6	71.6	132	49200	1.83	20.7
Toluene	48860	5000	50000		97.7	72.5	135	50590	3.48	23.2
Surr: 4-Bromofluorobenzene	47910	0	50000		95.8	66.1	129	47690	0	0
Surr: Dibromofluoromethane	50160	0	50000		100	83.6	123	50510	0	0
Surr: Toluene-d8	48660	0	50000		97.3	81.8	118	48260	0	0
Sample ID: 1702O89-003AMSD SampleType: MSD		MW-102-20170227- Volatile Organic Compo		SW8260B	Uni Bat	its: <b>ug/L</b> chID: <b>238866</b>	•	Date: <b>03/02</b> lysis Date: <b>03/03</b>		Run No: <b>337705</b> Seq No: <b>7379071</b>
Analyte	Result	RPT Limit	SPK value	SPK Ref Val	%REC	Low Limit	High Limit	RPD Ref Val	%RPD	RPD Limit Qual
Benzene	46.31	5.0	50.00		92.6	71.6	132	46.83	1.12	20.7
Coluene	46.67	5.0	50.00		93.3	72.5	135	47.36	1.47	23.2
Surr: 4-Bromofluorobenzene	47.65	0	50.00		95.3	66.1	129	47.73	0	0
Surr: Dibromofluoromethane	48.90	0	50.00		97.8	83.6	123	47.92	0	0
Surr: Toluene-d8	49.49	0	50.00		99.0	81.8	118	49.33	0	0

Qualifiers: Greater than Result value

> BRL Below reporting limit

Estimated value detected below Reporting Limit

Rpt Lim Reporting Limit

Less than Result value

E Estimated (value above quantitation range)

N Analyte not NELAC certified

S Spike Recovery outside limits due to matrix

B Analyte detected in the associated method blank

H Holding times for preparation or analysis exceeded

R RPD outside limits due to matrix

# **Data ValidationEvaluation**

Appendix E

Project No. 0366660 Atlanta Gas Light Company

# Appendix E - Data Validation Sample Submittals AGLC - Macon, Georgia February 21-28, 2017

Matrix	Sample ID	Laboratory ID
Water	AMW-2-20170221-01	1702K47-001
Water	AMW-12-20170221-01	1702K47-002
Water	AMW-6-20170221-01	1702K47-003
Water	AMW-14-20170221-01	1702K47-004
Water	MW-109-20170222-01	1702K47-008
Water	MW-205-20170222-01	1702K47-009
Water	MW-108-20170222-01	1702K47-010
Water	AMW-11-20170222-01	1702K47-011
Water	AMW-13-20170222-01	1702K47-012
Water	MW-8-20170222-01	1702K47-018
Water	TB-01-20170223-01	1702K47-022
Water	TB-02-20170223-01	1702K47-023
Water	TB-03-20170223-01	1702K47-024
Water	MW-101-20170223-01	1702M96-003
Water	AMW-15-20170223-01	1702M96-004
Water	MW-15-20170223-01	1702M96-005
Water	MW-400-20170223-01	1702M96-006
Water	DUP-01-20170223-01	1702M96-008
Water	DUP-02-20170223-01	1702M96-009
Water	DUP-03-20170223-01	1702M96-010
Water	MW-401-20170224-01	1702M96-022
Water	MW-103-20170224-01	1702M96-023
Water	MW-14-20170224-01	1702M96-024
Water	MW-12R-20170224-01	1702M96-026
Water	MW-104-20170224-01	1702M96-028
Water	TB-01-20170224-01	1702M96-029
Water	TB-02-20170224-01	1702M96-030
Water	TB-03-20170224-01	1702M96-031
Water	MW-21-20170227-01	1702O89-002
Water	MW-102-20170227-01	1702O89-003
Water	TB-01-20170228-01	1702O89-006

## Appendix E - Data Validation ERM Analytical Data Validation Checklist

Project Name: AGLC/Macon		La	boratory: Analytical	Environme	ntal Services, Inc.				
Project Reference: 0366660		Sa	Sample Matrix: Aqueous						
ERM Project Phase Number: 052		Sa	mple Start Date: 2/21	1/2017					
Date Validated: 4/11/2017			Sample End Date: 2/28/2017						
Sample Analyzed: Approximatel following samples within Order submittal summary above.									
MW-101-201	170223-01			DUP-01-20	170223-01				
AMW-15-20	170223-01			DUP-02-20	)170223-01				
MW-400-201	170223-01			DUP-03-20	)170223-01				
Parameters Analyzed: Volatile O disulfide) by SW-846 Method 826 Hydrocarbons by SW-846 Metho Laboratory Order No: 1702K47, 1	50B, Low 1 d 8270D	Level Semi-Vola							
,			MANCE AND CON	ADI ETENIE	CC ACCECCMENT				
PRECISION, ACCURAC	X	Acceptable	Unacceptable	JMM	Initials				
Comments: Laboratory precision matrix spike duplicates (MSDs). RPD is defined as the difference percent. Overall, laboratory and	Evaluatio: between t	n of duplicates v two duplicate sa	was done using the R mple results divided	delative Perc	cent Difference (RPD). The				
Accuracy:	Х	Acceptable	Unacceptable	JMM	Initials				
Comments: Accuracy is a measur spikes (MSs), LCSs, and surrogat									
Method Compliance:	X	Acceptable	Unacceptable	JMM	Initials				
Comments: Method compliance recoveries. Overall method comp		0	ing times, internal sta	andard reco	veries, and surrogate				
Completeness:	Х	Acceptable	Unacceptable	JMM	Initials				
Comments: Completeness is a pe data points. No data points were data validated, no data points we	rejected;	all data are usab	ole with some usable	_	=				

### Appendix E - Data Validation ERM Analytical Data Validation Checklist (Continued)

### **EVALUATION CRITERIA CHECK** Data validation flags used in this review only include those used by the laboratory: Below reporting limit Only bolded comments required qualification. The other comments are of interest, but qualification of the esults was not necessary. 1. Did the laboratory identify any nonconformances X Yes No IMM Initials related to the analytical results? Explanation: The laboratory identified the following nonconformance in the case narratives for the samples PAH Analysis by Method 8270D SIM: Oue to sample matrix, sample 1702M96-008B, 009B required dilution during preparation and/or analysis resulting in elevated reporting limits. 2. Were samples Chain-of Custody (COC) forms No JMM Initials Yes X complete? Comments: Collection time for sample 1702M96-028 was not listed. Sample was logged in using time on sample bottles 3. Were all the analyses requested for the samples on X Yes No IMM Initials the COCs completed by the laboratory? Comments: All analyses requested for the samples on the COCs were completed by the laboratory. 4. Were samples received in good condition and at Yes No IMM Initials appropriate temperature? Comments: Samples were received in good condition and at appropriate temperature. 5. Were the requested analytical methods in X Yes Nο IMM Initials compliance with WP/QAPP, permit, or COC? Comments: Requested analytical methods were in compliance with COC forms. Additionally, the test results in the validated report meet all NELAP requirements for parameters for which accreditation is required or available. 6. Were detection limits in accordance with Yes No IMM Initials WP/QAPP, permit, or method? Comments: Results were reported down to the practical quantitation limits. 7. Do the laboratory reports include only those constituents requested to be reported for a specific X Yes No IMM Initials analytical method? Comments: The laboratory reported the requested constituents. JMM 3. Were the sample holding times met? Yes No Initials Comments: All sample holding times were met. $\mathbf{x}$ JMM Initials 9. Were correct concentration units reported? No Comments: Organic results were reported in µg/L and inorganics in mg/L 10. Were the reporting requirements for flagged data No JMN. Initials met? Comments: No data was flagged during the February 2017 sampling event. 11. Were laboratory blank samples free of target No JMM Initials analyte contamination? Comments: Target analytes were not detected in blanks.

### Appendix E - Data Validation ERM Analytical Data Validation Checklist (Continued)

			`			
12. Were trip blank, field blank, and/or equipment rinse blank samples free of target analyte contamination?	x	Yes		No	JMM	Initials
Comments: Trip blanks were free of analytes.		•	•			
13. Were instrument calibrations within method control limits?	x	Yes		No	ЈММ	Initials
Comments: The initial calibrations were within contr	ol limits.					
14. Were surrogate recoveries within control limits?	X	Yes		No	JMM	Initials
Comments: Surrogate recoveries were within laborat	ory QC limi	its.				
15. Were laboratory control sample recoveries within control limits?	x	Yes		No	JMM	Initials
Comments: The LCS recoveries were within control l	imits.					
16. Were matrix spike recoveries within control limits?	x	Yes		No	JMM	Initials
Comments: All matrix spike recoveries were within o	control limit	s				
17. Were duplicate RPDs and/or serial dilution %Ds within control limits?	х	Yes		No	JMM	Initials
Comments: RPDs for MS/MSDs, laboratory duplicat compounds/analytes for the samples validated.	e samples a	nd LCS/LC	SDs met QC	C criteria for	all target	
18. Were organic system performance criteria met?	x	Yes		No	JMM	Initials
Comments: All GC/MS internal standards were with	in method	criteria for t	he samples	validated.		
19. Were internal standards within method criteria for GS/MS sample analyses?	x	Yes		No	JMM	Initials
Comments: All GC/MS internal standards were with	in method	criteria for t	he samples	validated.		
20. Were inorganic system performance criteria met?	NA	Yes	NA	No	JMM	Initials
Comments: Inorganic analyses were not performed						
21. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results.	x	Yes		No	JMM	Initials
Comments: The largest RPD vaule that was recorded naphthalene in MW-101/DUP-1. All other RPDs were		_	_	ne field dup	licates was	69% for
22. Were qualitative criteria for organic target analyte identification met?	х	Yes		No	JMM	Initials
Comments: All qualitative criteria for organic target a	analyte ider	ntification w	ere met.			
23. Were 100% of the EDD concentrations and reporting limits compared to the hardcopy data reports?	NA	Yes	NA	No	JMM	Initials
Comments: The EDD is not routinely reviewed as pa	rt of the dat	a validation	process.			

# Appendix E - Data Validation Field Duplicate Comparisons ACLC - Macon, Georgia February 21-28, 2017

Parameter	MW-101-20170223-	-01	DUP-01-20170223-	01	RPD(%)
Acenaphthene	1.4	μg/L	<50	μg/L	NC
Anthracene	0.22	ug/L	<5.0	ug/L	NC
Fluoranthene	0.12	ug/L	<10	ug/L	NC
Fluorene	1.7	μg/L	<10	μg/L	NC
Naphthalene	43	μg/L	21	ug/L	69
Phenanthrene	1.0	μg/L	<5.0	μg/L	NC
Pyrene	0.084	μg/L	<5.0	μg/L	NC

Parameter	AMW-15-2017022	23-01	DUP-02-20170223-	01	RPD(%)
Benzene	78	μg/L	80	μg/L	3
Ethylbenzene	14	μg/L	17	μg/L	19
Xylenes	10	μg/L	12	μg/L	18
Acenaphthylene	1.9	μg/L	<100	μg/L	NC
Acenaphthene	11	μg/L	10	μg/L	10
Anthracene	0.49	ug/L	<5.0	ug/L	NC
Fluoranthene	0.29	ug/L	<10	ug/L	NC
Fluorene	4.0	μg/L	<5.0	μg/L	NC
Naphthalene	12	μg/L	11	ug/L	9
Phenanthrene	3.2	μg/L	<5.0	μg/L	NC
Pyrene	0.2	μg/L	<5.0	μg/L	NC

Parameter	MW-400-20170223-03	1	DUP-03-20170223-01		RPD(%)
Anthracene	0.11	ug/L	0.12	ug/L	9
Fluoranthene	0.10	ug/L	<0.10	ug/L	NC
Naphthalene	0.56	μg/L	0.55	ug/L	2
Pyrene	0.14	μg/L	0.14	μg/L	0

## Appendix E - Data Validation Sample Submittals AGLC Macon February 21-28, 2017

Matrix	Sample ID	Laboratory ID
Water	MW-27D-20170221-01	1702K47-005
Water	MW-22D-20170221-01	1702K47-006
Water	MW-301D-20170221-01	1702K47-007
Water	MW-108D-20170222-01	1702K47-013
Water	MW-23D-20170222-01	1702K47-014
Water	MW-113D-20170222-01	1702K47-015
Water	MW-308D-20170222-01	1702K47-016
Water	MW-112D-20170222-01	1702K47-017
Water	MW-26D-20170222-01	1702K47-019
Water	MW-307D-20170222-01	1702K47-020
Water	MW-300D-20170222-01	1702K47-021
Water	TB-04-20170223-01	1702K47-025
Water	TB-05-20170223-01	1702K47-026
Water	TB-06-20170223-01	1702K47-027
Water	MW-207D-20170223-01	1702M96-001
Water	MW-302DD-20170223-01	1702M96-002
Water	MW-304D-20170223-01	1702M96-007
Water	MW-12DD-20170223-01	1702M96-011
Water	MW-110D-20170223-01	1702M96-012
Water	DUP-04-20170223-01	1702M96-013
Water	MW-14I-20170223-01	1702M96-014
Water	MW-12DRR-20170224-01	1702M96-015
Water	MW-200DR-20170224-01	1702M96-016
Water	MW-204D-20170224-01	1702M96-017
Water	MW-205D-20170224-01	1702M96-018
Water	MW-205DD-20170224-01	1702M96-019
Water	MW-302D-20170224-01	1702M96-020
Water	MW-306D-20170224-01	1702M96-021
Water	MW-12IR-20170224-01	1702M96-025
Water	DUP-05-20170224-01	1702M96-027
Water	TB-04-20170224-01	1702M96-032
Water	TB-05-20170224-01	1702M96-033
Water	TB-06-20170224-01	1702M96-034
Water	TB-07-20170224-01	1702M96-035
Water	MW-24D-20170228-01	1702O89-001
Water	MW-206D-20170227-01	1702O89-004
Water	MW-305D-20170227-01	1702O89-005
Water	TB-02-20170228-01	1702O89-007

### Appendix E - Data Validation ERM Analytical Data Validation Checklist

	LIXIVI A	mary mear Da	ita vai	idation Check	KIISt	
Project Name: AGLC/Macon			Labora	tory: Analytical	Environmen	ntal Services, Inc.
Project Reference: 0366660			Sample	e Matrix: Aqueou	1S	
ERM Project Phase Number: 052			Sample	e Start Date: 2/2	1/2017	
Date Validated: April 11, 2017				End Date: 2/28		
Sample Analyzed: Approximatel samples within Order No: 1702M summary above.			_			_
MW-110D-2	20170223-0	1			DUP-04-20	170223-01
MW-205D-2					DUP-05-20	
Parameters Analyzed: Volatile O disulfide) by SW-846 Method 826 Hydrocarbons by SW-846 Metho	60B, Low I	-				-
Laboratory Order No: 1702K47, 1		1702O89				
PRECISION, ACCUR.	ACY, MET	THOD CONFO	RMAN	ICE, AND COM	PLETENES	S ASSESSMENT
Precision:	x	Acceptable		Unacceptable	JMM	Initials
Comments: Laboratory precision matrix spike duplicates (MSDs). was done using the Relative Perc sample results divided by the macceptable.	Field samp ent Differ	pling precision ence (RPD). Th	was eva e RPD i	aluated using fie s defined as the	ld duplicate difference be	s. Evaluation of duplicates etween two duplicate
Accuracy:	х	Acceptable		Unacceptable	JMM	Initials
Comments: Accuracy is a measu: (MSs), LCSs, and surrogate recov						ng blanks, matrix spikes
Method Compliance:	х	Acceptable		Unacceptable	JMM	Initials
Comments: Method compliance recoveries. Overall method comp			ling tim	nes, internal stand	dard recover	ies, and surrogate
Completeness:	Х	Acceptable		Unacceptable	JMM	Initials
Comments: Completeness is a pe points. No data points were rejec validated, no data points were re	ted; all da	ta are usable w	rith som	e usable with qu		
	I	EVALUATION	CRITI	ERIA CHECK		
Data validation flags used in this	review or	nly include thos	se used	by the laborator	y:	
BRL Below reporting limit	:					
l I						

### Appendix E - Data Validation ERM Analytical Data Validation Checklist (Continued)

Only bolded comments required qualification. The results was not necessary.	other	comments ar	e of in	terest, but qua	alificati	ion of the
Did the laboratory identify any nonconformances related to the analytical results?	х	Yes		No		Initials
Explanation: The laboratory identified the following validated.	nonco	nformance ir	the ca	se narratives	for the	samples
Volatile Organic Compounds Analysis by Method 8260B dilution during preparation and/or analysis resulting in ellimits. One of the Trip Blank vials for TB-05-20170223-01 was receproceeded with analysis.	levated	reporting				
2. Were samples Chain-of Custody (COC) forms complete?	x	Yes		No	JMM	Initials
Comments: Chains-of-Custody were complete and comments	orrect;		l			
3. Were all the analyses requested for the samples on the COCs completed by the laboratory?	х	Yes		No	JMM	Initials
Comments: All analyses requested for the samples o	n the C	COCs were co	omplet	ed by the labo	oratory	
4. Were samples received in good condition and at appropriate temperature?		Yes	x	No	JMM	Initials
Comments: Samples were received in good condition trip blank vial for TB-05020170223-01 which was bro with analysis.						
5. Were the requested analytical methods in compliance with WP/QAPP, permit, or COC?	х	Yes		No	JMM	Initials
Comments: Requested analytical methods were in co in the validated report meet all NELAP requirements available.						
6. Were detection limits in accordance with WP/QAPP, permit, or method?	x	Yes		No	JMM	Initials
Comments: Results were reported down to the pract	ical qu	antitation lir	nits.			
7. Do the laboratory reports include only those constituents requested to be reported for a specific analytical method?	x	Yes		No	JMM	Initials
Comments: The laboratory reported the requested co	onstitu	ents.				
8. Were the sample holding times met?	X	Yes		No	JMM	Initials
Comments: All sample holding times were met.						
9. Were correct concentration units reported?	X	Yes	,,	No	JMM	Initials
Comments: Organic results were reported in µg/L at 10. Were the reporting requirements for flagged data met?	x	Yes	g/L	No	JMM	Initials
	v 2017	campling or	ont			
Comments: No data was flagged during the Februar  11. Were laboratory blank samples free of target  analyte contamination?	x	Yes	eiii.	No	JMM	Initials
Comments: Target analytes were not detected in blan	nks.	l	I	1	1	

### Appendix E - Data Validation ERM Analytical Data Validation Checklist (Continued)

contamination?  X Yes No JMM Initials Control limits?  X Yes No JMM Initials Comments: Trip blanks were free of analytes.  13. Were instrument calibrations within method control limits?  X Yes No JMM Initials Comments: The initial calibrations were within control limits.  14. Were surrogate recoveries were within control limits?  X Yes No JMM Initials Comments: Surrogate recoveries were within laboratory QC limits.  15. Were laboratory control sample recoveries X Yes No JMM Initials within control limits?  Comments: The LCS recoveries were within control limits.  16. Were matrix spike recoveries were within control limits.  17. Were duplicate RPDs and/or serial dilution X Yes No JMM Initials Comments: RPDs for MS/MSDs, laboratory duplicate samples and LCS/LCSDs met QC criteria for all target compounds/analytes for the samples validated.  18. Were organic system performance criteria met? X Yes No JMM Initials Comments: All GC/MS internal standards were within method criteria for the samples validated.  19. Were internal standards within method criteria for the samples validated.  20. Were internal standards within method criteria for the samples validated.  21. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results.  X Yes No JMM Initials  Comments: RPD's exceeded the 30% advisory limit for variation between primary and duplicate for the samples as bolded in following page  22. Were qualitative criteria for organic target X Yes No IMM Initials	ERWI Aliaiyukai Da	••• • •••			,		
13. Were instrument calibrations within method	12. Were trip blank, field blank, and/or equipment rinse blank samples free of target analyte contamination?	x	Yes		No	JMM	Initials
Comments: The initial calibrations were within control limits.  14. Were surrogate recoveries were within control limits?  15. Were laboratory control sample recoveries within control limits.  15. Were laboratory control sample recoveries within control limits.  16. Were matrix spike recoveries were within control limits.  16. Were matrix spike recoveries were within control limits.  16. Were matrix spike recoveries were within control limits.  17. Were duplicate RPDs and/or serial dilution X Yes No JMM Initials.  18. Were duplicate RPDs and/or serial dilution X Yes No JMM Initials.  18. Were organic system performance criteria met? X Yes No JMM Initials.  18. Were organic system performance criteria met? X Yes No JMM Initials.  19. Were internal standards within method criteria for the samples validated.  19. Were internal standards within method criteria for the samples validated.  20. Were internal standards within method criteria for the samples validated.  20. Were inorganic system performance criteria NA Yes NA No JMM Initials.  Comments: Inorganic analyses?  Comments: Inorganic analyses were not performed.  21. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results.  22. Were qualitative criteria for organic target A Yes No JMM Initials.  Comments: RPD's exceeded the 30% advisory limit for variation between primary and duplicate for the samples as bolded in following page  22. Were qualitative criteria for organic target A Yes No JMM Initials.  Comments: All qualitative criteria for organic target A Yes No JMM Initials reports?	Comments: Trip blanks were free of analytes.						
14. Were surrogate recoveries within control limits? X Yes No JMM Initials  Comments: Surrogate recoveries were within laboratory QC limits.  15. Were laboratory control sample recoveries X Yes No JMM Initials  Comments: The LCS recoveries were within control limits.  16. Were matrix spike recoveries were within control limits.  17. Were duplicate RPDs and/or serial dilution X Yes No JMM Initials  Tomments: All matrix spike recoveries were within control limits  Comments: RPDs for MS/MSDs, laboratory duplicate samples and LCS/LCSDs met QC criteria for all target compounds/ analytes for the samples validated.  18. Were organic system performance criteria met? X Yes No JMM Initials  Comments: All GC/MS internal standards were within method criteria for the samples validated.  19. Were internal standards within method criteria for the samples validated.  20. Were inorganic system performance criteria met? NA Yes NA No JMM Initials  Comments: All GC/MS internal standards were within method criteria for the samples validated.  20. Were inorganic system performance criteria met? NA Yes NA No JMM Initials  Comments: All GC/MS internal standards were within method criteria for the samples validated.  20. Were inorganic system performance criteria met? NA Yes NA No JMM Initials  Comments: All GC/MS internal standards were within method criteria for the samples validated.  21. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results.  22. Were plind field duplicates collected? If so, discuss the precision (RPD) of the results.  23. Were qualitative criteria for organic target analyte identification were met.  24. Were qualitative criteria for organic target analyte identification were met.	13. Were instrument calibrations within method control limits?	х	Yes		No	JMM	Initials
Comments: Surrogate recoveries were within laboratory QC limits.  15. Were laboratory control sample recoveries within control limits?  Comments: The LCS recoveries were within control limits.  16. Were matrix spike recoveries were within control limits.  16. Were matrix spike recoveries were within control limits.  17. Were duplicate RPDs and/or serial dilution	Comments: The initial calibrations were within conti	ol limits.	•			•	
Is. Were laboratory control sample recoveries within control limits?  Comments: The LCS recoveries were within control limits.  I6. Were matrix spike recoveries within control limits.  I6. Were matrix spike recoveries within control limits.  I6. Were matrix spike recoveries within control limits.  I7. Were duplicate RPDs and/or serial dilution	14. Were surrogate recoveries within control limits?	Х	Yes		No	JMM	Initials
within control limits?  A 1es No JMM Initials  Comments: The LCS recoveries were within control limits.  16. Were matrix spike recoveries within control limits.  17. Were duplicate RPDs and/or serial dilution X Yes No JMM Initials  Comments: All matrix spike recoveries were within control limits  17. Were duplicate RPDs and/or serial dilution X Yes No JMM Initials  Comments: RPDs for MS/MSDs, laboratory duplicate samples and LCS/LCSDs met QC criteria for all target compounds/analytes for the samples validated.  18. Were organic system performance criteria met? X Yes No JMM Initials  Comments: All GC/MS internal standards were within method criteria for the samples validated.  19. Were internal standards within method criteria for the samples validated.  20. Were internal standards were within method criteria for the samples validated.  20. Were inorganic system performance criteria MA Yes NA No JMM Initials  Comments: All GC/MS internal standards were within method criteria for the samples validated.  20. Were inorganic system performance criteria MA Yes NA No JMM Initials  Comments: RID's exceeded the 30% advisory limit for variation between primary and duplicate for the samples as bolded in following page  22. Were qualitative criteria for organic target A Yes No JMM Initials  Comments: All qualitative criteria for organic target analyte identification were met.  23. Were 100% of the EDD concentrations and reporting limits compared to the hardcopy data reports?  NA Yes NA No JMM Initials	Comments: Surrogate recoveries were within laborate	tory QC lim	its.				
Initials  Comments: All matrix spike recoveries were within control limits  17. Were duplicate RPDs and/or serial dilution	15. Were laboratory control sample recoveries within control limits?	x	Yes		No	JMM	Initials
limits?  Comments: All matrix spike recoveries were within control limits  17. Were duplicate RPDs and/or serial dilution	Comments: The LCS recoveries were within control	limits.					
17. Were duplicate RPDs and/or serial dilution	16. Were matrix spike recoveries within control limits?	х	Yes		No	JMM	Initials
%Ds within control limits?  X Yes No JMM Initials  Comments: RPDs for MS/MSDs, laboratory duplicate samples and LCS/LCSDs met QC criteria for all target compounds/analytes for the samples validated.  18. Were organic system performance criteria met? X Yes No JMM Initials  Comments: All GC/MS internal standards were within method criteria for the samples validated.  19. Were internal standards within method criteria for GS/MS sample analyses?  Comments: All GC/MS internal standards were within method criteria for the samples validated.  20. Were inorganic system performance criteria NA Yes NA No JMM Initials  Comments: Inorganic analyses were not performed.  21. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results.  X Yes No JMM Initials  Comments: RPD's exceeded the 30% advisory limit for variation between primary and duplicate for the samples as bolded in following page  22. Were qualitative criteria for organic target X Yes No JMM Initials  Comments: All qualitative criteria for organic target analyte identification were met.  23. Were 100% of the EDD concentrations and reporting limits compared to the hardcopy data reports?  NA Yes NA No JMM Initials	Comments: All matrix spike recoveries were within o	control limi	ts				
compounds/analytes for the samples validated.  18. Were organic system performance criteria met?		х	Yes		No	JMM	Initials
Comments: All GC/MS internal standards were within method criteria for the samples validated.  19. Were internal standards within method criteria for GS/MS sample analyses?  Comments: All GC/MS internal standards were within method criteria for the samples validated.  20. Were inorganic system performance criteria NA Yes NA No JMM Initials  Comments: Inorganic analyses were not performed.  21. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results.  X Yes No JMM Initials  Comments: RPD's exceeded the 30% advisory limit for variation between primary and duplicate for the samples as bolded in following page  22. Were qualitative criteria for organic target analyte identification were met.  23. Were 100% of the EDD concentrations and reporting limits compared to the hardcopy data reports?  NA Yes NA No JMM Initials	Comments: RPDs for MS/MSDs, laboratory duplicat compounds/analytes for the samples validated.	e samples a	nd LCS/LC	CSDs met Q	C criteria fo	r all target	
19. Were internal standards within method criteria for GS/MS sample analyses?  Comments: All GC/MS internal standards were within method criteria for the samples validated.  20. Were inorganic system performance criteria met?  NA Yes NA No JMM Initials  Comments: Inorganic analyses were not performed.  21. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results.  X Yes No JMM Initials  Comments: RPD's exceeded the 30% advisory limit for variation between primary and duplicate for the samples as bolded in following page  22. Were qualitative criteria for organic target analyte identification were met.  23. Were 100% of the EDD concentrations and reporting limits compared to the hardcopy data reports?  NA Yes NA No JMM Initials		l .				JMM	Initials
for GS/MS sample analyses?  Comments: All GC/MS internal standards were within method criteria for the samples validated.  20. Were inorganic system performance criteria NA Yes NA No JMM Initials met?  NA Yes NA No JMM Initials  Comments: Inorganic analyses were not performed.  21. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results.  X Yes No JMM Initials  Comments: RPD's exceeded the 30% advisory limit for variation between primary and duplicate for the samples as bolded in following page  22. Were qualitative criteria for organic target analyte identification met?  X Yes No JMM Initials  Comments: All qualitative criteria for organic target analyte identification were met.  23. Were 100% of the EDD concentrations and reporting limits compared to the hardcopy data reports?	Comments: All GC/MS internal standards were with	nin method	criteria for	the samples	validated.	ı	
20. Were inorganic system performance criteria net?  NA Yes NA No JMM Initials  Comments: Inorganic analyses were not performed.  21. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results.  X Yes No JMM Initials  Comments: RPD's exceeded the 30% advisory limit for variation between primary and duplicate for the samples as bolded in following page  22. Were qualitative criteria for organic target analyte identification met?  X Yes No JMM Initials  Comments: All qualitative criteria for organic target analyte identification were met.  23. Were 100% of the EDD concentrations and reporting limits compared to the hardcopy data reports?  NA Yes NA No JMM Initials	19. Were internal standards within method criteria for GS/MS sample analyses?	x	Yes		No	JMM	Initials
met?  Comments: Inorganic analyses were not performed.  21. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results.  X Yes No JMM Initials  Comments: RPD's exceeded the 30% advisory limit for variation between primary and duplicate for the samples as bolded in following page  22. Were qualitative criteria for organic target analyte identification met?  X Yes No JMM Initials  Comments: All qualitative criteria for organic target analyte identification were met.  23. Were 100% of the EDD concentrations and reporting limits compared to the hardcopy data reports?  NA NO JMM Initials	Comments: All GC/MS internal standards were with	nin method	criteria for	the samples	validated.		
21. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results.  X Yes No JMM Initials  Comments: RPD's exceeded the 30% advisory limit for variation between primary and duplicate for the samples as bolded in following page  22. Were qualitative criteria for organic target analyte identification met?  X Yes No JMM Initials  Comments: All qualitative criteria for organic target analyte identification were met.  23. Were 100% of the EDD concentrations and reporting limits compared to the hardcopy data reports?  NA Yes NA No JMM Initials	20. Were inorganic system performance criteria met?	NA	Yes	NA	No	JMM	Initials
discuss the precision (RPD) of the results.  A Yes NO JMM Imitials  Comments: RPD's exceeded the 30% advisory limit for variation between primary and duplicate for the samples as bolded in following page  22. Were qualitative criteria for organic target analyte identification met?  Comments: All qualitative criteria for organic target analyte identification were met.  23. Were 100% of the EDD concentrations and reporting limits compared to the hardcopy data reports?  NA Yes NA NO JMM Initials	Comments: Inorganic analyses were not performed.						
in following page  22. Were qualitative criteria for organic target analyte identification met?  Comments: All qualitative criteria for organic target analyte identification were met.  23. Were 100% of the EDD concentrations and reporting limits compared to the hardcopy data reports?  NA Yes NA No JMM Initials	21. Were blind field duplicates collected? If so, discuss the precision (RPD) of the results.	x	Yes		No	JMM	Initials
analyte identification met?  Comments: All qualitative criteria for organic target analyte identification were met.  23. Were 100% of the EDD concentrations and reporting limits compared to the hardcopy data reports?  NA Yes NA No JMM Initials	Comments: RPD's exceeded the 30% advisory limit fi in following page	or variation	between p	rimary and o	duplicate fo	or the sampl	es as bolded
23. Were 100% of the EDD concentrations and reporting limits compared to the hardcopy data reports?  NA Yes NA No JMM Initials	22. Were qualitative criteria for organic target analyte identification met?	х	Yes		No	JMM	Initials
reporting limits compared to the hardcopy data reports?	Comments: All qualitative criteria for organic target	analyte idei	ntification v	vere met.			
Comments: The EDD is not routinely reviewed as part of the data validation process.	reporting limits compared to the hardcopy data	NA	Yes	NA	No	JMM	Initials
	Comments: The EDD is not routinely reviewed as pa	rt of the da	ta validatio	n process.			

# Appendix E - Data Validation Field Duplicate Comparisons ACLC - Macon, Georgia February 21-28, 2017

Parameter	MW-110D-20170	223-01	DUP-04-201702	23-01	RPD(%)
Benzene	70	ug/L	63	ug/L	11
Ethylbenzene	150	μg/L	160	μg/L	6
Xyenes, Total	5.7	ug/L	6.0	ug/L	5
Acenaphthene	46	μg/L	55	μg/L	18
Acenaphthylene	1.9	μg/L	1.8	μg/L	5
Anthracene	6.2	ug/L	5.5	ug/L	12
Benzo(a)anthracene	0.20	ug/L	0.17	ug/L	16
Chrysene	0.16	ug/L	0.14	ug/L	13
Fluoranthene	4.5	ug/L	4.1	ug/L	9
Fluorene	15	μg/L	19	μg/L	24
Naphthalene	760	μg/L	1100	ug/L	37
Phenanthrene	26	μg/L	32	μg/L	21
Pyrene	5.6	μg/L	5.1	μg/L	9

Parameter	MW-205D-201702	24-01	DUP-05-20170224	-01	RPD(%)
Benzene	4300	ug/L	4300	ug/L	0
Ethylbenzene	860	μg/L	950	μg/L	10
Toluene	12	μg/L	14	μg/L	15
Xyenes, Total	580	ug/L	420	ug/L	32
Acenaphthene	120	μg/L	140	μg/L	15
Acenaphthylene	1.4	μg/L	<1.0	μg/L	NC
Anthracene	5.3	ug/L	4.9	ug/L	8
Fluoranthene	1.6	ug/L	1.6	ug/L	0
Fluorene	29	μg/L	34	μg/L	16
Naphthalene	3400	μg/L	3700	ug/L	8
Phenanthrene	31	μg/L	37	μg/L	18
Pyrene	1.7	μg/L	1.5	μg/L	13

# **Historical Data Summary (CD ONLY)**

Appendix F

Project No. 0366660 Atlanta Gas Light Company

	ı	ı						ΔΙ	MW-1 (Abandon	ed)				
Parameter	Units	Type 2 RRS	Type 4 RRS	04/28/15	08/05/13	02/04/13	11/05/12	08/06/12	05/14/12	02/08/12	11/15/11	08/09/11	05/02/11	02/17/11
Field Groundwater Quality	Parameters	•								•		•		
рН	SU	N/A	N/A	5.96	6.58	6.15	6.23	5.92	6.21	6.10	6.38	6.46	6.52	6.90
Specific Conductance	μS/cm	N/A	N/A	944	1371	581	524	605	584	496	593	597	655	589
Temperature	°Celsius	N/A	N/A	21.15	27.21	15.66	22.66	26.50	22.67	21.37	24.40	27.69	21.87	21.53
Dissolved Oxygen (YSI)	mg/L	N/A	N/A	0.67	0.18	0.20	1.40	1.16	0.38	1.35	0.76	0.32	0.22	0.08
ORP	mV	N/A	N/A	-42.5	160.5	129.5	25.0	36.0	25.9	54.4	-68.2	126.9	-364.1	-490.3
Turbidity	NTU	N/A	N/A	27.5	7.41	4.97	10.38	284	17.4	23	864	790	234	74
Laboratory Results - Natur	1													
Nitrogen, Nitrate	mg/L	N/A	N/A		-	< 0.050				0.75				< 0.050
Sulfate	mg/L	N/A	N/A	-	-	95		-		62				23
Sulfide	mg/L	N/A	N/A	-	-	< 1.0		-		1.5				< 1.0
Ferrous Iron	mg/L	N/A	N/A		-	0.47 HF				< 0.10 HF				2.2 HF
Total Iron	mg/L	N/A	N/A		-	1.2				4.2				14
Carbon Dioxide	mg/L	N/A	N/A	-	-	120		-		2.1				0.67
Methane	mg/L	N/A	N/A		-	1.3				< 0.58				430
Dissolved Nitrogen	mg/L	N/A	N/A		-	15				5.5				4.5
Dissolved Oxygen	mg/L	N/A	N/A		-	5.1				1.8				1.5
Laboratory Results - Orga	nic Constituents													
Volatile Organic Compounds	3						<u> </u>							
Benzene	μg/L	5*	9	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	22	51	170	300
Carbon Disulfide	μg/L	329	1,700	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 5.0					
Ethylbenzene	μg/L	700*	2,300	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	11	10	34	42
Toluene	μg/L	1,000*	1,100	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 10	< 10
Total Xylenes	μg/L	31,000	200,000	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	17	26
Semivolatile Organic Compo	ounds													
Acenaphthene	μg/L	2,000*	6,100	< 10	< 10	< 0.23	0.28	1.1	1.7					
Acenaphthylene	μg/L	470	3,100	< 10	< 10	< 0.23	< 0.21	< 0.19	< 0.19					
Anthracene	μg/L	4,700	31,000	< 10	< 10	< 0.23	< 0.21	< 0.19	< 0.19					
Benzo[a]anthracene	μg/L	1.17	3.92	< 0.050	< 0.20	< 0.23	< 0.21	< 0.19	< 0.19					
Benzo[a]pyrene	μg/L	0.2*	0.39	< 0.050	< 0.20	< 0.23	< 0.21	< 0.19	< 0.19					
Benzo[b]fluoranthene	μg/L	1.17	3.92	< 0.10	< 0.20	< 0.23	< 0.21	< 0.19	< 0.19		-			
Benzo[g,h,i]perylene	μg/L	10	10	< 10	< 10	< 0.23	< 0.21	< 0.19	< 0.19		-			
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 10	< 10	< 0.23	< 0.21	< 0.19	< 0.19					
Chrysene	μg/L	117	392	< 10	< 10	< 0.23	< 0.21	< 0.19	< 0.19					
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	< 0.10	< 0.20	< 0.23	< 0.21	< 0.19	< 0.19					
2,4-Dimethylphenol	μg/L	700*	700*	< 10	< 10	< 2.3	< 2.1	< 1.9	< 1.9		-			
Fluoranthene	μg/L	1,000*	4,100	< 10	< 10	< 0.23	< 0.21	< 0.19	< 0.19					
Fluorene	μg/L	1,000*	4,100	< 10	< 10	< 0.23	0.65	0.59	0.33					
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.050	< 0.20	< 0.23	< 0.21	< 0.19	< 0.19					
2-Methylphenol	μg/L	780	5,100	< 10	< 10	< 2.3	< 2.1	< 1.9	< 1.9					
3 & 4 Methylphenol	μg/L	78	510	< 10	< 10	< 2.3	< 2.1	< 1.9	< 1.9					
Naphthalene	μg/L	20*	20*	< 10	< 10	< 0.23	< 0.21	< 0.19	< 0.19	< 5.0	< 5.0	< 5.0 *	62	110
Phenanthrene	μg/L	470	3,100	< 10	< 10	< 0.23	< 0.21	< 0.19	< 0.19					
Phenol	μg/L	9,390	61,000	< 10	< 10	< 1.2	< 1.1	< 0.19	< 0.19					
Pyrene	μg/L	1,000*	3,100	< 10	< 10	< 0.23	0.22	0.26	< 0.96					
Laboratory Results - Inorg				-				-		•		•		
Antimony	μg/L	6.3	400	< 20	< 20	< 20	< 20	< 20	< 20					
Arsenic	μg/L	50*	50*	< 50	< 50	< 20	< 20	< 20	< 20					
Barium	µg/L	2,000	7,200	59.6	105	75	95	120	10	94	230	140	190	170
Beryllium	μg/L	31	200	< 10	< 10	< 4.0	< 4.0	< 4.0	< 4.0					
Cadmium	μg/L	7.8	51	< 5	< 5	< 5.0	< 5.0	< 5.0	< 5.0					
Chromium	μg/L	100	310	< 10	< 10	< 10	< 10	13	< 10	< 10	22	< 10	< 10	< 10
Copper	μg/L	630	4,100	< 10	< 10	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Lead	µg/L	15*	15*	< 10	< 10	< 10	< 10	< 10	< 10	< 10	23	< 10	< 10	< 10
Nickel	μg/L	100	2,000	< 20	< 20	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40
Zinc	μg/L	4,700	31,000	< 20	< 20	< 20	< 20	20	21					
Mercury	μg/L	2*	2*	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20					
Total Cyanide	μg/L	310	2,000	< 0.10	35	< 10	< 10	< 10	< 10	< 10	-			< 10
Notes:														

Notes:

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Stamdard Units

μS/cm - microsiemens per centimeter

μg/L - micrograms per liter

mg/L - milligrams per liter

mV - millivolts

NTU - nephelometric turbidity units

N/A - RRS are not applicable to this parameter

- Not Analyzed

- Not Analyzed

HF - Holding time of 15 minutes was exceeded

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

4th Semiannual Progress Report May 2017

Field Groundwater Quality DH Specific Conductance		Type 2 RRS	Type 4 RRS	02/21/17	08/23/16	04/27/15	08/05/13	02/04/13	11/05/12	AMW-2 08/06/12	05/14/12	02/07/12	11/15/11	08/09/11	05/02/11	02/16/
														_		
•	SU	N/A	N/A	6.48	6.24	5.92	6.52	6.30	5.96	5.36	6.00	5.99	6.02	5.74	5.84	5.98
omnoraturo	μS/cm	N/A	N/A	202.37	258.2	309	352	401	502	492	403	388	544	717	507	414
emperature	°Celsius	N/A	N/A	18.85	21.28	20.57	25.48	18.26	23.57	28.97	24.27	20.89	22.06	25.39	20.39	18.1
issolved Oxygen (YSI)	mg/L	N/A	N/A	2.81	0.43	2.25	0.41	3.40	0.34	1.51	0.33	0.56	0.61	1.65	0.38	1.8
PRP urbidity	mV NTU	N/A N/A	N/A N/A	111.74 2.33	-22.0 4.45	-39.3 3.42	130.9 0.99	106.6 5.90	52.9 4.41	48.6 6.39	-8.3 1.81	-47.9 20.8	150.8 9.77	147.0 290	-55.1 8.31	61. 9.7
,			IV/A	2.33	4.45	3.42	0.99	5.90	4.41	0.39	1.01	20.8	9.77	290	0.31	9.7
aboratory Results - Natur litrogen, Nitrate	mg/L	N/A	N/A					4.0	1			1.3		T	1	4.
Sulfate	mg/L	N/A	N/A		-			60				65				10
Sulfide	mg/L	N/A	N/A					< 1.0				< 1.0				< 1
errous Iron	mg/L	N/A	N/A					2.3 HF				21 HF				7.4
otal Iron	mg/L	N/A	N/A		-			4.2	-			25				8.
Carbon Dioxide	mg/L	N/A	N/A		-			97	-			1.7				1.
Methane	mg/L	N/A	N/A		-	-		17				39				30
Dissolved Nitrogen	mg/L	N/A	N/A		-			18				4.9				4.
issolved Oxygen	mg/L	N/A	N/A		-			6.2				1.5				1.
aboratory Results - Organ	3					I.		V	I					l .	1	<del></del>
olatile Organic Compounds																
enzene	μg/L	5*	9	<5.0	<5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5
arbon Disulfide	μg/L	329	1,700	<5.0	<5.0 <5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 5.0	< 5.0	< 5.0 	< 5.0	< 5.0	
thylbenzene	μg/L	700*	2,300	<5.0	<5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5
oluene	μg/L	1,000*	1,100	<5.0 <5.0	<5.0 <5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5
otal Xvlenes	μg/L	31,000	200,000	<5.0	<5.0 <5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5
emivolatile Organic Compo		31,000	200,000	₹3.0	₹3.0	₹ 3.0	₹ 3.0	₹ 2.0	₹ 2.0	₹ 2.0	₹ 5.0	₹ 3.0	₹ 3.0	₹ 5.0	₹ 3.0	
cenaphthene	μg/L	2,000*	6,100	< 0.50	<0.50	< 10	< 10	2.8	4.2	8.4	12			I		_
cenaphthylene	μg/L	470	3,100	< 1.0	<1.0	< 10	< 10	0.29	0.52	0.97	1.2					1 -
nthracene	μg/L	4,700	31,000	< 0.050	<0.050	< 10	< 10	< 0.22	< 0.22	< 0.20	< 0.22					1 -
enzo[a]anthracene	μg/L	1.17	3,92	0.19	<0.050	< 0.050	< 0.20	< 0.22	< 0.22	< 0.20	< 0.22					-
enzo[a]pyrene	μg/L	0.2*	0.39	0.12	<0.050	< 0.050	< 0.20	< 0.22	< 0.22	< 0.20	< 0.22					-
enzo[b]fluoranthene	μg/L	1.17	3.92	0.14	<0.10	< 0.10	< 0.20	< 0.22	< 0.22	< 0.20	< 0.22					
enzo[g,h,i]perylene	μg/L	10	10	0.15	<0.10	< 10	< 10	< 0.22	< 0.22	< 0.20	< 0.22					-
enzo[k]fluoranthene	μg/L	11.7	39.2	0.14	<0.050	< 10	< 10	< 0.22	< 0.22	< 0.20	< 0.22					-
hrvsene	μg/L	117	392	0.20	<0.050	< 10	< 10	< 0.22	< 0.22	< 0.20	< 0.22					<del>                                     </del>
ibenz(a,h)anthracene	μg/L	0.3*	0.39	0.11	<0.10	< 0.10	< 0.20	< 0.22	< 0.22	< 0.20	< 0.22					<del>                                     </del>
,4-Dimethylphenol	μg/L	700*	700*	< 10	<10	< 10	< 10	< 2.2	< 2.2	< 2.0	< 0.22					_
luoranthene	μg/L	1,000*	4,100	< 0.10	<0.10	< 10	< 10	< 0.22	0.38	0.49	< 2.2					
luorene	μg/L	1,000*	4,100	< 0.10	<0.10	< 10	< 10	0.74	1.1	2.6	0.33					
ndeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	0.13	< 0.050	< 0.050	< 0.20	< 0.22	< 0.22	< 0.20	< 0.22					-
-Methylphenol	μg/L	780	5,100	< 10	<10	< 10	< 10	< 2.2	< 2.2	< 2.0	< 2.2					
	μg/L	78	510	< 10	<10	< 10	< 10	< 2.2	< 2.2	< 2.0	< 2.2					-
,		20*	20*	< 0.50	< 0.50	< 10	< 10	< 0.22	< 0.22	< 0.20	< 0.22	< 5.0	< 5.0	< 5.0	< 5.0	< 5
& 4 Methylphenol	μq/L															
& 4 Methylphenol	μg/L μg/L	470	3,100	< 0.050	< 0.050	< 10	< 10	< 0.22	< 0.22	< 0.20	< 0.22					
& 4 Methylphenol aphthalene	μg/L	470	3,100	< 0.050 < 10	<0.050 <10	< 10 < 10		< 0.22 < 1.1	< 0.22 < 1.1	< 0.20 < 0.98	< 0.22 < 1.1					
& 4 Methylphenol aphthalene henanthrene henol	μg/L μg/L			< 10	<10	< 10	< 10	< 1.1	< 1.1	< 0.98	< 1.1					-
& 4 Methylphenol aphthalene henanthrene henol yrene	μg/L μg/L μg/L μg/L	470 9,390 1,000*	3,100 61,000													-
& 4 Methylphenol aphthalene henanthrene henol yrene aboratory Results - Inorg	μg/L μg/L μg/L ganic Constituer	470 9,390 1,000*	3,100 61,000 3,100	< 10	<10 <0.050	< 10 < 10	< 10 < 10	< 1.1 <b>0.25</b>	< 1.1 0.87	< 0.98 <b>0.73</b>	< 1.1 1.4					-
& 4 Methylphenol aphthalene henanthrene henol yrene aboratory Results - Inorgantimony	μg/L μg/L μg/L μg/L ganic Constituer μg/L	470 9,390 1,000* hts	3,100 61,000 3,100	< 10 <b>0.052</b>	<10 <0.050	< 10 < 10	< 10 < 10	< 1.1 <b>0.25</b> < 20	< 1.1 <b>0.87</b> < 20	< 0.98 <b>0.73</b> < 20	< 1.1 1.4 < 20					-
& 4 Methylphenol aphthalene henanthrene henol yrene aboratory Results - Inorgintimony rsenic	μg/L μg/L μg/L pg/L panic Constituer μg/L μg/L	470 9,390 1,000* hts 6.3 50*	3,100 61,000 3,100 400 50*	< 10 <b>0.052</b>	<10 <0.050 < 20 < 50	< 10 < 10 < 20 < 50	< 10 < 10 < 20 < 50	< 1.1 0.25 < 20 < 20	< 1.1 0.87 < 20 < 20	< 0.98 <b>0.73</b>	< 1.1 1.4 < 20 < 20		  			-
& 4 Methylphenol aphthalene henanthrene henol yrene aboratory Results - Inorgintimony rsenic arium	μg/L μg/L μg/L ganic Constituer μg/L μg/L μg/L	470 9,390 1,000* hts	3,100 61,000 3,100	< 10 0.052	<10 <0.050 < 20 < 50 104	< 10 < 10 < 20 < 50 111	< 10 < 10 < 20 < 50 125	< 1.1 <b>0.25</b> < 20	< 1.1 0.87 < 20 < 20 66	< 0.98 0.73 < 20 < 20	< 1.1 1.4 < 20					- - - - 5
& 4 Methylphenol aphthalene henanthrene henol yrene aboratory Results - Inorgi ntimony resenic arium eryllium	µg/L µg/L µg/L yaric Constituer µg/L µg/L µg/L µg/L	470 9,390 1,000* hts 6.3 50* 2,000	3,100 61,000 3,100 400 50* 7,200	< 10 0.052  	<10 <0.050 < 20 < 50 104 <10	< 10 < 10 < 20 < 50	< 10 < 10 < 20 < 50 125 < 10	< 1.1 0.25 < 20 < 20 76 < 4.0	< 1.1 0.87 < 20 < 20 66 < 4.0	< 0.98 0.73 < 20 < 20 64 < 4.0	< 1.1 1.4 < 20 < 20 51 < 4.0	   48	   61	   39	    54	- - - - 5
& 4 Methylphenol aphthalene henanthrene henol yrene aboratory Results - Inorg ntimony rsenic arium eryllium admium	µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L	470 9,390 1,000* hts 6.3 50* 2,000 31	3,100 61,000 3,100 400 50* 7,200 200	< 10 0.052	<10 <0.050 < 20 < 50 104	< 10 < 10 < 20 < 50 111 < 10	< 10 < 10 < 20 < 50 125	< 1.1 0.25 < 20 < 20 76	< 1.1 0.87 < 20 < 20 66	< 0.98 0.73 < 20 < 20 64	< 1.1 1.4 < 20 < 20 51	   48	   61	   39	   54	- - - - 5
& 4 Methylphenol aphthalene henanthrene henol yrene aboratory Results - Inorg ntimony rsenic arium eryllium admium hromium	µg/L µg/L µg/L  pg/L  pg/L  µg/L	470 9,390 1,000* tts 6.3 50* 2,000 31 7.8	3,100 61,000 3,100 400 50* 7,200 200 51	< 10 0.052	<10 <0.050 < 20 < 50 104 <10 5.3	< 10 < 10 < 20 < 50 111 < 10 7.0	< 10 < 10 < 20 < 50 125 < 10 13.9	< 1.1 0.25 < 20 < 20 76 < 4.0 < 5.0 < 10	< 1.1 0.87 < 20 < 20 66 < 4.0 < 5.0	< 0.98 0.73 < 20 < 20 64 < 4.0 < 5.0	< 1.1 1.4 < 20 < 20 < 20 51 < 4.0 < 5.0	   48 	   61 	   39 	   54  < 10	55
& 4 Methylphenol aphthalene henanthrene henol yrene aboratory Results - Inorg ntimony rsenic arium eryllium admium hromium opper	µg/L µg/L µg/L yg/L yg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L	470 9,390 1,000* ts 6.3 50* 2,000 31 7.8 100	3,100 61,000 3,100 400 50* 7,200 200 51 310	<10 0.052	<10 <0.050 < 20 < 50 104 <10 5.3 < 10	<10 <10 <20 <50 111 <10 7.0 <10	< 10 < 10 < 20 < 50 125 < 10 13.9 < 10	< 1.1 0.25 < 20 < 20 76 < 4.0 < 5.0	< 1.1 0.87 < 20 < 20 66 < 4.0 < 5.0 < 10	< 0.98 0.73 < 20 < 20 64 < 4.0 < 5.0 < 10	< 1.1 1.4 < 20 < 20 51 < 4.0 < 5.0 < 10	   48   < 10	   61   < 10	   39   < 10	    54	55
& 4 Methylphenol aphthalene henanthrene henol yrene aboratory Results - Inorg ntimony rrsenic arium eryllium admium hromium opper pad	µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L	470 9,390 1,000* ts 6.3 50* 2,000 31 7.8 100 630	3,100 61,000 3,100 400 50° 7,200 200 51 310 4,100	<10 0.052	<10 <0.050 < 20 < 50 104 <10 5.3 < 10 < 10	< 10 < 10 < 20 < 50 111 < 10 7.0 < 10 < 10	< 10 < 10 < 20 < 50 125 < 10 13.9 < 10 < 10	< 1.1  0.25  < 20 < 20 76 < 4.0 < 5.0 < 10 < 20	< 1.1 0.87  < 20 < 20 66 < 4.0 < 5.0 < 10 < 20	< 0.98 0.73  < 20 < 20 64 < 4.0 < 5.0 < 10 < 20	< 1.1 1.4 < 20 < 20 < 20 51 < 4.0 < 5.0 < 10 < 20	  48  < 10 < 20	    61   < 10 < 20	   39  < 10 < 20	   54  < 10 < 20	55
& 4 Methylphenol aphthalene henanthrene	µg/L µg/L µg/L yg/L yg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L µg/L	470 9,390 1,000* tts 6.3 50* 2,000 31 7.8 100 630 15*	3,100 61,000 3,100 400 50° 7,200 200 51 310 4,100 15°	<10 0.052	<10 <0.050  < 20 < 50 104 <10 5.3 < 10 < 10 < 10 < 10	<10 <10 <10 <20 <50 111 <10 7.0 <10 <10 <10 <10	< 10 < 10 < 20 < 50 125 < 10 13.9 < 10 < 10 < 10	< 1.1 0.25  < 20 < 20 76 < 4.0 < 5.0 < 10 < 20 < 10	<1.1 0.87  < 20 < 20 < 66 < 4.0 < 5.0 < 10 < 20 < 10	< 0.98 0.73  < 20 < 20 64 < 4.0 < 5.0 < 10 < 20 < 10	< 1.1 1.4  < 20 < 20 < 20 51 < 4.0 < 5.0 < 10 < 20 < 10	   48   < 10 < 20 < 10		  39   < 10 < 20 < 10	    54   < 10 < 20 < 10	
& 4 Methylphenol aphthalene henanthrene henol yrene aboratory Results - Inorg ntimony rsenic arrium eryllium admium hromium opper aad ickel	pg/L pg/L pg/L pg/L pg/L pg/L pg/L pg/L	470 9,390 1,000* ts 6.3 50* 2,000 31 7.8 100 630 15* 100	3,100 61,000 3,100 400 50° 7,200 200 51 310 4,100 15° 2,000	<10 0.052	<10 <0.050  < 20 < 50 104 <10 5.3 < 10 < 10 < 10 < 20 < 10 < 20	<10 <10 <10 <20 <50 111 <10 7.0 <10 <10 <10 <20	< 10 < 10 < 20 < 50 125 < 10 13.9 < 10 < 10 < 10 < 20	< 1.1  0.25  < 20 < 20  76 < 4.0 < 5.0 < 10 < 20 < 10 < 40	< 1.1     0.87     < 20     < 20     66     < 4.0     < 5.0     < 10     < 20     < 40     < 40     < 40     < 40     < 40     < 40     < 40     < 40     < 40     < 40     < 40     < 40     < 40     < 40     < 40     < 40     < 40     < 40     < 40	< 0.98 0.73 < 20 < 20 64 < 4.0 < 5.0 < 10 < 20 < 40 < 4.0	< 1.1 1.4  < 20 < 20 51 < 4.0 < 5.0 < 10 < 20 < 10 < 40	  48   < 10 < 10 < 40	61 <10 <20 <10 <40			

mg/L - milligrams per liter
mV - milliovolts
NTU - nephelometric turbidity units
NIA - RRS are not applicable to this parameter
-- Not Analyzed
HF - Holding time of 15 minutes was exceeded
Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

4th Semiannual Progress Report May 2017 ERM

			1						A BANA/ 2 /A	bandoned)					
Parameter	Units	Type 2 RRS	Type 4 RRS	08/05/13	02/11/13	02/13 DUP	11/05/12	08/06/12	05/15/12	05/12 DUP	02/07/12	11/17/11	08/10/11	05/03/11	02/17/11
Field Groundwater Quality	Parameters														
pH	SU	N/A	N/A	6.25	6.56	6.56	5.90	5.20	5.86	5.86	6.19	6.08	5.86	6.02	6.43
Specific Conductance	μS/cm	N/A	N/A	746	613	613	647	682	740	740	784	527	509	782	674
Temperature	°Celsius	N/A	N/A	25.67	19.33	19.33	22.73	25.72	24.84	24.84	19.26	23.02	24.46	19.79	18.59
Dissolved Oxygen (YSI)	mg/L	N/A	N/A	1.06	4.73	4.73	0.90	1.72	0.28	0.28	4.50	0.51	0.93	3.83	2.68
ORP	mV	N/A	N/A	142.8	114.3	114.3	153.6	189.5	123.5	123.5	-8.4	5.0	329.4	-29.2	0.0
Turbidity	NTU	N/A	N/A	0.97	1.79	1.79	3.25	281	8.09	8.09	3.32	292	>1000	13.2	8.42
Laboratory Results - Natur	al Attenuation F	Parameters													
Nitrogen, Nitrate	mg/L	N/A	N/A		1.3	1.4					6.1				5.4
Sulfate	mg/L	N/A	N/A		150	150					280				220
Sulfide	mg/L	N/A	N/A		< 1.0	< 1.0	-				1.4				< 1.0
Ferrous Iron	mg/L	N/A	N/A		< 0.10 HF	< 0.10 HF	-				< 0.10 HF				< 0.010 HF
Total Iron	mg/L	N/A	N/A	-	< 0.10	< 0.10	-				< 0.10	-			0.62
Carbon Dioxide	mg/L	N/A	N/A	-	61	66					1.0				0.91
Methane	mg/L	N/A	N/A		< 0.58	< 0.58					< 0.58				1.1
Dissolved Nitrogen	mg/L	N/A	N/A				-				5.0				4.5
Dissolved Oxygen	mg/L	N/A	N/A		8.9	8.7					1.8				1.5
Laboratory Results - Organ								•	•	•			•		
Volatile Organic Compounds		-													
Benzene	μg/L	5*	9	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Disulfide	μg/L	329	1.700	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	μg/L	700*	2,300	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	μg/L	1.000*	1.100	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Xylenes	μg/L	31,000	200.000	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Semivolatile Organic Compo		31,000	200,000	₹ 3.0	₹2.0	₹ 2.0	₹ 2.0	₹ 2.0	₹ 2.0	₹ 2.0	V 3.0	₹ 3.0	₹ 3.0	₹ 3.0	₹ 3.0
Acenaphthene	µg/L	2,000*	6,100	< 10	< 0.19	< 0.20	< 0.23	< 0.20	< 0.23	< 0.21					
Acenaphthylene	μg/L	470	3,100	< 10	< 0.19	< 0.20	< 0.23	< 0.20	< 0.23	< 0.21					
Anthracene	μg/L	4,700	31.000	< 10	< 0.19	< 0.20	< 0.23	< 0.20	< 0.23	< 0.21					
Benzo[a]anthracene		1.17	3.92	< 0.20	< 0.19	< 0.20	< 0.23	< 0.20	0.28	< 0.21					
Benzo[a]pyrene	μg/L μg/L	0.2*	0.39	< 0.20	< 0.19	< 0.20	< 0.23	< 0.20	0.25	< 0.21					
Benzo[b]fluoranthene	μg/L	1.17	3.92	< 0.20	< 0.19	< 0.20	< 0.23	< 0.20	< 0.23	< 0.21					
Benzo[g,h,i]perylene	μg/L	10	10	< 10	< 0.19	< 0.20	< 0.23	< 0.20	< 0.23	< 0.21					
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 10	< 0.19	< 0.20	< 0.23	< 0.20	< 0.23	< 0.21					
Chrysene	μg/L	117	392	< 10	< 0.19	< 0.20	< 0.23	< 0.20	0.35	< 0.21					
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	< 0.20	< 0.19	< 0.20	< 0.23	< 0.20	< 0.23	< 0.21					
2,4-Dimethylphenol	μg/L	700*	700*	< 10	< 1.9	< 2.0	< 2.3	< 2.0	< 2.3	< 2.1					
Fluoranthene	μg/L	1,000*	4.100	< 10	< 0.19	< 0.20	< 0.23	< 0.20	0.27	< 0.21					
Fluorene	μg/L	1,000*	4,100	< 10	< 0.19	< 0.20	< 0.23	< 0.20	< 0.23	< 0.21					
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.20	< 0.19	< 0.20	< 0.23	< 0.20	< 0.23	< 0.21					
2-Methylphenol	μg/L	780	5.100	< 10	< 1.9	< 2.0	< 2.3	< 2.0	< 2.3	< 2.1					
3 & 4 Methylphenol	μg/L	78	510	< 10	< 1.9	< 2.0	< 2.3	< 2.0	< 2.3	< 2.1					
Naphthalene	μg/L	20*	20*	< 10	0.59	< 0.20	< 0.23	< 0.20	< 0.23	< 0.21	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Phenanthrene	μg/L	470	3,100	< 10	< 0.19	< 0.20	< 0.23	< 0.20	< 0.23	< 0.21					
Phenol	μg/L	9,390	61,000	< 10	< 0.19	< 0.99	< 1.2	< 0.98	< 1.1	< 1.0					
Pyrene	ug/L	1.000*	3.100	< 10	< 0.19	< 0.39	< 0.23	< 0.90	0.58	0.22					
Laboratory Results - Inorg	1.5	,	5,700	× 10	× 0.10	~ U.ZU	~ 0.20	~ U.ZU	0.00	V.EE					
,		6.3	400	< 20	< 20	< 20	< 20	< 20	< 20	< 20					
Antimony	μg/L	5.3 50*	400 50*												
Arsenic	μg/L	2,000	7,200	< 50	< 20	< 20 44	< 20	< 20	< 20	< 20					
Barium	μg/L	31	200	60.1	42		38	90	36	36	45	78	460	57	93
Beryllium Cadmium	μg/L	7.8	200 51	< 10.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0					
	μg/L	100	310	< 5.0 < 10.0	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 <b>19</b>	< 5.0 < 10	< 5.0 < 10	 < 10	 < 10	42	 < 10	 < 10
Chromium	μg/L												320		
Copper	μg/L	630 15*	4,100 15*	< 10.0	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20		< 20	< 20
Lead	μg/L	15*		< 10.0	< 10	< 10	< 10	20	< 10	< 10	< 10	25	560	< 10	< 10
Nickel	μg/L		2,000	< 20.0	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40
Zinc	μg/L	4,700	31,000	< 20.0	< 20	< 20	< 20	< 20	< 20	< 20		-			
Mercury Total Cyanida	μg/L	2* 310	2* 2,000	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20					
Total Cyanide	μg/L	310	۷,000	16	< 10	< 10	26	22	21	21	< 10				< 10

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Stamdard Units µS/cm - microsiemens per centimeter

μς/Cm - microsiemens per centimeter
μg/L - micrograms per liter
mg/L - milligrams per liter
mV - millivolts
NTU - nephelometric turbidity units
N/A - RRS are not applicable to this parameter

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

4th Semiannual Progress Report May 2017

Γ	1	ı						A B # 1 A / A	handan-4\				
Parameter	Units	Type 2 RRS	Type 4 RRS	08/07/13	03/14/13	11/06/12	08/08/12	AMW-4 (A 05/15/12	bandoned) 02/08/12	11/17/11	08/11/11	05/04/11	02/18/11
Field Groundwater Quality	Parameters	L		33,31710	33, 3, 10		33,30,12	33, 10, 12	J2, 30/ 12			33,3711	02,10/11
рН	SU	N/A	N/A	6.59	6.90	6.59	6.13	6.44	6.71	6.66	6.71	6.70	6.87
Specific Conductance	μS/cm	N/A	N/A	902	960	754	884	953	738	723	817	849	559
Temperature	°Celsius	N/A	N/A	24.10	17.61	22.32	25.18	23.58	18.59	24.48	23.32	18.06	19.26
Dissolved Oxygen (YSI)	mg/L	N/A	N/A	0.65	2.91	2.62	0.33	0.78	1.86	1.00	0.23	0.52	0.50
ORP	mV	N/A	N/A	-73.9	63.6	-106.1	-82.9	74.1	-27.4	-96.7	150.2	-92.4	-370.1
Turbidity	NTU	N/A	N/A	7.84	8.72	2087	271	103	211	123	>1000	107	>999
Laboratory Results - Natur	ral Attenuation I												
Nitrogen, Nitrate	mg/L	N/A	N/A		14				0.59				9.6
Sulfate	mg/L	N/A	N/A		138				47				55
Sulfide	mg/L	N/A	N/A		< 1.0				< 1.0				1.5
Ferrous Iron	mg/L	N/A	N/A		< 0.10 HF				< 0.10 HF				< 0.010 HF
Total Iron	mg/L	N/A	N/A		0.26				1.0				8.0
Carbon Dioxide	mg/L	N/A	N/A		38				1.5				0.41
Methane	mg/L	N/A	N/A		37				82				140
Dissolved Nitrogen	mg/L	N/A	N/A		16				5.5				4.7
Dissolved Oxygen	mg/L	N/A	N/A		6.4				1.7				1.7
Laboratory Results - Organ		8											
Volatile Organic Compounds		T											
Benzene Contrar Biodified	μg/L	5*	9	1,000	5.1	5,400	1,800	1,300	720	4,900	5,000	3,200	1,700
Carbon Disulfide	μg/L	329	1,700	< 5.0	< 2.0	< 20	< 20	< 20					
Ethylbenzene	μg/L	700*	2,300	230	<1.0	1200	430	300	140	640	450	890	290
Toluene	μg/L	1,000*	1,100	190	1.6	4,400	1,200	630	610	4,200	4,100	3,000	1,800
Total Xylenes	μg/L	31,000	200,000	480	3.1	4,200	990	570	780	3,200	2,700	4,600	1,400
Semivolatile Organic Compo		0.000#	0.400	40	0.40					ı	ı	_	1
Acenaphthene	μg/L	2,000*	6,100	< 10	<0.19	34	23	27					
Acenaphthylene	μg/L	470	3,100	< 10	<0.19	54	42	35					
Anthracene	µg/L	4,700	31,000	< 10	<0.19	< 0.10	4.0	1.9					
Benzo[a]anthracene	µg/L	1.17 0.2*	3.92 0.39	< 0.20	<0.19	< 0.10	< 2.1	< 1.1					
Benzo[a]pyrene Benzo[b]fluoranthene	µg/L	1.17	3.92	< 0.20 < 0.20	<0.19 <0.19	< 0.10 < 0.10	< 2.1 < 2.1	< 1.1 < 1.1					
	μg/L μg/L	10	10	< 10	<0.19	< 0.10	< 2.1	< 1.1					
Benzo[g,h,i]perylene Benzo[k]fluoranthene	μg/L μg/L	11.7	39.2	< 10	<0.19	< 0.10	< 2.1	< 1.1					
Chrysene	μg/L μg/L	117	392	< 10	<0.19	< 0.10	< 2.1	< 1.1					
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	< 0.20	<0.19	< 0.10	< 2.1	< 1.1					
2,4-Dimethylphenol	μg/L	700*	700*	< 10	<1.9	130	< 21	< 11					
Fluoranthene	μg/L	1,000*	4,100	< 10	<0.19	< 0.10	3.2	< 1.1					
Fluorene	μg/L	1,000*	4,100	< 10	<0.19	21	17	15					
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.20	<0.19	< 0.10	< 2.1	< 1.1					
2-Methylphenol	μg/L	780	5,100	< 10	<1.9	< 100	29	< 11					
3 & 4 Methylphenol	μg/L	78	510	< 10	<1.9	< 100	< 21	< 11					
Naphthalene	µg/L	20*	20*	150	<0.19	1,800	<b>690</b> D	420	510	1,900	1,100	1,200	530
Phenanthrene	μg/L	470	3,100	< 10	<0.19	42	46	25					
Phenol	μg/L	9,390	61,000	< 10	< 0.96	960	47	15					
Pyrene	μg/L	1,000*	3,100	< 10	<0.19	< 0.10	3.9	1.3					
Laboratory Results - Inorg	anic Constituer	nts	<u> </u>										
Antimony	μg/L	6.3	400	< 20	< 20	< 20	< 20	< 20					
Arsenic	μg/L	50*	50*	< 50	< 20	< 20	56	< 20					
Barium	μg/L	2,000	7,200	127	130	340	1,100	170	250	320	620	170	120
Beryllium	μg/L	31	200	< 10	< 4.0	< 4.0	9.9	< 4.0					
Cadmium	μg/L	7.8	51	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0					
Chromium	μg/L	100	310	< 10	< 10	< 10	430	< 10	< 10	< 10	22	< 10	< 10
Copper	μg/L	630	4,100	< 10	< 20	< 20	310	< 20	< 20	< 20	91	< 20	< 20
Lead	μg/L	15*	15*	< 10	< 10	< 10	400	< 10	< 10	< 10	190	< 10	< 10
Nickel	μg/L	100	2,000	< 20	< 40	< 40	120	< 40	< 40	< 40	< 40	< 40	< 40
Zinc	μg/L	4,700	31,000	< 20	< 20	< 20	440	< 20					
Mercury	μg/L	2*	2*	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20					
Total Cyanide	μg/L	310	2,000	< 10	< 10	< 10	10	< 10	< 10	< 10			< 10
Notes:													

Notes:

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Stamdard Units

S(m - microsionappers per continueter)

SU - Stamdard Units
μS/cm - microsiemens per centimeter
μg/L - micrograms per liter
mg/L - milligrams per liter
my/L - milligrams per liter
my - millivolts
NTU - nephelometric turbidity units
NTU - nephelometric turbidity units
NTA - RRS are not applicable to this parameter
-- Not Analyzed
HF - Holding time of 15 minutes was exceeded
Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

4th Semiannual Progress Report May 2017

	1								A B #1.4/ E / A	handoned)					
Parameter	Units	Type 2 RRS	Type 4 RRS	08/07/13	03/13/13	11/06/12	08/07/12	05/15/12	AMW-5 (A 02/08/12	bandoned) 11/17/11	DUP 11/17	08/10/11	08/11 DUP	05/04/11	02/22/11
Field Groundwater Quality	Parameters	1	1						34						
рН	SU	N/A	N/A	6.35	6.39	6.27	6.31	6.38	6.20	6.52	6.52	6.41	6.41	6.46	6.62
Specific Conductance	μS/cm	N/A	N/A	646	433	490	520	582	354	479	479	536	536	526	383
Temperature	°Celsius	N/A	N/A	21.95	17.76	22.09	24.69	23.75	19.55	21.24	21.24	21.70	21.70	18.86	19.99
Dissolved Oxygen (YSI)	mg/L	N/A	N/A	0.48	0.40	1.71	3.63	0.59	1.62	0.35	0.35	0.25	0.25	0.12	0.37
ORP	mV	N/A	N/A	-90.7	-225.5	-73.9	-21.1	-77.9	-19.9	-93.5	-93.5	151.8	151.8	-100.8	-356.3
Turbidity	NTU	N/A	N/A	4.46	8.82	5.10	2.84	1.45	1.48	9.86	9.86	>1000	>1000	36.9	>999
Laboratory Results - Natur	al Attenuation F	Parameters													
Nitrogen, Nitrate	mg/L	N/A	N/A	-	< 0.050				< 0.050						< 0.050
Sulfate	mg/L	N/A	N/A	-	6.0				< 5.0						< 5.0
Sulfide	mg/L	N/A	N/A		< 1.0				< 1.0						< 1.0
Ferrous Iron	mg/L	N/A	N/A	-	0.58 HF				5.6 HF					-	4.1 HF
Total Iron	mg/L	N/A	N/A	-	14				11						22
Carbon Dioxide	mg/L	N/A	N/A	-	100				2.0						0.92
Methane	mg/L	N/A	N/A		620				220						490
Dissolved Nitrogen	mg/L	N/A	N/A	-	19				5.3						3.0
Dissolved Oxygen	mg/L	N/A	N/A		5.1				1.4						1.0
Laboratory Results - Organ		S													
Volatile Organic Compounds															
Benzene	μg/L	5*	9	840	540	910	390	680	640	520	610	890	960	720	900
Carbon Disulfide	μg/L	329	1,700	< 5.0	< 10	< 10	< 10	< 20							
Ethylbenzene	μg/L	700*	2,300	700	280	1,000	500	460	220	480	550	830	680	580	920
Toluene	μg/L	1,000*	1,100	400	430	1,200	340	630	640	520	670	1,700	1,600	870	2,000
Total Xylenes	μg/L	31,000	200,000	1,300	2,200	4,100	1,400	2,300	2,400	1,500	1,700	3,600	2,900	3,000	4,000
Semivolatile Organic Compo		0.000#	0.400			40			1		ı				
Acenaphthene	μg/L	2,000*	6,100	28	37	40	32	51							
Acenaphthylene	μg/L	470	3,100	33	40	43	21	48							
Anthracene	μg/L	4,700	31,000	< 10	4.5	< 20	< 1.9	< 23							
Benzo[a]anthracene	μg/L	1.17 0.2*	3.92 0.39	1.2 0.56	< 3.9	< 20	< 1.9	< 23						-	
Benzo[a]pyrene Benzo[b]fluoranthene	μg/L	1.17	3.92	1.3	< 3.9 < 3.9	< 20 < 20	< 1.9 < 1.9	< 23 < 23							
Benzo[g,h,i]perylene	μg/L μg/L	10	10	< 10	< 3.9	< 20	< 1.9	< 23							
Benzo[k]fluoranthene	μg/L μg/L	11.7	39.2	< 10	< 3.9	< 20	< 1.9	< 23							
Chrysene	μg/L	11.7	392	< 10	< 3.9	< 20	< 1.9	< 23							
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	0.21	< 3.9	< 20	< 1.9	< 23							
2,4-Dimethylphenol	μg/L	700*	700*	62	< 39	< 200	120	< 230							
Fluoranthene	μg/L	1,000*	4.100	< 10	< 3.9	< 20	< 1.9	< 23							
Fluorene	μg/L	1,000*	4,100	14	22	26	17	28							
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	0.37	< 3.9	< 20	< 1.9	< 23							
2-Methylphenol	μg/L	780	5.100	12	< 39	< 200	< 19	< 230							
3 & 4 Methylphenol	µg/L	78	510	17	< 39	< 200	38	< 230							
Naphthalene	μg/L	20*	20*	1,400	950	2,500	440	2,700	1,800	1,600	1,300	2,500 *	2,600	3,600	2,900
Phenanthrene	μg/L	470	3,100	42	70	130	38	62							
Phenol	μg/L	9,390	61,000	< 10	< 20	< 98	< 9.5	< 110							
Pyrene	μg/L	1,000*	3,100	< 10	< 3.9	< 20	2.1	< 23		-				-	
Laboratory Results - Inorga	anic Constituen	nts										_			
Antimony	μg/L	6.3	400	< 20	< 20	< 20	< 20	< 20							
Arsenic	μg/L	50*	50*	< 50	< 20	< 20	< 20	< 20						-	
Barium	μg/L	2,000	7,200	318	240	520	150	220	330	330	270	460	470	290	400
Beryllium	μg/L	31	200	< 10	< 4.0	< 4.0	< 4.0	< 4.0						-	
Cadmium	μg/L	7.8	51	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0						-	
Chromium	μg/L	100	310	< 10	< 10	14	< 10	< 10	< 10	< 10	< 10	12	44	27	12
Copper	μg/L	630	4,100	< 10	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	22	< 20	< 20
Lead	μg/L	15*	15*	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	33	< 10	< 10
Nickel	μg/L	100	2,000	< 20	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40
Zinc	μg/L	4,700	31,000	< 20	< 20	< 20	< 20	< 20						-	
Mercury	μg/L	2*	2*	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20							
Total Cyanide	μg/L	310	2,000	< 10	< 10	< 10	< 10	< 10	< 10						< 10
Notes:															

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Stamdard Units µS/cm - microsiemens per centimeter

μς/Cm - microsiemens per centimeter
μg/L - micrograms per liter
mg/L - milligrams per liter
mV - millivolts
NTU - nephelometric turbidity units
N/A - RRS are not applicable to this parameter

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

		l							A M	W-6					
Parameter	Units	Type 2 RRS	Type 4 RRS	02/21/17	08/22/16	08/05/13	02/12/13	11/05/12	08/06/12	05/14/12	02/09/12	11/18/11	08/08/11	05/03/11	02/17/11
Field Groundwater Quality	Parameters	I.	I.			I.		I.	I.	I.		I.	I.	U.	I.
рΗ	SU	N/A	N/A	6.45	5.66	7.23	5.97	5.62	5.79	5.71	5.89	6.20	5.65	5.94	6.02
Specific Conductance	μS/cm	N/A	N/A	599.4	527.5	602	492	516	541	499	426	507	597	736	441
Temperature	°Celsius	N/A	N/A	21.49	28.57	26.27	17.92	21.10	25.98	20.74	17.47	16.18	24.70	18.61	17.55
Dissolved Oxygen (YSI)	mg/L	N/A	N/A	4.68	0.21	0.16	1.71	1.14	0.75	0.80	1.32	0.40	0.47	0.44	4.78
ORP	mV	N/A	N/A	106.8	176.7	-5.6	-35.7	4.0	48.2	65.4	-6.5	0.1	-16.1	-39.8	-2.6
Turbidity	NTU	N/A	N/A	9.2	1.51	6.01	5.67	1291	9.7	9.27	9.08	8.94	4.22	23.8	121
Laboratory Results - Natur						1		1	1	1		1	T	1	
Nitrogen, Nitrate	mg/L	N/A	N/A				< 0.050				< 0.050				< 0.050
Sulfate	mg/L	N/A N/A	N/A				140				120				130
Sulfide	mg/L	N/A N/A	N/A N/A				< 1.0 <b>12</b> HF				< 1.0 <b>5.1</b> HF				< 1.0 <b>9.7</b> HF
Ferrous Iron Total Iron	mg/L mg/L	N/A	N/A				13				6.0				16
Carbon Dioxide	mg/L	N/A	N/A				140				2.6				2.1
Methane	mg/L	N/A	N/A				23				20				15
Dissolved Nitrogen	mg/L	N/A	N/A	-							4.6				3.0
Dissolved Oxygen	mg/L	N/A	N/A	-			7.4				1.4				1.0
Laboratory Results - Organ	_											L	•		
Volatile Organic Compounds															
Benzene	μg/L	5*	9	<5.0	<5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Disulfide	μg/L	329	1,700	<5.0	<5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 5.0					
Ethylbenzene	μg/L	700*	2,300	<5.0	<5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	μg/L	1,000*	1,100	<5.0	<5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Xylenes	μg/L	31,000	200,000	<5.0	<5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Semivolatile Organic Compo	ounds														
Acenaphthene	μg/L	2,000*	6,100	< 0.50	< 0.50	< 10	1.0	0.84	0.43	0.85					
Acenaphthylene	μg/L	470	3,100	<1.0	<1.0	< 10	< 0.20	< 0.21	< 0.23	< 0.22					
Anthracene	μg/L	4,700	31,000	<0.050	< 0.050	< 10	< 0.20	< 0.21	< 0.23	< 0.22					
Benzo[a]anthracene	μg/L	1.17	3.92	0.019	<0.050	< 0.20	< 0.20	< 0.21	< 0.23	0.24	-				
Benzo[a]pyrene	μg/L	0.2*	0.39	0.12	<0.050	< 0.20	< 0.20	< 0.21	< 0.23	0.22					
Benzo[b]fluoranthene	μg/L	1.17	3.92	0.12	<0.10	< 0.20	< 0.20	< 0.21	< 0.23	0.39					
Benzo[g,h,i]perylene	μg/L	10	10	0.15	<0.10	< 10	< 0.20	< 0.21	< 0.23	< 0.22					
Benzo[k]fluoranthene	μg/L	11.7	39.2	0.14	<0.050	< 10	< 0.20	< 0.21	< 0.23	< 0.22					
Chrysene	μg/L	117 0.3*	392 0.39	0.20 0.11	<0.050	< 10 < 0.20	< 0.20 < 0.20	< 0.21 < 0.21	< 0.23 < 0.23	0.26					
Dibenz(a,h)anthracene	μg/L	700*	700*	<10	<0.10 <10	< 10	< 0.20	< 2.1	< 2.3	< 0.22 < 2.2					
2,4-Dimethylphenol Fluoranthene	μg/L μg/L	1.000*	4.100	<0.10	<0.10	< 10	< 0.20	< 0.21	< 0.23	0.44					
Fluorene	μg/L	1,000*	4,100	<0.10	<0.10	< 10	< 0.20	< 0.21	< 0.23	< 0.22					
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	0.13	<0.050	< 0.20	< 0.20	< 0.21	< 0.23	< 0.22					
2-Methylphenol	μg/L	780	5,100	<10	<10	< 10	< 2.0	< 2.1	< 2.3	< 2.2					
3 & 4 Methylphenol	μg/L	78	510	<10	<10	< 10	< 2.0	< 2.1	< 2.3	< 2.2					
Naphthalene	µg/L	20*	20*	<0.50	<0.50	< 10	< 0.20	< 0.21	< 0.23	< 0.22	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Phenanthrene	μg/L	470	3,100	<0.050	<0.050	< 10	< 0.20	< 0.21	< 0.23	< 0.22					
Phenol	μg/L	9,390	61,000	<10	<10	< 10	< 1.0	< 1.0	< 1.1	< 1.1					
Pyrene	μg/L	1,000*	3,100	0.052	< 0.050	< 10	< 0.20	0.23	< 0.23	0.48					
Laboratory Results - Inorg	anic Constituen	ts													
Antimony	μg/L	6.3	400		< 20	< 20.0	< 20	< 20	< 20	< 20					
Arsenic	μg/L	50*	50*	1	< 50	< 50.0	< 20	< 20	< 20	< 20	1				
Barium	μg/L	2,000	7,200	-	39.3	36.6	63	60	54	51	62	71	74	66	81
Beryllium	μg/L	31	200		< 10	< 10.0	< 4.0	< 4.0	< 4.0	< 4.0					
Cadmium	μg/L	7.8	51		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0					
Chromium	μg/L	100	310	-	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Copper	μg/L	630	4,100	1	< 10	< 10	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Lead	μg/L	15*	15*	-	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Nickel	μg/L	100	2,000	1	< 20	< 20	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40
Zinc	μg/L	4,700	31,000	-	< 20	< 20	< 20	< 20	< 20	< 20	-				
Mercury	μg/L	2*	2*	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20					
Total Cyanide	μg/L	310	2,000		< 10	< 10	< 10	< 10	< 10	< 10	< 10				< 10

Notes:

Analyte was detected above laboratory detection limit

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level
RRS - Risk Reduction Standard
SU - Stamdard Units

µS/cm - microsiemens per centimeter

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N/A - RRS are not applicable to this parameter
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Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

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	1	,	1					Δ M/A/_7 / A	bandoned)					1					Δ M/M/Δ/_Q / A	Abandoned)					
	Units Ty	pe 2 RRS	Type 4 RRS	08/07/13	03/14/13	11/07/12	8/7/2012		02/08/12	11/17/11	08/09/11	05/04/11	02/22/11	08/07/13	03/13/13	11/07/12	8/7/2012	05/16/12		11/18/11	08/09/11	08/11 DUP	05/04/11	05/11 DUP	02/22/11
Field Groundwater Quality Para	rameters						0/1/2012						,		00,10,10		0/1/2012								
H	SU	N/A	N/A	6.81	6.35	6.21	6.15	6.27	6.10	6.22	6.19	6.18	6.37	7.12	6.66	6.31	6.21	6.47	6.44	6.50	6.43	6.43	6.48	6.48	6.56
	μS/cm	N/A	N/A	469	439	364	493	399	292	326	333	468	256	1,096	804	510	575	971	1,389	566	661	661	899	899	810
	°Celsius	N/A	N/A	24.13	16.90	17.93	27.64	22.42	18.00	19.63	22.44	17.68	17.44	23.13	16.52	17.04	22.86	21.58	17.35	20.69	27.16	27.16	17.70	17.70	18.23
Dissolved Oxygen (YSI)	mg/L mV	N/A N/A	N/A N/A	0.59 -43.9	1.14 34.9	7.13 -45.2	3.99 5.0	1.58 -100.3	5.50 16.0	0.53 -74.5	0.41 142.5	0.31 -97.3	0.78 -243.5	0.18 -56.7	3.39 159.1	0.50 -49.0	2.68 -7.7	0.41 -73.9	0.94 -40.7	0.58 -108.1	0.16 138.7	0.16 138.7	0.52 -433.9	0.52 -433.9	0.29 -279.2
Turbidity	NTU	N/A	N/A	1.72	6.82	10	161	22.3	57.3	511	>1000	452	>999	1.09	5.03	101	83.3	9.2	9.82	308	>1000	>1000	7.06	7.06	381
Laboratory Results - Natural A	Attenuation Par	rameters					•		•			•		•											
	mg/L	N/A	N/A		0.19				0.47				0.22	-	0.28		-		0.23				-		1.0
	mg/L	N/A	N/A		78 1.1				27				18 3.1	-	120		-		200		-		-		95 5.3
	mg/L mg/L	N/A N/A	N/A N/A		1.1 1.1 HF				1.6 < 0.10 HF				3.1 1.4 HF		< 1.0 < 0.10 HF				< 1.0 <b>2.5</b> HF						< 0.010 H
	mg/L	N/A	N/A		2.3				1.0				13	-	1.1		-		4.1						18
	mg/L	N/A	N/A		61				1.2				0.74	-	71		-		2.6						1.1
	mg/L	N/A	N/A	-	19				1.2				100		< 0.58		-		24						12
	mg/L	N/A N/A	N/A N/A		19				4.7				4.2 1.5	-	17				5.2 1.5						3.9 1.3
Laboratory Results - Organic C	mg/L	N/A	IN/A		6.0				1.6			-	1.5		6.9		-		1.5	-	-		-		1.3
Volatile Organic Compounds	Constituents																								
	μg/L	5*	9	770	180	3,300	870	1,800	8.6	3,600	6,000	3,800	2,300	< 5.0	< 1.0	780	620	110	14	590	600	530	< 50	<25	< 50
	μg/L	329	1,700	< 5.0	<10	< 50	< 50	< 25						< 5.0	< 2.0	< 100	< 20	< 5.0					-		
	μg/L	700*	2,300	160	21	1,000	330	730	< 5.0	580	< 500	660	< 500	< 5.0	< 1.0	1,500	810	380	44	950	760	670	130	130	450
		1,000* 31.000	1,100 200,000	1,500 690	400 370	10,000 5,200	2,800 1.800	5,000 2.600	25 20	7,700 3,800	13,000 3,700	9,300 4,900	5,700 2,400	< 5.0 < 5.0	< 1.0 < 2.0	4,600 5,100	3,700 D 2,200	590 780	39 120	2,600 3,100	2,400 2,500	2,600 2.300	240 1.400	240 1,300	580 3,300
Semivolatile Organic Compounds		51,000	200,000	030	3/0	3,200	1,000	2,000	_ <u> </u>	3,000	3,700	4,300	2,400	₹ 5.0	< 2.U	3,100	2,200	100	120	3,100	2,500	2,300	1,400	1,300	3,300
		2,000*	6,100	< 10	2.0	28	21	28						< 10	< 0.20	32	27	14							
Acenaphthylene	μg/L	470	3,100	12	5.7	99	69	100						< 10	< 0.20	48	41	19							
	μg/L	4,700	31,000	< 10	0.30	2.8	< 1.9	2.1						< 10	0.36	4.2	< 2.0	< 2.2					-		
	µg/L	1.17 0.2*	3.92	< 0.20	< 0.20	< 2.3	< 1.9	< 2.1 < 2.1						< 0.20	<b>0.21</b> < 0.20	< 2.4	< 2.0	< 2.2 < 2.2							
Bonzolajpyrono	μg/L μg/L	1.17	3.92	< 0.20	< 0.20	< 2.3	< 1.9	< 2.1						< 0.20	< 0.20	< 2.4	< 2.0	< 2.2 < 2.2							
	μg/L	10	10	< 10	< 0.20	< 2.3	< 1.9	< 2.1						< 10	< 0.20	< 2.4	< 2.0	< 2.2							
	μg/L	11.7	39.2	< 10	< 0.20	< 2.3	< 1.9	< 2.1						< 10	< 0.20	< 2.4	< 2.0	< 2.2					-		
	μg/L	117	392	< 10	< 0.20	< 2.3	< 1.9	< 2.1						< 10	0.25	< 2.4	< 2.0	< 2.2					-		-
	μg/L	0.3*	0.39	< 0.20	< 0.20	< 2.3	< 1.9	< 2.1						< 0.20	< 0.20	< 2.4	< 2.0	< 2.2			-		-		
	μg/L μg/L	700* 1.000*	700* 4.100	<b>69</b> < 10	<b>32</b> <0.20	540 2.3	350 2.2	<b>460</b> < 2.1						< 10 < 10	< 2.0 0.30	38 4.4	30 3.9	< 22 < 2.2				-	-		
	μg/L	1,000*	4,100	< 10	1.5	20	16	18	-					< 10	< 0.20	21	19	7.3							
	μg/L	1.17	3.92	< 0.20	<0.2	< 2.3	< 1.9	< 2.1						< 0.20	< 0.20	< 2.4	< 2.0	< 2.2					-		
	μg/L	780	5,100	40	42	< 23	75	300						< 10	< 2.0	< 24	< 20	< 22							
	μg/L	78	510	62	28 1.8	300	150 380	500 1,100	6.3	1,100	740 *	1,100	1,300	< 10	< 2.0	< 24 2,100	< 20	< 22	470	1,100	1,700	1,400		700	1,800
	μg/L μg/L	470	3.100	<b>260</b> < 10	0.73	1,800 28	23	1,100	0.3	1,100	740	1,100	1,300	< 10 < 10	< 0.20 <b>0.54</b>	52	1,600 46	650 20	170	1,100	1,700	1,400	680	700	1,000
	μg/L	9,390	61,000	30	37	130	73	390						< 10	< 0.99	< 12	< 9.9	< 11							-
		1,000*	3,100	< 10	<0.20	3.1	3.1	2.6						< 10	0.35	5.3	5.7	< 2.2							
Laboratory Results - Inorganic																									
	μg/L	6.3	400	< 20	< 20	< 20	< 20	< 20						< 20.0	< 20	< 20	< 20	< 20							-
	µg/L	50* 2.000	50* 7,200	< 50 <b>52.5</b>	< 20 <b>29</b>	< 20 <b>55</b>	< 20 <b>76</b>	< 20	36	44		69	46	< 50.0 <b>59.2</b>	< 20 <b>41</b>	< 20 140	< 20 <b>89</b>	< 20	87	130	170	95	74	76	92
	μg/L μg/L	31	200	<b>52.5</b> < 10	< 4.0	< 4.0	< 4.0	<b>35</b> < 4.0			53		40	< 10	< 4.0	< 4.0	< 4.0	<b>59</b> < 4.0							
	μg/L	7.8	51	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0						< 5.0	< 5.0	< 5.0	< 5.0	< 5.0							
Chromium	μg/L	100	310	< 10	< 10	10	< 10	< 10	< 10	< 10	< 10	18	< 10	< 10	< 10	< 10	12	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	μg/L	630	4,100	< 10	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 10	< 20	< 20	< 20	< 20	< 20	< 20	34	< 20	< 20	< 20	< 20
	µg/L	15* 100	15* 2.000	< 10 < 20	< 10	< 10	13 < 40	< 10	< 10	< 10 < 40	< 10 < 40	< 10 < 40	< 10 < 40	< 10 < 20	< 10	12 < 40	<b>17</b>	< 10 < 40	< 10 < 40	<b>23</b> < 40	10 < 40	<b>20</b> < 40	< 10 < 40	< 10 < 40	<b>12</b> < 40
410101	μg/L μg/L	4,700	31,000	< 20	< 40 < 20	< 40 <b>20</b>	< 40 <b>29</b>	< 40 < 20	< 40	< 40	< 40	< 40	< 40	< 20 < 20	< 40 < 20	< 40 < 20	< 40 23	< 40 < 20	< 40	< 40	< 40	< 40	< 40	< 40	< 40
	μg/L	2*	2*	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20						< 0.20	< 0.20	< 0.20	< 0.20	< 0.20			-	-			-
		310	2,000	< 10	< 10	< 10	< 10	< 10	< 10				< 10	11	< 10	< 10	< 10	< 10	11		1	1			< 10

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Parameter	Units	Type 2 RRS	Type 4 RRS						MW-9 (Destroye	d)										abandoned)				
	Units	Type 2 RRS	Type 4 KKS	04/28/15	08/06/13	03/13/13	11/06/12	08/06/12	05/14/12	02/09/12	11/18/11	08/08/11	05/04/11	02/22/11	08/07/13	02/12/13	11/07/12	08/08/12	05/16/12	02/14/12	11/18/11	08/11/11	05/04/11	02/23
eld Groundwater Quality Par	rameters																							
1	SU	N/A	N/A	4.64	4.51	4.92	4.58	5.07	4.71	5.33	4.91	4.48	5.05	5.59	6.41	6.35	6.18	6.09	6.21	5.92	6.38	6.20	6.24	6.
ecific Conductance	μS/cm	N/A	N/A	374	341	317	371	414	398	353	378	474	405	364	726	628	528	676	716	561	541	651	569	3
mperature	°Celsius	N/A	N/A	16.87	19.93	17.56	16.78	23.04	23.64	16.88	18.80	23.01	18.63	17.36	22.53	19.54	16.98	23.79	24.20	18.49	15.13	20.61	21.39	20
ssolved Oxygen (YSI)	mg/L	N/A	N/A	0.75	1.27	1.06	1.36	1.76	1.52	5.18	0.50	0.49	0.28	2.73	0.15	1.79	2.38	0.53	0.43	2.70	0.30	0.26	0.62	2
RP	mV	N/A	N/A	-24.7	212.2	1.5	237.0	125.1	167.1	40.8	210.1	357.7	-420.6	160.1	-2.5	-58.9	-71.2	-40.7	-66.0	-40.7	-75.4	162.3	-54.3	-9
ırbidity	NTU	N/A	N/A	461	230	>4000	37.3	34.6	51.1	34.2	306	125	652	273	3.03	51.3	3.02	131	7.75	18.0	6.05	233	5.12	>!
boratory Results - Natural A	Attenuation	Parameters																						
trogen, Nitrate	mg/L	N/A	N/A			< 0.050				< 0.050				< 0.050		< 0.050				< 0.050				< (
ulfate	mg/L	N/A	N/A			91				110				83		40		-		110				
ulfide	mg/L	N/A	N/A			1.0				< 1.0			-	< 1.0		< 1.0		-		1.2			-	<
errous Iron	mg/L	N/A	N/A			< 0.10 HF				0.23 HF			-	1 HF		36 HF		-		16 HF			-	0.3
otal Iron	mg/L	N/A	N/A			14		-		1.6			-	1.4	-	59		-		21			-	- 1
Carbon Dioxide	mg/L	N/A	N/A			110				2.5			-	1.5	-	200		-		3200			-	1
lethane	mg/L	N/A	N/A			1.7			-	1.3	-	-	-	14	-	250		-		< 0.58				
issolved Nitrogen	mg/L	N/A	N/A			16			1	6.6			-	4.7	-		-	ı		5200				- 4
issolved Oxygen	mg/L	N/A	N/A			9.4			-	2.3				1.7	-	3.0	-	-		1500				1
aboratory Results - Organic (	Constituen	its																						
olatile Organic Compounds																								
enzene	μg/L	5*	9	< 5.0	< 5.0	< 1.0	3.6	2.7	< 5.0	< 5.0	20	11	22	< 5.0	< 5.0	390	410	670	180	250	170	240	180	1
arbon Disulfide	μg/L	329	1,700	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 5.0						< 5.0	< 20	< 20	< 20	< 25					
thylbenzene	μg/L	700*	2,300	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	1,000	760	1,200	370	290	450	520	410	2
oluene	μg/L	1,000*	1,100	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	20	17	20	< 25	< 25	25	11	13	<
otal Xylenes	μg/L	31,000	200,000	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	480	410	440	190	540	300	390	490	2
emivolatile Organic Compound	ds																							
cenaphthene	μg/L	2,000*	6,100	< 10	< 10	< 0.19	< 0.22	< 0.22	< 0.21		-				< 10	38	52	38	18				-	
cenaphthylene	μg/L	470	3,100	< 10	< 10	< 0.19	< 0.22	< 0.22	0.21						< 10	15	13	15	3.9					
nthracene	μg/L	4,700	31,000	< 10	< 10	< 0.19	< 0.22	< 0.22	0.29						< 10	2.2	< 1.9	2.4	0.53					
enzo[a]anthracene	μg/L	1.17	3.92	< 0.050	< 0.20	0.20	0.22	< 0.22	1.8						< 0.20	< 2.0	< 1.9	< 2.0	< 0.23					
enzo[a]pyrene	μg/L	0.2*	0.39	< 0.050	0.29	0.24	0.29	< 0.22	2.0				-	-	< 0.20	< 2.0	< 1.9	< 2.0	< 0.23			-	-	
enzo[b]fluoranthene	μg/L	1.17	3.92	< 0.10	0.64	0.39	0.58	< 0.22	3.2				-		< 0.20	< 2.0	< 1.9	< 2.0	< 0.23				-	
lenzo[g,h,i]perylene	μg/L	10	10	< 10	< 10	0.39	0.43	0.22	2.1				-		< 10	< 2.0	< 1.9	< 2.0	< 0.23				-	
enzo[k]fluoranthene	μg/L	11.7	39.2	< 10	< 10	0.37	0.31	< 0.22	< 0.21						< 10	< 2.0	< 1.9	< 2.0	< 0.23					
Chrysene	μg/L	117	392	< 10	< 10	0.26	0.35	< 0.22	1.9						< 10	< 2.0	< 1.9	< 2.0	0.35					
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	< 0.10	< 0.20	< 0.19	< 0.22	< 0.22	< 0.21						< 0.20	< 2.0	< 1.9	< 2.0	< 0.23					-
,4-Dimethylphenol	μg/L	700*	700*	< 10	< 10	< 1.9	< 2.2	< 2.2	< 2.1						< 10	< 20	< 19	< 20	4.1					-
luoranthene	μg/L	1,000*	4,100	< 10	< 10	0.31	0.34	< 0.22	2.9						< 10	< 2.0	< 1.9	< 2.0	< 0.23			-		-
luorene	μg/L	1,000*	4,100	< 10	< 10	0.48	0.61	< 0.22	0.23				-		< 10	17	20	16	6.1					-
ndeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.050	0.44	0.34	0.31	< 0.22	1.5			-			< 0.20	< 2.0	< 1.9	< 2.0	< 0.23			-	-	-
-Methylphenol	μg/L	780	5,100	< 10	< 10	< 1.9	< 2.2	< 2.2	< 2.1				-		< 10	< 20	< 19	< 20	< 2.3				-	-
& 4 Methylphenol	μg/L	78	510	< 10	< 10	< 1.9	< 2.2	< 2.2	< 2.1	-	-	-		-	< 10	< 20	< 19	< 20	< 2.3				-	-
laphthalene	μg/L	20*	20*	< 10	< 10	< 0.19	< 0.22	< 0.22	1.1	7.1	< 5.0	< 5.0 *	< 5.0	< 5.0	< 10	390	690	460	200	510	520	590 *	690	30
henanthrene	μg/L	470	3,100	< 10	< 10	1.3	0.95	0.22	1.4				-		< 10	36	31	37	8.8		-	-	-	-
henol	μg/L	9,390	61,000	< 10	< 10	0.97	< 1.1	< 1.1	< 1.1				-		< 10	11	< 9.7	23	12					
yrene	μg/L	1,000*	3,100	< 10	< 10	0.34	0.39	< 0.22	3.3				-		< 10	< 2.0	< 1.9	< 2.0	0.23					-
aboratory Results - Inorganic										,		ı		Tr.								,		
ntimony	μg/L	6.3	400	< 20	< 20.0	< 20	< 20	< 20	< 20				-		< 20.0	< 20	< 20	< 20	< 20			-		
rsenic	μg/L	50*	50*	< 50	< 50.0	< 20	< 20	< 20	< 20						< 50.0	< 20	< 20	< 20	< 20					+
arium	μg/L	2,000	7,200	34.5	44.9	83	44	40	36	35	97	96	1,400	46	42.3	440	450	810	240	300	220	600	370	17
leryllium	μg/L	31	200 51	< 10	< 10	< 4.0	< 4.0	< 4.0	< 4.0						< 10.0	< 4.0	< 4.0	< 4.0	< 4.0					+
Cadmium	μg/L	7.8	51 310	< 5.0	< 5.0	< 5.0	< 5.0 < 10	< 5.0	< 5.0				200		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	 < 10				+ -
Chromium	μg/L	100		< 10	< 10	11		< 10	< 10	< 10	< 10	< 10	390	< 10	< 10.0	< 10	< 10	34	< 10		10	90	< 10	<
Copper	μg/L	630 15*	4,100 15*	< 10	< 10	< 20	< 20	< 20	< 20	< 20	< 20	< 20	750	< 20	< 10.0	< 20	< 20	20	< 20	< 20	20	< 20	< 20	<
and	μg/L	15* 100	2.000	< 10 < 20.0	< 10 < 20.0	<b>20</b>	< 10 < 40	< 10	< 10 < 40	< 10 < 40	< 10 < 40	< 10	1,200	< 10	< 10.0 < 20.0	< 10 < 40	< 10 < 40	<b>20</b> < 40	< 10 < 40	< 10 < 40	10	<b>120</b> < 40	< 10 < 40	<
ead	μg/L	100 4,700	2,000 31,000	< 20.0 < 20.0	< 20.0 <b>64.7</b>	< 40 98		, 10		< 40	< 40	< 40	200	< 40			< 40 < 20		< 40 < 20	< 40	40	< 40	< 40	<
lickel	ua/I		31,000 2*	< 20.0	<b>64.7</b> < 0.20	98 < 0.20	100 < 0.20	110 < 0.20	100 < 0.20						< 20.0 < 0.20	<b>32</b> < 0.20	< 20	<b>32</b> < 0.20	< 20					+
lickel linc	μg/L	2*		< 0.20							<del></del>						< 0.20 <b>28</b>	< 0.20 < 10		< 10		-		<
lickel inc fercury	μg/L	2*																						
ickel nc		2* 310	2,000	< 10	< 10	< 10	16	24	< 10	< 10				< 10	< 10	< 10	28	< 10	< 10	< 10				

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Parameter Field Groundwater Quality Parameter	Hart.	T 6 225	T 1 225		AM\	W-11				AMW-12				AMV	V-13			AMW-14			AMV	V-15	
ield Groundwater Quality Pa	Units	Type 2 RRS	Type 4 RRS	2/22/2017			08/06/13	2/21/2017	08/23/16	8/16 DUP	04/28/15	08/06/13	02/22/17	08/23/16		08/06/13	02/21/17	08/23/16	04/29/15	02/23/17	DUP-2	08/24/16	04/29/15
	arameters			-			•							Į	Į			•		· ·			
Н	SU	N/A	N/A	6.12	6.04	5.99	7.06	5.65	5.	60	5.41	6.06	5.71	5.53	5.41	6.75	6.38	6.01	6.18	5.7		5.70	6.02
pecific Conductance	μS/cm	N/A	N/A	655.0	625.1	581	861	356.8		3.4	389	292	117.30	341.9	415	646	258.3	318.4	373	175.		185.5	158
emperature	°Celsius	N/A	N/A	21.24	30.86	19.31	26.81	21.05		.53	19.61	26.11	23.77	26.88	22.22	27.72	23.21	28.35	18.46	22.2		26.88	17.72
Dissolved Oxygen (YSI)	mg/L	N/A	N/A	0.32	0.23	2.05	0.27	3.27		94	2.44	0.60	1.64	0.70	1.75	0.41	5.88	0.31	1.26	1.08		0.61	7.96
DRP	mV	N/A	N/A	67.60	99.1	-30.4	1.5	137.5		9.5	-31.4	146.4	191.20	435.7	-28.3	83.7	113.8	-13.7	-27.1	128.		29.9	39.0
urbidity	NTU	N/A	N/A	3.11	3.01	9.91	1.38	1.00	7.	80	1.4	0.98	1.75	9.85	9.61	13.7	7.88	7.70	5.58	6.85	5	41.30	24.1
aboratory Results - Natural																							
litrogen, Nitrate	mg/L	N/A	N/A																				
Sulfate Sulfide	mg/L	N/A N/A	N/A N/A					-						-				-					
errous Iron	mg/L mg/L	N/A	N/A																				
otal Iron	mg/L	N/A	N/A																		-		
Carbon Dioxide	mg/L	N/A	N/A																				
Methane	mg/L	N/A	N/A																				
Dissolved Nitrogen	mg/L	N/A	N/A					-															-
Dissolved Oxygen	mg/L	N/A	N/A					-															
aboratory Results - Organic	c Constituen	ts																					
olatile Organic Compounds																							
Benzene	μg/L	5*	9	<5.0	<5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	< 5.0	< 5.0	<5.0	<5.0	< 5.0	< 5.0	<5.0	63	< 5.0	78	80	120	57
Carbon Disulfide	μg/L	329	1,700	<5.0	<5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	< 5.0	< 5.0	<5.0	<5.0	< 5.0	< 5.0	<5.0	<5.0	< 5.0	<5.0	<5.0	<5.0	< 5.0
thylbenzene	μg/L	700*	2,300	<5.0	<5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	< 5.0	< 5.0	<5.0	<5.0	< 5.0	< 5.0	14	110	< 5.0	14	17	28	9.3
oluene	μg/L	1,000*	1,100	<5.0	<5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	< 5.0	< 5.0	<5.0	<5.0	< 5.0	< 5.0	<5.0	11	< 5.0	<5.0	<5.0	7	< 5.0
otal Xylenes	μg/L	31,000	200,000	<5.0	<5.0	< 5.0	< 5.0	<5.0	<5.0	<5.0	< 5.0	< 5.0	<5.0	<5.0	< 5.0	< 5.0	16	100	< 5.0	10	12	27	15
Semivolatile Organic Compount Acenaphthene		2,000*	6,100	<0.50	<0.50	< 10	< 10	<0.50	<0.50	<0.50	< 10	< 10	<0.50	<0.50	< 10	< 10	0.71	2.4	< 10	11	10	15	< 10
Acenaphthylene	μg/L μg/L	2,000 470	3,100	<0.50	<0.50	< 10	< 10	<0.50	<0.50	<0.50	< 10	< 10	<0.50	<0.50	< 10	< 10	<1.0	2.4	< 10	1.9	<100	4.2	< 10
Anthracene	μg/L	4.700	31,000	0.066	<0.050	< 10	< 10	0.053	<0.050	<0.050	< 10	< 10	<0.050	<0.050	< 10	< 10	<0.050	2.6	< 10	0.49	<5.0	0.81	< 10
Benzo[a]anthracene	μg/L	1.17	3.92	<0.050	<0.050	<0.050	< 0.20	<0.050	<0.050	<0.050	<0.050	< 0.20	<0.050	<0.050	<0.050	< 0.20	<0.050	0.07	< 0.050	<0.050	<5.0	<0.050	< 0.050
Benzo[a]pyrene	μg/L	0.2*	0.39	< 0.050	<0.050	< 0.050	< 0.20	<0.050	<0.050	< 0.050	< 0.050	< 0.20	< 0.050	< 0.050	< 0.050	< 0.20	< 0.050	< 0.050	< 0.050	<0.050	<5.0	< 0.050	< 0.050
Benzo[b]fluoranthene	μg/L	1.17	3.92	<0.10	<0.10	< 0.10	< 0.20	<0.10	<0.10	<0.10	< 0.10	< 0.20	<0.10	<0.10	< 0.10	< 0.20	<0.10	<0.10	< 0.10	<0.10	<10	<0.10	< 0.10
Benzo[g,h,i]perylene	μg/L	10	10	<0.10	<0.10	< 10	< 10	<0.10	<0.10	<0.10	< 10	< 10	<0.10	<0.10	< 10	< 10	<0.10	<0.10	< 10	<0.10	<10	<0.10	< 10
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 0.050	< 0.050	< 10	< 10	< 0.050	< 0.050	< 0.050	< 10	< 10	<0.050	< 0.050	< 10	< 10	< 0.050	< 0.050	< 10	<0.050	<5.0	<0.050	< 10
Chrysene	μg/L	117	392	<0.050	< 0.050	< 10	< 10	< 0.050	< 0.050	< 0.050	< 10	< 10	<0.050	<0.050	< 10	< 10	< 0.050	< 0.050	< 10	<0.050	<5.0	<0.050	< 10
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	<0.10	< 0.10	< 0.20	<0.10	<0.10	<0.10	< 0.10	< 0.20	<0.10	<0.10	< 0.10	< 0.20	<0.10	<0.10	< 0.10	<0.10	<10	<0.10	< 0.10
,4-Dimethylphenol	μg/L	700* 1.000*	700* 4.100	<10 <0.10	<10 <0.10	< 10	< 10 < 10	<10 <0.10	<10 <0.10	<10 <0.10	< 10 < 10	< 10 < 10	<10 <0.10	<10 <0.10	< 10	< 10 < 10	<10 <0.10	<10 <b>0.98</b>	< 10 < 10	<10 <b>0.29</b>	<10 <10	<10 <b>0.44</b>	< 10 < 10
luoranthene luorene	μg/L μg/L	1,000*	4,100	<0.10	<0.10	< 10	< 10	<0.10	<0.10	<0.10	< 10	< 10	<0.10	<0.10	< 10	< 10	0.10	1.1	< 10	4.0	4.0	5.4	< 10
ndeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	<0.050	<0.050	< 0.050	< 0.20	<0.050	<0.050	<0.050	< 0.050	< 0.20	<0.050	<0.050	< 0.050	< 0.20	<0.050	<0.050	< 0.050	<0.050	<5.0	<0.050	< 0.050
-Methylphenol	μg/L	780	5,100	<10	<10	< 10	< 10	<10	<10	<10	< 10	< 10	<10	<10	< 10	< 10	<10	<10	< 10	<10	<10	<10	< 10
& 4 Methylphenol	μg/L	78	510	<10	<10	< 10	< 10	<10	<10	<10	< 10	< 10	<10	<10	< 10	< 10	<10	<10	< 10	<10	<10	<10	< 10
laphthalene	μg/L	20*	20*	< 0.50	< 0.50	< 10	< 10	< 0.50	< 0.50	< 0.50	< 10	< 10	< 0.50	<0.50	< 10	< 10	18	40	< 10	12	11	28	20
Phenanthrene	μg/L	470	3,100	< 0.050	< 0.050	< 10	< 10	< 0.050	< 0.050	< 0.050	< 10	< 10	< 0.050	< 0.050	< 10	< 10	0.30	2.8	< 10	3.2	<5.0	8.0	< 10
Phenol	μg/L	9,390	61,000	<10	<10	< 10	< 10	<10	<10	<10	< 10	< 10	<10	<10	< 10	< 10	<10	<10	< 10	<10	<10	<10	< 10
Pyrene	μg/L	1,000*	3,100	< 0.050	< 0.050	< 10	< 10	< 0.050	< 0.050	< 0.050	< 10	< 10	< 0.050	< 0.050	< 10	< 10	< 0.050	0.99	< 10	0.20	<5.0	0.39	< 10
.aboratory Results - Inorgan	nic Constitue																						
Antimony	μg/L	6.3	400		< 20	< 20	< 20		< 20	< 20	< 20	< 20		< 20	< 20	< 20		< 20	< 20			< 20	< 20
Arsenic	μg/L	50*	50*		< 50	< 50	< 50	-	< 50	< 50	< 50	< 50		< 50	< 50	< 50		< 50	< 50			< 50	< 50
Barium	μg/L	2,000	7,200		47.4	42.3	53.6	-	38.8	39.7	42.8	38.5		45	48.8	93.9		201	92.5			164	15.8
Beryllium Cadmium	μg/L	7.8	200 51		<0.0100 <0.0050	< 10	< 10 < 5.0	-	< 10	< 10 < 5.0	< 10	< 10 < 5.0		< 10	< 10 < 5.0	< 10 < 5.0		< 10 < 5.0	< 10 < 5.0			< 10 < 5.0	< 10
Chromium	μg/L ug/l	100	310		<0.0050 <b>23.2</b>	< 5.0 17.7	< 5.0 < 10		< 5.0 38.4	< 5.0 <b>39.2</b>	< 5.0 <b>15.7</b>	< 5.0 < 10		< 5.0 < 10	< 5.0 < 10	< 5.0 < 10		< 5.0 < 10	< 5.0 < 10			< 5.0 < 10	< 5.0 < 10
Copper	μg/L μg/L	630	4,100		< 10	< 10	< 10		< 10	< 10	< 10	< 10		< 10	< 10	< 10		< 10	< 10			< 10	< 10
.ead	μg/L	15*	15*		< 10	< 10	< 10		< 10	< 10	< 10	< 10	-	< 10	< 10	< 10		< 10	< 10	-		< 10	< 10
	µg/L	100	2,000		< 20	< 20	< 20		< 20	< 20	< 20	< 20		< 20	< 20	< 20		< 20	< 20			< 20	< 20
lickel	μg/L	4,700	31,000		< 20	< 20	< 20.	-	< 20	< 20	< 20	< 20		< 20	< 20	< 20		< 20	< 20			< 20	< 20
lickel Zinc		2*	2*		< 0.20	< 0.20	< 0.20	-	< 0.20	< 0.20	< 0.20	< 0.20		< 0.20	< 0.20	< 0.20		< 0.20	< 0.20			< 0.20	< 0.20
	μg/L μg/L	310	2,000		<10	15	45		< 10.0	< 10.0	< 10.0	< 10		< 10	< 10	< 10		< 10	< 10			< 10	< 10

-- Not Analyzed

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

4th Semiannual Progress Report May 2017 ERM

	1	Turne 2	Tues 4			MW-07								MW-08					
Parameter	Units	Type 2 RRS	Type 4 RRS	08/06/13	08/13 DUP		08/11/09	03/05/04	02/22/17	08/25/16	04/05/16	04/27/15	08/05/13	02/04/13	02/08/12	02/17/11	02/23/10	08/11/09	12/12/02
Field Groundwater Quality	y Parameters	1		00,00,00	00,1020.	02,00,.0	00,1.,00	00,00,0	V=/==/	00/20/10	0 1,00,10	0.,,2.,,10	00,00,10	02/01/10	02,00,.2	V=,,	02/20/10	00/11/00	
pН	SU	N/A	N/A	5.	.12	5.86	6.59	5.72	6.44	5.73	6.29	5.95	5.08	5.55	5.51	2.19	6.02	5.79	6.10
Specific Conductance	μS/cm	N/A	N/A	18	85	191	230	171	214.10	240.2	300	271	419	273	262	198	339	481	289
Temperature	°Celsius	N/A	N/A	24.	.16	15.37	25.85	18.88	20.65	25.60	20.84	19.59	25.97	20.01	21.22	17.64	17.89	23.98	23.37
Dissolved Oxygen (YSI)	mg/L	N/A	N/A	4.	.35	6.27	5.75	2.10	6.44	0.79	5.56	3.85	3.29	2.10	2.23	2.00	3.43	2.96	0.24
ORP	mV	N/A	N/A	-25	5.1	130.5	-122.4	97.0	106.6	29.0	73.5	59.2	34.6	186.2	73.2	5.7	73.4	-179.9	-8.2
Turbidity	NTU	N/A	N/A	8.0	.62	2.97	1.82	12.9	5.15	0.76	7.76	1.01	0.21	6.62	5.2	78.3	4.31	1.50	1.64
Laboratory Results - Natu	ıral Attenuation	Parameters																	
Nitrogen, Ammonia	mg/L	N/A	N/A																0.894
Nitrogen, Nitrate	mg/L	N/A	N/A			1.3	0.45							0.26	0.38	0.065	0.091	< 0.050	< 0.0500
Sulfate	mg/L	N/A	N/A			33	59							60	55	35	64	92	27.5
Sulfide	mg/L	N/A	N/A			< 1.0	< 1.0							< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.00
Dissolved Manganese	mg/L	N/A	N/A																0.169
Total Manganese	mg/L	N/A	N/A					0.218											0.175
Ferrous Iron	mg/L	N/A	N/A			< 0.10 HF	< 0.01 HF							1.3 HF	0.40 HF	0.19 HF	0.29	2.8	4.86
Total Iron	mg/L	N/A	N/A			19	0.16	1.21						1.8	0.79	1.2	0.99	3.1	4.82
Carbon Dioxide	mg/L	N/A	N/A			120	0.37							110	1800	1.2	1.1	0.77	120
Methane	mg/L	N/A	N/A			< 0.58	<0.19							9.3	1.7	3.3	12	3.7	100
Dissolved Nitrogen	mg/L	N/A	N/A				4.4							17	5300	3.9	4.2	4.7	16
Dissolved Oxygen	mg/L	N/A	N/A			6.5	1.6							5.2	1700	1.4	1.5	1.7	7.5
Laboratory Results - Orga		s																	
Volatile Organic Compound																,			
Benzene	μg/L	5.0*	9	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Disulfide	μg/L	329	1,700	< 5.0	< 5.0	< 2.0			<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 2.0					
Ethylbenzene	μg/L	700*	2,300	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	μg/L	1,000*	1,100	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Xylenes	μg/L	31,000	200,000	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Semivolatile Organic Comp	ounds																		
Acenaphthene	μg/L	2,000*	6,100	< 10	< 10	16		< 10	<0.50	<0.50	< 0.50	< 10	< 10	1.3					< 10
Acenaphthylene	μg/L	470	3,100	< 10	< 10	13		< 10	<1.0	<1.0	< 1.0	< 10	< 10	< 0.19					< 10
Anthracene	μg/L	4,700	31, 000	< 10	< 10	< 0.20		< 10	<0.050	<0.050	< 0.050	< 10	< 10	< 0.19					< 10
Benzo[a]anthracene	μg/L	1.17	3.92	< 0.20	< 0.20	< 0.20			<0.050	<0.050	< 0.050	< 0.050	< 0.20	< 0.19					
Benzo[a]pyrene	μg/L	0.2*	0.39	< 0.20	< 0.20	< 0.20			<0.050	<0.050	< 0.050	< 0.050	< 0.20	< 0.19					
Benzo[b]fluoranthene	μg/L	1.17	3.92	< 0.20	< 0.20	< 0.20			<0.10	<0.10	< 0.10	< 0.10	< 0.20	< 0.19					
Benzo[g,h,i]perylene	μg/L	10	10	< 10	< 10	< 0.20			<0.10	<0.10	< 0.10	< 10	< 10	< 0.19					
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 10	< 10	< 0.20			<0.050	<0.050	< 0.050	< 10	< 10	< 0.19					
Chrysene	μg/L	117	392	< 10	< 10	< 0.20			<0.050	<0.050	< 0.050	< 10	< 10	< 0.19					
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	< 0.20	< 0.20	< 0.20			<0.10	<0.10	< 0.10	< 0.10	< 0.20	< 0.19					
2,4-Dimethylphenol	μg/L	700*	700*	< 10	< 10	< 2.0		< 10	<10	<10	< 10	< 10	< 10	< 1.9					< 10
Fluoranthene	μg/L	1,000*	4,100	< 10	< 10	1.6		< 10	<0.10	<0.10	< 0.10	< 10	< 10	< 0.19					< 10
Fluorene	μg/L	1,000*	4,100	< 10	< 10	6.0		< 10	<0.10	<0.10	< 0.10	< 10	< 10	< 0.19					< 10
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.20	< 0.20	< 0.20			<0.050	<0.050	0.10	< 0.050	< 0.20	< 0.19					
2-Methylphenol	μg/L	780	5,100	< 10	< 10	< 2.0		< 10	<10	<10	< 10	< 10	< 10	< 1.9					< 10
3 & 4 Methylphenol	μg/L	78	510	< 10	< 10	< 2.0		< 10	<10	<10	< 10	< 10	< 10	< 1.9					< 10
Naphthalene	μg/L	20*	20*	< 10	< 10	7.8	< 9.8	< 10	<0.50	<0.50	< 0.50	< 10	< 10	< 0.19	< 5.0	< 9.4	< 9.4	< 11	< 10
Phenanthrene	μg/L	470	3,100	< 10	< 10	0.48		< 10	<0.050	<0.050	< 0.050	< 10	< 10	< 0.19					< 10
Phenol	μg/L	9,390	61,000	< 10	< 10	< 0.99		< 10	<10	<10	< 10	< 10	< 10	< 0.97					
Pyrene	μg/L	1,000*	3,100	< 10	< 10	4.7		< 10	0.16	0.16	< 0.050	< 10	< 10	0.29					< 10
Laboratory Results - Inorg			40	. 22	. 00	. 00	Γ	. 40		. 00	.00	.00	. 00	. 00	ı		ı	ı	1 . 40
Antimony	μg/L	6.3	40	< 20	< 20	< 20		< 40		< 20	< 20	< 20	< 20	< 20					< 40
Arsenic	µg/L	50*	50*	< 50	< 50	< 20		< 50		< 50	< 50	< 50	< 50	< 20					< 50
Barium	μg/L	2,000	7,200	31.2	31.4	100	59	39.6		59.5	48.6	72.5	61.6	66	69	58	64	0.11	56
Beryllium	µg/L	31	200	< 10	< 10	< 4.0				< 10	< 10	< 10	< 10	< 4.0					
Cadmium	mg/L	7.8	51	< 5.0	< 5.0	< 5.0				< 5.0	< 5.0	< 5.0	< 5.0	< 5.0					
Chromium	μg/L	100	310	< 10	< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Copper	μg/L	630	4,100	< 10	< 10	< 20	< 20	< 10		< 10	< 10	< 10	< 10	< 20	< 20	< 20	< 20	< 20	< 10
Lead	μg/L	15*	15*	< 10	< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Nickel	μg/L	100	2,000	< 20	< 20	< 40	< 40	< 20		< 20	< 20	< 20	< 20	< 40	< 40	< 40	< 40	< 40	< 20
Zinc	μg/L	4,700	31,000	< 20	< 20	< 20		< 20		< 20	< 20	< 20	< 20	< 20		-			< 20
Mercury Total Cyanide	μg/L μg/L	2* 310	2* 2,000	< 0.20 < 10	< 0.20 < 10	< 0.20 < 10	< 10	< 0.5 < 10		< 0.20 < 10	 < 10	< 10	 < 10	 < 10	< 0.5 < 10				

Notes:

Analyte was detected above laboratory detection limit

'Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level
RRS - Risk Reduction Standard
SU - Stamdard Units
µS/cm - microsiemens per centimeter
µg/L - micrograms per liter
mg/L - milligrams per liter
m/V - milligrams per liter
N/A - RRS are not applicable to this parameter
- Not Analyzed
HF - Holding time of 15 minutes was exceeded

HF - Holding time of 15 minutes was exceeded

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

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Parameter	Units	Type 2 RRS	Type 4 RRS	00/06/12	02/07/12	11/07/12	09/00/12	08/12 DUP	05/16/12	02/07/12	11/16/11	09/11/11	05/05/11	02/22/11	11/00/10	00/40/40	05/10/10		V-09 (Aband		03/10/06	12/22/05	00/20/05	03/15/05	12/16/04	10/01/04	06/00/04	03/04/04	12/19/02	00/00/02	06/11/03	02/11/02	12/11/02	00/17/03
eld Groundwater Quality	v Parameters	KKS	KKS	06/06/13	02/07/13	11/07/12	00/09/12	100/12 DUF	05/16/12	02/07/12	11/10/11	06/11/11	03/03/11	02/23/11	11/09/10	06/10/10	03/10/10	02/23/10	00/13/09	00/00/00	03/10/06	12/22/05	09/29/05	03/15/05	12/10/04	10/01/04	00/09/04	03/04/04	12/10/03	09/09/03	00/11/03	03/11/03	12/11/02	09/17/02
H	SU	N/A	N/A	5.35	6.16	6.10	5.97	5.97		6.22	4.91	6.09	5.99	6.13	6.04	5.95	5.72	6.03	6.02	6.61	6.44	6.16	6.45	6.47	6.36	6.04	6.52	6.43	6.39	5.37	6.6	6.19	6.23	6.24
Specific Conductance	μS/cm	N/A	N/A	495	467	476	445	445		419	378	518	523	468	479	495	480	482	486	536	494	292	402	431	493	314	561	408	424	477	501	577	399	454
emperature	°Celsius	N/A	N/A	23.01	12.14	20.94	25.47	25.47		17.89	18.80	27.19	20.47	20.42	26.10	25.96	20.73	17.67	25.96	23.30	18.72	19.88	24.43	19.15	23.02	24.92	21.32	18.77	20.72	23.76	22.88	18.72	21.69	26.69
issolved Oxygen (YSI)	mg/L	N/A	N/A	0.67	0.14	0.78	0.60	0.60		4.04	0.50	0.22	0.16	0.09	0.08	0.09	0.43	0.60	2.15	0.28	0.44	0.77	0.27	2.66	1.68	0.84	0.11	0.65	0.26	0.29	0.10	0.04	0.18	0.12
)RP	mV	N/A	N/A	-29.2	-50.10	-73.3	-21.10			-30.2	210.1	130.5	-97.4	-62.6	-65.3	-64.9	-57.2	-55.3	-11.5	-92.2	-72.2	9.5	-26.3	-88.4	-81.9	43.4	-108.7	-3.1	-143.3	-87.8	-94	-63.7	-73.4	-60.6
urbidity aboratory Results - Natu	NTU	N/A Parameters	N/A	1.77	1.06	6.24	4.38	4.38		9.85	306	666	1.95	0.41	3.47	5.34	8.51	15.1	2.5	2.74	3.0	3.54	4.27	1.17	2.08	0.05	0.70	2.75	2.20	3.29	1.1	2.8	0.10	3.75
litrogen, Ammonia	mg/L	N/A	N/A	Т		T	T	Т	T	I	T		Т		Т	Т	T				1			0.57	0.61	< 0.20	0.56	0.78	0.39	0.83	0.429	0.289	0.274	0.280
litrogen, Nitrate	mg/L	N/A	N/A		< 0.050					6.4				< 0.050				< 0.050	<0.25					< 0.500	< 0.0500	0.0687	< 0.0500	< 0.500	< 0.0500	< 0.0500	< 0.500	< 0.0500	< 0.0500	0.059
Sulfate	mg/L	N/A	N/A		< 5.0					100				< 5.0				< 5.0	9.0					1.29	3.08	35.2	2.63	9.23	24.0	2.17	14.5	83	13.3	12.6
Sulfide	mg/L	N/A	N/A		< 0.010					1.70		-		< 1.0				< 1.0	< 1.0					< 1.0	1.2	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.00	< 1.00
Dissolved Manganese	mg/L	N/A	N/A																					0.693	0.646	0.131	0.804	0.684	0.655	0.792	0.81	0.916	0.450	0.685
Total Manganese	mg/L	N/A N/A	N/A N/A		 16 HF					 < 10 HF				 8.2 HF				26	13					0.696 20.2	0.656 17.0	0.114 1.0	0.783 46.5	0.712 28.3	0.668 10.7	0.804 32.8	0.831 14.1	0.938 12.8	0.462 18.6	0.573 16.9
Ferrous Iron Total Iron	mg/L mg/L	N/A	N/A		44				-	< 10 HF				39				45	37					29.0	28.2	0.793	34.9	25.3	16.8	35.0	25.9	11.9	18.3	17.7
Carbon Dioxide	mg/L	N/A	N/A		170					3.3				2.7				2.9	2.3					110	130	140	120	130	130	120	140	160	140	160
Methane	mg/L	N/A	N/A		1300					1300				1500				1400	1200					2,500	2,200	130	2,200	1,600	570	1,800	1,700	810	1,800	2,200
Dissolved Nitrogen	mg/L	N/A	N/A							4.4				3.9				3.3	4.0					19	17	16	15	21	17	14	15	19	15	16
Dissolved Oxygen	mg/L	N/A	N/A		2.9				-	1.5				1.2				0.95	1.2					1.8	0.81	1.2	0.46	0.95	1.1	0.53	0.58	0.72	6.0	4.3
_aboratory Results - Orga		s																																
/olatile Organic Compound		5*	9	1,300	1.300	1.300	640	1.300 D	1300	980	20	020	1.200	880	910	1.000	1,100	1,000	940	900	980	< 5.0	600	600	830	11	1 100	440	60	410	470	120	020	1 100
Benzene Carbon Disulfide	μg/L μg/L	329	1,700	< 5.0	< 20	< 50	< 50	< 2.0	< 250	980	29	930	1,200		910	1,000	1,100	1,000	940	900	980	< 5.0 	600	600	830		1,100	440	60	410	470	120	830	1,100
Ethylbenzene	μg/L μg/L	700*	2,300	2,800	2,200	2,500	1,300	<b>2,700</b> D	2,600	2,100	170	1,800	2,900	2,100				2,200	2,500	2,000	2,300	13	1,700	1,400	1,800	18	2,900	890	120	390	940	300	1,800	2,200
Toluene	μg/L	1,000*	1,100	790	500	580	290	<b>590</b> D	580	480	< 5.0	510	680	450				600	460	1,400	1,500	< 5.0	560	640	1,200	< 5.0	1,100	290	25	480	500	23	780	970
Total Xylenes	μg/L	31,000	200,000	5,300	3,800	4,600	2,400	<b>4,900</b> D	4,500	3,800	82	2,600	4,300	3,800				3,700	3,300	4,200	4,800	7.4	2,800	1,900	3,500	18	4,100	490	89	1,600	980	136	1,000	3,600
Semivolatile Organic Compo						,	,								,		1									•								
Acenaphthene	μg/L	2,000*	6,100	< 10	29	45	36	33	33															70	64	< 10	87	74	26	93	64	21	45	33
Acenaphthylene Anthracene	μg/L μg/L	470 4,700	3,100 31,000	<b>52</b> < 10	2.4	68 4.2	52 3.4	49 3.9	47 2.2															<b>36</b> < 10	<b>51</b> < 10	< 10 < 10	<b>47</b> < 10	<b>18</b> < 10	< 10 < 10	<b>61</b> < 10	<b>22</b> < 10	< 10 < 10	<b>29</b> < 10	<b>30</b> < 10
Benzo[a]anthracene	μg/L μg/L	1.17	3.92	0.47	< 2.4	< 1.9	< 1.9	< 1.9	< 2.1															< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 	< 10 	< 10
Benzo[a]pyrene	μg/L	0.2*	0.39	0.45	< 2.4	< 1.9	< 1.9	< 1.9	< 2.1																									
Benzo[b]fluoranthene	μg/L	1.17	3.92	0.44	< 2.4	< 1.9	< 1.9	< 1.9	< 2.1																									
Benzo[g,h,i]perylene	μg/L	10	10	< 10	< 2.4	< 1.9	< 1.9	< 1.9	< 2.1																									
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 10	< 2.4	< 1.9	< 1.9	< 1.9	< 2.1																									
Chrysene	μg/L	117	392	< 10	< 2.4	< 1.9	< 1.9	< 1.9	< 2.1																									
Dibenz(a,h)anthracene 2,4-Dimethylphenol	μg/L μg/L	0.3* 700*	0.39 700*	0.22 52	< 2.4 180	< 1.9 <b>210</b>	< 1.9 <b>180</b>	< 1.9 170	< 2.1 140															15	22	< 10	< 10	< 10	< 10	< 10	 < 10	 < 10	 15	15
Fluoranthene	μg/L	1,000*	4.100	< 10	< 2.4	2.0	< 1.9	< 1.9	< 2.1															< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Fluorene	μg/L	1,000*	4,100	< 10	20	30	25	25	22															26	24	< 10	31	23	< 10	38	23	< 10	15	15
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	0.35	< 2.4	< 1.9	< 1.9	< 1.9	< 2.1																									
2-Methylphenol	μg/L	780	5,100	< 10	< 24	< 19	58	56	72															< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3 & 4 Methylphenol	μg/L	78	510	< 10	< 24	< 19	< 19	< 19	< 21				4.000		4.000	4.500				4 000	4 400	47	4 000	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Naphthalene Phenanthrene	μg/L μg/L	20* 470	20* 3.100	2,400 67	1,400 45	4,900 83	2,000 D 64	2,000 D	2,500 46	3,700	300	2,100	4,300	3,800	4,000	4,500	3,100	2,000	3,000	1,000	1,400	17	1,300	1,300 89	2,200 91	<b>42</b> < 10	2,500 120	910 84	180 50	210 120	820 91	290 21	890 63	730 43
Phenol	μg/L	9.390	61.000	< 10	20	< 9.7	13	13	26															< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Pyrene	μg/L	1,000*	3,100	< 10	< 2.4		2.1	2.2	< 2.1															< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Laboratory Results - Inorg	ganic Constituen	nts	•	•		•	•		•	•	•		•	•	•	•	•	•		•				•	•	•	•	•	•	•		•		
Antimony	μg/L	6.3	40	< 20	< 20	< 20	< 20	< 20	< 20															< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40
Arsenic	μg/L	50*	50*	< 50	< 20	< 20	< 20	< 20	< 20															< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Barium	μg/L	2,000	7,200	893	790	840	770	<b>760</b> < 4.0	<b>1,300</b> < 4.0	36	91	820	700	620				550	360	211	210	59.9	167	155	160	54.7	152	111	97.8	165	122	71.6	113	133
Beryllium Cadmium	μg/L μg/L	7.8	200 51	< 10 < 5.0	< 4.0 < 5.0	< 4.0 < 5.0	< 4.0 < 5.0	< 4.0 < 5.0	< 4.0 < 5.0																									
Chromium	μg/L	100	310	< 10	< 10	< 10	< 10	< 10	44	< 10	< 10	< 10	< 10	< 10				< 10	< 10	< 10.0	< 10.0	< 10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Copper	μg/L	630	4,100	< 10	< 20	< 20	< 20	< 20	85	< 20	< 20	< 20	< 20	< 20				< 20	< 20	< 10.0	< 10.0	< 10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Lead	μg/L	15*	15*	< 10	< 10	< 10	< 10	< 10	110	< 10	< 10	13	< 10	< 10				< 10	< 10	< 10.0	< 10.0	< 10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Nickel	μg/L	100	2,000	20.5	< 40	< 40	< 40	< 40	44	< 40	< 40	< 40	< 40	< 40				< 40	< 40	< 20.0	< 20.0	< 20.0	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Zinc	μg/L	4,700 2*	31,000 2*	< 20 < 0.20	< 20 < 0.20	<b>28</b> < 0.20	<b>49</b> < 0.20	<b>49</b> < 0.20	2,900 200															< 20 < 0.5	< 20 < 0.5	< 20	< 20 < 0.5	< 20 < 0.5	< 20 < 0.5	< 20 < 0.5	< 20 < 0.5	< 20 < 0.5	< 20 < 0.5	< 20 < 0.5
Mercury Total Cyanide	μg/L μg/L	310	2,000	< 10	< 10		< 10			 < 10				< 10				 < 10	10	< 10	< 10	 < 10	< 10	< 0.5	< 0.5	< 0.5 < 10	< 10.5				< 0.5 < 10		< 0.5 < 10	
Notes:	F3/-	010	_,500	\ 10	\ 10	_ \ 10	_ \ 10	, 10	\ 10	\ 10				\ 10				, 10	10	× 10	\ 10	\ 10	\ 10	\ 10	\ 10	× 10	\ 10	× 10	\ 10	\ 10	\ 10	~ 10	\ 10	<u> </u>
Analyte was detected above Analyte concentration exceptibilities RRS equals Type of the AMSL - feet Above Mean RRS - Risk Reduction Stands U - Stamdard Units   µS/cm - microsiemens per cup/L - micrograms per liter  my/L - milligrams per liter  mV - millivolts	ceeds the Type 4 1 RRS; therefore, Sea Level dard	4 RRS (RRS	applicable t			his chemical																												
NTU - nephelometric turbidii N/A - RRS are not applicabl Not Analyzed HF - Holding time of 15 mini Values are listed with the lal	ole to this paramete	ed	significant fig	jures, which	varies betwe	een different	constituents	within the sa	me groundwa	iter sample,	and betweel	n the same	constituent i	n different we	ells.																			

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Units	Type 2	Type 4			-10	1					1		1	1	MW-11								
	RRS	RRS	08/24/16	04/07/16	02/06/13	09/17/02	02/07/13	02/08/12	02/17/11	02/23/10	08/12/09	03/15/05	12/15/04	09/30/04	06/08/04	6/04 DUP	03/03/04	12/17/03	09/09/03	06/11/03	03/11/03	12/09/02	09/17/
y Paramete	_					1				7	T		T	,									
SU	N/A	N/A	5.83	6.06	5.65	5.72	5.59	5.32	5.49	5.43	5.96	5.43	5.37	5.33	5.64	5.64	5.45	5.52	5.50	5.56	5.40	5.35	5.3
μS/cm °Celsius	N/A N/A	N/A N/A	325.9 26.56	200 19.02	287 20.56	350 23.11	293 17.27	322 19.4	304 16.77	474 12.92	330 28.79	278 19.03	314 23.03	324 28.66	314 24.53	314 24.53	273 18.37	305 22.95	301 27.51	300 23.95	294 19.14	276 23.37	29 29.
mg/L	N/A	N/A	0.09	1.87	2.33	0.23	2.94	0.67	0.84	0.49	2.48	2.08	4.11	0.35	0.63	0.63	0.38	0.16	0.23	0.25	0.21	0.46	0.0
mV	N/A	N/A	20.7	80	159.8	40.1	187.8	71.1	44.7	20.43	75.4	157.7	242.5	158.6	148.7	148.7	107.8	190.8	21.4	156.3	227.6	273.3	194
NTU	N/A	N/A	1.44	23.9	1.79	2.11	4.02	7.76	0.65	0.57	0.00	0.00	4.3	0.00	0.89	0.89	0.23	0.00	0.00	0.00	2.4	0.00	0.1
ıral Attenua	ation Param	neters																					
mg/L	N/A	N/A				< 0.200						< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.200	< 0.200	< 0.200	< 0
																							1.0
J																							<b>65</b>
																		_					0.3
																					_		0.3
mg/L	N/A	N/A			< 0.10 HF	< 0.200 HF	< 0.10 HF	0.17 HF	0.15 HF	< 0.010	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.2	< 0.1	< 0.100	< 0.200	< 0.2
mg/L	N/A	N/A			< 0.10	0.735	< 0.10	0.13	< 0.010	< 0.010	< 0.1	< 0.1	0.119	< 0.1	< 0.1	< 0.1	< 0.1	< 0.100	< 0.100	0.108	< 0.100	< 0.100	< 0.
mg/L	N/A	N/A			130	**	130	2.4	1.8	1.8	1.3	160	180	180	170	170	170	170	130	190	180	**	17
					< 0.58		< 0.58																0.5
_				-																			15
Ü		IN/A			8.5		5.8	1.6	1.6	1.6	1.4	2.9	2.4	1.5	1.2	2.1	1.6	2.1	2.6	1.3	1.2		7.
is	LUCIILS																						
μg/L	5.0*	9.0	<5.0	< 5.0	< 1.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5
μg/L	329	1700	<5.0	< 5.0	< 2.0		< 2.0														-		
μg/L	700*	2,300	<5.0	< 5.0	< 1.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5
μg/L	1,000*	1,100	<5.0	< 5.0	< 1.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5
μg/L	31,000	200,000	<5.0	< 5.0	< 2.0	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5
	0.000+	0.400	0.50	0.50	0.00	40	0.00				1	40	10	10	40	40	40	10	40	40	40	40	
									-		-												< '
		-,																					<
								-															
	0.2*	0.39	<0.050	< 0.050	< 0.20		< 0.20																-
μg/L	1.17	3.92	<0.10	< 0.10	< 0.20		< 0.20	1									1				1		-
μg/L	10	10	<0.10	< 0.10	< 0.20		< 0.20											-					-
μg/L	11.7	39.2	<0.050	< 0.050	< 0.20		< 0.20																
									-		ļ							+					
								-	-														< 1
																							< 1
μg/L	1,000*	4,100	<0.10	< 0.10	< 0.20	< 10	< 0.20					< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1
μg/L	1.17	3.92	< 0.050	< 0.050	< 0.20		< 0.20	-									-						
μg/L	780	5,100	<10	< 10	< 2.0	< 10	< 2.0					< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1
μg/L	78	510	<10	< 10		< 10						< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1
																							< 1
									-		-												< 1 < 1
																		_					< 1
. 0		-,	40.000	₹ 0.000	V 0.20	V 10	₹ 0.20			l .		110	V 10	V 10	` ` '								
μg/L	6.3	40	< 20	< 20	< 20	< 40	< 20					< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 4
μg/L	50*	50*	< 50	< 50.0	< 20	< 50	< 20	-				< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 5
μg/L	2,000	7,200	60.8	86.1	47	79.8	31	30	33	42	36	35.7	38.8	39.7	37.8	37.8	38.8	42	42.7	43.4	41.8	43	46
mg/L	31	200	< 10	< 10	< 4.0		< 4.0																
μg/L		51																					<del>  -</del>
																							< 1 < 1
																							< 1
			< 20	< 20	< 40	< 20	< 40	< 40	< 40	< 40	< 40	< 20	< 20			< 20	< 20	< 20	< 20		< 20		< 2
μg/L	4,700	31,000	< 20	< 20	< 20	< 20	< 20					< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 2
μg/L	2*	2*	< 0.20	< 0.20	< 0.20	< 0.5	< 0.20	-				< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0
μg/L	310	2,000	< 10	< 10	< 10	< 10	< 10	< 10	< 10	20	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1
	NTU mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	NTU   N/A   ral Attenuation Param   mg/L   N/A   N	NTU   N/A   N/A   N/A   ral Attenuation Parameters   mg/L   N/A   N/A   N/A   mg/L   N/A   N/A   N/A   N/A   Mg/L   N/A   N/A   N/A   Mg/L   N/A   N/A   N/A   Mg/L   N/A   N/A   N/A   Mg/L   N/A   N/A   N/A   N/A   N/A   Mg/L   N/A   N/A   N/A   N/A   N/A   N/A   Mg/L   N/A   N/A   N/A   N/A   Mg/L   N/A   N/A   N/A   N/A   N/A   Mg/L   N/A   N/A   N/A   N/A   N/A   Mg/L   N/A   N/A   N/A   N/A   N/A   N/A   N/A   N/A   Mg/L   N/A   N/A	NTU   N/A   N/A   1.44     ral Attenuation Parameters     mg/L   N/A   N/A       mg/L   N/A   N/A   N/A       mg	NTU   N/A   N/A   1.44   23.9   ral Attenuation Parameters   mg/L   N/A   N/A   N/A           mg/L   N/A   N/A   N/A         mg/L   N/A   N/A   N/A           mg/L   N/A   N/A   N/A         mg/L   N/A   N/A   N/A         mg/L   N/A   N/A   N/A         mg/L   N/A   N/A   N/A         mg/L   N/A   N/A   N/A         mg/L   N/A   N/A           mg/L   N/A   N/A         mg/L   N/A   N/A           mg/L   N/A   N/A           mg/L   N/A   N/A             mg/L   N/A   N/A             mg/L   N/A   N/A               mg/L   N/A   N/A	NTU   N/A   N/A   1.44   23.9   1.79	NTU	NTU	N/A   N/A   N/A   1.44   23.9   1.79   2.11   4.02   7.76	NTU	NATION   NA	NATION   NA	NATION   NA	NA	No.   No.   1,46   23.0   1,76   27.0   27	The   No.   No.   1.44	No.   No.   No.   Let   23   179   211   Alig.   770   0.85   0.87   0.80   0						

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188 400	
MW-12R   02/06/13   02/09/12   02/15/11   2/11 DUP   02/23/10   08/12/09   06/06/06   03/08/06   12/21/05   09/29/05   03/25/05   12/14/04   10/04/04   06/09/04   03/03/04   12/17/03   09/09/03   06/10/03   03	3 12/10/02 09/18/02 11/06/01
020010 020012 021011 011000 000000 0300000 0300000 03020000 0302000 0302000 0302000 0302000 0302000 0302000 0302000 03020000 0302000 0302000 0302000 0302000 0302000 0302000 0302000 0302000 0302000 0302000 0302000 0302000 0302000 0302000 0302000 03020000 03020000 03020000 030200000000	12/10/02 09/10/02 11/00/01
4.05         4.03         4.10         4.15         6.01         3.63         3.61         3.71         3.70         5.13         3.52         3.26         4.33         3.71         3.75         3.75         3.66         3.	4.61 4.44 5.62
642 649 567 567 584 468 630 667 630 723 497 752 817 690 887 1492 1280 1196 90	617 964 788
19.63     17.49     17.92     17.92     17.34     24.75     23.54     19.1     21.44     26.97     19.23     22.21     26.29     22.34     18.30     21.64     25.68     22.44     18.30       1.24     1.26     4.12     4.12     0.70     4.13     0.20     0.42     0.83     0.26     0.52     2.61     0.67     0.60     0.88     0.24     0.21     0.40     0.40       1.24     1.26     4.12     4.12     0.70     4.13     0.20     0.42     0.83     0.26     0.52     2.61     0.67     0.60     0.88     0.24     0.21     0.40     0.40       1.24     1.26     4.12     0.70     4.13     0.20     0.42     0.83     0.26     0.52     2.61     0.67     0.60     0.88     0.24     0.21     0.40     0.40	22.56 27.83 25.85
1.24     1.26     4.12     4.12     0.70     4.13     0.20     0.42     0.83     0.26     0.52     2.61     0.67     0.60     0.88     0.24     0.21     0.40     0.       295.4     54.2     239.0     239.0     312.1     -77.1     357.7     361.1     364.6     278.0     333.2     347.0     338.2     283     262.9     275.9     296     309.2     28	0.22         0.06         0.22           211.9         208.7         11.0
2007 2007 2007 2007 2007 2007 2007 2007	0.00 7.60 8.42
	<u> </u>
	5.57 8.64 7.23
0.64	< 0.050 <b>0.075</b> < 0.050
290   270   260   250   230           227   161   164   134   517   487   607   378   488   489   48	301   457   281     < 1.00   < 1.00   < 1.00
0.889 0.953 1.10 0.923 1.06 1.25 1.60 1.44 1.	0.950 1.36 0.974
	0.945 1.22 1.01
14 HF	35.5 38.0 21.4
15 17 13 13 9.8 41 10.2 10.6 11.3 25.2 29.1 31.0 68.4 46.3 45	25.5 43.9 79.6
110         2.2         1.3         1.3         2.4         0.85            180         160         150         170         170         120         130         180         20           51         79         31         34         36         1.7            14         6.9         4.3         25         10         16         7.6         21         4	210 180 160 82 33 40
	15 22 11
6.3 1.8 1.4 1.5 1.3 1.5 4.6 1.6 2.3 0.81 1.1 1.5 2.4 0.81 0.	7.2 8.2 0.98
<1.0	< 5.0 <b>5.9 31</b>
< 2.0	 < 5.0 < 5.0 < 5.0
< 1.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < 5.0 < < 5.0 < < 5.0 < < 5.0 < < 5.0 < < < < < > < < < > < < < > < < < > < < < < > < < < < > < < < < < > < < < < < < < > < < < < < < < > < < < < < < < < < < < < > < < < < < < < < < < < < > < < < < < < < < < < < < < < < < < < < <	< 5.0 < 5.0 < 5.0 12
	< 5.0 < 5.0 < 5.0
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	< 10 < 10 < 10
<0.97 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10	< 10 < 10 < 10
0.47 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10	< 10 < 10 < 10
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<5.0	
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<0.20	< 0.5 < 0.5 < 0.5
74 73 66 66 46 <10 <10 <10 <10 12 <10 <10 44 18 39 21 33 10 2	19 30 19
<5.0	<10 <10 <10 <10 <20 51 <0.5

FI HG - Holding time of 15 minutes was exceeded

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

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i <del>-</del>																																									
Parameter	Units	Type 2	Type 4				T		T	T		MW-												T		T		I	T T			2I (continue				T					
Field Groundwater Quali	n. Davamata	RRS	RRS	02/24/17	08/24/16	08/06/13	02/05/13	11/06/12	08/08/12	08/12 DUP	05/15/12	02/09/12	11/15/11	08/09/11	05/03/11	05/11 DUP	02/15/11	11/10/10	08/10/10	05/10/10	02/24/10	08/14/09	06/07/06	06/06 DUP	03/09/06	12/21/05	09/29/05	09/05 DUP	03/16/05	03/05 DUP	12/16/04	10/04/04	10/04 DUP	06/09/04	03/04/04	12/17/03	09/09/03	06/10/03   03/1	2/03 12/10	10/02   09/18	8/02 11/07/01
nH	y Paramete	ers N/A	N/A	5.58	5.60	5.69	5.75	5.56	5.16	5.16	6.06	5.52	5.64	5.65	5.48	5.48	5.56	5.47	5.65	5.51	5.78	5.98	5.81	5.81	5.65	5.59	5.49	5.49	5.56	5.56	5.49	5.59	5.59	6.08	5.81	5.83	5.81	5.92 5.8	.86 5.7	.79 5.8	39 5.88
Specific Conductance	μS/cm	N/A	N/A	625.7	613.2	634	605	584	593	593	595	564	559	561	532	532	479	497	516	505	506	391	460	460	395	359	407	407	381	381	413	388	388	463	472	750	517			13 54	
Temperature	°Celsius		N/A	21.62	22.28	24.30	21.06	19.07	22.92	22.92	24.91	18.92	24.05	24.57	23.52	23.52	19.85	23.72	25.71	20.70	13.52	27.54		21.93	21.10	21.98	24.39	24.39	20.77	20.77	23.84	24.82	24.82	21.57	21.05	23.16	24.52	21.94 21.	.34 23	3.53 25.	.2 24.37
Dissolved Oxygen (YSI)	mg/L	N/A	N/A	0.22	0.10	0.76	0.42	0.34	0.21	0.21	0.59	0.21	0.22	0.16	0.23	0.23	1.29	0.19	2.7	0.39	7.04	6.61	0.19	0.19	0.25	0.28	0.15	0.15	0.80	0.80	3.06	2.22	2.22	0.56	0.28	0.26	0.26	0.06 0.0	.09 0.3	.38 0.0	0.25
ORP	mV	N/A	N/A	83.4		91.6				66.5		72.6	81.7	212.4	-405.7	-405.7	78.3	93.6	-37.9		64.6	-105.3			-28.3		-99.7	-99.7	113.3	113.3	89.9	37.1	37.1	18.7						0.4 21	
Turbidity	NTU		N/A	9.20	7.50	9.20	9.09	0.29	1.72	1.72	8.53	9.59	4.6	9.21	9.60	9.60	9.26	0.49	5.72	9.83	50.7	8.81	0.42	0.42	4.2	0.00#	1.10	1.10	1.09	1.09	0.96	0.73	0.73	1.96	4.95		1.10	26.1 4.	.3 3.	3.2 1.5	5 6.8
Laboratory Results - Nat					1			_												1	1								244	244	2.04	2 57		244	2.70	204	2.44	2.00	72 2	.51 2.8	36 2.86
Nitrogen, Ammonia Nitrogen, Nitrate	mg/L mg/L	N/A N/A	N/A N/A				< 0.050		-		-	< 0.050					< 0.050			-	< 0.050	< 0.050		-					2.14 0.186	2.44 0.139	3.01 0.209	2.57 0.0732		<b>2.44</b> < 0.5				3.09 2.7 < 0.0500 < 0.0			
Sulfate	mg/L	N/A	N/A				210					190		-			160		-		140	110					-		102	103	93.8	112		248	134	126	193				0 232
Sulfide	mg/L	N/A	N/A				< 1.0					< 1.0	-				< 1.0				< 1.0	< 1.0							< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		1.0 < 1.	1.00 < 1.	
Dissolved Manganese	mg/L	N/A	N/A								-		-			-	-					-		-					1.36	1.40	1.39	1.22		1.47	1.44	1.49	1.28	1.32 1.5	.55 1.8	.84 1.7	76 1.69
Total Manganese	mg/L	N/A	N/A										-			-						-							1.46	1.46	1.34	1.19	1.26	1.44	1.53	1.46	1.22			.67 1.6	
Ferrous Iron	mg/L	N/A	N/A				14 HF					11 HF					9.2 HF				7.5	4.6							10.6	10.5	7.9	7.0		30.2	27.1	19.6	25.7				.6 25.7
Total Iron	mg/L	N/A	N/A N/A	-		-	14					14	-			-	1.4				32	4.6		-					9.58	9.39	9.36	6.72	7.33	24.7	25.0	24.4	24.0	67 25		7.5 27.	
Carbon Dioxide Methane	mg/L mg/L	N/A N/A	N/A			-	100 120		-		-	2.3 240		-			56				1.6 65	0.24			-				200 48	200 15	200 82	190 63		170 33		160 39	38 0.91			70 16 59 54	
Dissolved Nitrogen	mg/L		N/A			_	18				-	5.3	-				4.6				3.4	4.5							25	23	15	9.2		19	21	18	12			16 16	
Dissolved Oxygen	mg/L		N/A				6.3					1.6		-			1.6		-		1.2	1.7					-			5.6					0.85			0.60 0.9			0 0.74
Laboratory Results - Org	anic Consti	tituents		•										,								•																		•	
Volatile Organic Compoun	ds																																								
Benzene	μg/L	5*	9	<5.0	<5.0	< 5.0							< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	140	140	180	460	630	590	26	24	69	21	23	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 < 5			5.0 < 5.0
Carbon Disulfide	µg/L	329 700*	1,700 2,300	<5.0	<5.0	< 5.0			< 2.0	< 2.0	< 2.0			 - E O	 - E O	 - E O	 - E O															 - E O		 - E O					E 0 . E	E 0 . E	
Ethylbenzene Toluene	μg/L	1,000*	1,100	<5.0 <5.0	<5.0 <5.0	< 5.0 < 5.0	< 1.0 < 1.0		< 1.0 < 1.0	< 1.0	< 1.0 < 1.0	< 5.0 < 5.0				< 5.0 < 5.0	< 5.0 < 5.0		6.8 5.0	6.3 5.9	15 16	23 22	24 22	< 5.0 < 5.0	< 5.0 < 5.0	<b>6.2</b> < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0				5.0 < 5 5.0 < 5	i.0 < 5.0 i.0 < 5.0					
Total Xvlenes	µg/L		200,000						< 2.0					< 5.0			< 5.0				< 5.0										< 5.0							< 5.0 < 5			i.0 < 5.0
Semivolatile Organic Com	oounds	0.,000		40.0	40.0	10.0	1 12.0	12.0	12.0	12.0	12.0	10.0	4 0.0	4 0.0	1 0.0	1 0.0	10.0				1 0.0	10.0					110		10.0	10.0	10.0	10.0	10.0	۷ 0.0	10.0	10.0	10.0	10.0	2.0	0.0	0 10.0
Acenaphthene	μg/L	2,000*	6,100	1.6	6.8	< 10	14	7.9	15	14	8.4		-				-					-		-					18	18	< 10	15	16	24	22	37	23	17 2	20 3	33 27	7 64
Acenaphthylene	μg/L	470	3,100	<1.0	4.4	< 10	14	7.8	16	15	8.5		-	-		-	-					-		-					52	50	< 10	43	46	71	66	90	60			00 75	5 22
Anthracene	μg/L	4,700	31,000	0.24	0.43	< 10			0.8	0.8							-					-							< 10	< 10	< 10	< 10	< 10	< 10	< 10					10 < 1	
Benzo[a]anthracene	μg/L	1.17	3.92	0.26	0.60	0.47	0.62		0.72	0.72	0.38		-			-	-					-		-			-		-												
Benzo[a]pyrene Benzo[b]fluoranthene	μg/L	0.2* 1.17	0.39 3.92	<0.050 <0.10	<b>0.072</b> <0.10	< 0.20	< 0.19	< 0.23	< 0.19	< 0.19	< 0.22		-				-			-	-	-		-					_				-		-	-					
Benzo[g,h,i]perylene	μg/L μg/L	10	10	<0.10	<0.10	< 10			< 0.19				-				_																			-					
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 0.050	< 0.050	< 10	< 0.19		< 0.19	< 0.19	< 0.22			-			-		-			-					-			-											
Chrysene	μg/L	117	392	0.17	0.41	< 10	0.5	0.49	0.56	0.59	0.34			-			-		-	_		-		-			-		-	-						-					_
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	<0.10	< 0.20	< 0.19		< 0.19	< 0.19	< 0.22	-	-			-	-	-				-						-		-			-			-					
2,4-Dimethylphenol	μg/L	700*	700*	<10	<10	< 10	< 1.9		< 1.9	< 1.9	< 2.2																		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 < 1		10 < 1	
Fluoranthene	μg/L	1,000*	4,100	3.1	7.5	< 10	11	9.5	11	10	6.3		-	-			-					-		-			-		< 10	< 10	< 10	< 10	< 10	< 10	< 10	13	< 10			12 < 1	
Fluorene Indeno[1,2,3-cd]pyrene	µg/L	1,000* 1.17	4,100 3.92	<b>3.6</b> <0.050	9.5 <0.050	14 < 0.20	<b>27</b> < 0.19	< 0.23	<b>34</b> < 0.19	< 0.19	< 0.22		-				-				-			-					40	39	< 10	35	38	48	46	69	46		43 65	55 51	
2-Methylphenol	μg/L μg/L	780	5.100	<10	<10	< 10	< 1.9		< 1.9	< 1.9	< 2.2																		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10				10 < 1	
3 & 4 Methylphenol	μg/L	78	510	<10	<10	< 10	< 1.9	< 2.3	< 1.9	< 1.9	< 2.2		_				-				-								< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10				10 < 1	
Naphthalene	μg/L	20*	20*	7.9	< 0.50	< 10			0.49	0.46	6.7	18	< 5.0	< 5.0	15	14	6.3	9.1	< 5.0	80	< 9.8	< 9.4	530	580	440	710	810	910	63	66	< 10	57	59	18	< 10	25	< 10			52 24	
Phenanthrene	μg/L	470	3,100	0.25	0.36	< 10	0.97	1.1	1.2	1.1			-				-					-		-			-		14	13	< 10	11	12	14	14	20	< 10			24 15	5 15
Phenol		9,390	61,000 3,100	<10	<10	< 10			< 0.97	< 0.96		-	-	1			-	-				-		-				-	< 10	< 10	< 10		< 10	< 10							
Pyrene			3,100	4.2	8.7	< 10	14	13	15	15	9.3													-					< 10	< 10	< 10	< 10	10	11	13	15	< 10	< 10 1:	2 1	15 11	1 < 10
Laboratory Results - Inor			40		~0.0200	< 20.0	< 20	< 20	< 20	< 20	< 20				П						1	1							< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40 < 4	40 < 4	40 < 4	10 < 40
Antimony Arsenic	μg/L μg/L	6.3 50*	50*		<0.0200	< 50.0	< 20	< 20	< 20	< 20	< 20		_							-				H =	-				< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50			50 < 5	
Barium	μg/L	2.000	7,200		< 20				27	27	25	26		30	26	26	27	-		-	100	64		159	172		216		69.9	69.5	85.5	77.5	82.8	68.6		74.8					2 81
Beryllium	μg/L	31	200		< 10	< 10.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0																														
Cadmium	μg/L	7.8	51		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		-									-					-									-					
Chromium	μg/L	100	310		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10		-		11	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10				10 < 1	
Copper	μg/L	630	4,100		< 10	< 10			< 20	< 20	< 20	< 20	< 10	< 20	< 20	< 20	< 20				< 20	< 20	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10				10 < 1	
Lead	µg/L	15*	15*		< 10	< 10	_		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10				< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10			10 < 1	
Nickel	μg/L	100	2,000	-	< 20	< 20	< 40	< 40 21	< 40	< 40	< 40 <b>20</b>	< 40	< 20	< 40	< 40	< 40	< 40				< 40	< 40	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20			20 < 2	
∠IIIC Mercury	μg/L μg/l	4,700	31,000		< 20		<b>21</b> < 0.20		<b>24</b> < 0.20	<b>23</b> < 0.20			-				-					-							< 20 < 0.5	< 20 < 0.5	<b>21.9</b> < 0.5	<b>27.6</b> 0.05	<b>25.5</b> < 0.5	< 20	<b>25.1</b> < 0.5					20 < 2	20 < 20
Total Cyanide	μg/L μg/L	-	2,000	-	35		28			16			_				13			-	< 10	18			12		< 10			< 10	< 0.5 <b>21</b>		12	< 10.5		< 10					0.5 < 0.5
. Idi Oyumuo	P9'-	0.0	_,		- 55	10					1 14						10				\ 10				- 14	14	\ 10	× 10	\ 10	\ 10			14	\ 10	\ 10	- 10	\ 10	- 10		10	V 10

Notes:

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Leve RRS - Risk Reduction Standard

SU - Stamdard Units µS/cm - microsiemens per centimeter µg/L - milligrams per liter mg/L - milligrams per lit

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## Parameter   Works	3 6.3; 5 172 9 15.6 4 4.4; 2 108, 0 21.  8 < 0.2 500 1.1; 5 0.01; 7 0.030; 1 0.7;	6.33 296 23.39 1.34 91.2 5.40 0.38 < 0.0500 16.5 < 1.0	5.33 296 3.39 1.34 91.2 5.40 0.0500	03/03/04 6.32 172 15.66 4.42 108.2 21.6	32 6 '2 2 66 19 42 4 3.2 11	6.46 236 19.42 4.35 117.6	6.34 289 26.43 1.03 3.4 4.02	6.4 269 3 22.86 1.8 37.2	6.43 243 6 17.1 2.66	3 6.28 3 376 5 20.85 6 1.39	6.14 380 26.37 0.55	6.32 502
State	172   173   174   175   175	296 23.39 1.34 91.2 5.40 <b>0.38</b> <0.0500 <b>16.5</b> <1.0	296 3.39 1.34 91.2 5.40 <b>0.38</b> 0.0500	172 15.66 4.42 108.2 21.6	72 2 66 19 42 4 3.2 11	236 19.42 4.35 117.6	289 26.43 1.03 3.4	269 3 22.86 1.8 37.2	243 3 17.1 2.66	3 376 5 20.85 6 1.39	380 26.37 0.55	502
Specific Confusioner   Spicing   NA	172   173   174   175   175	296 23.39 1.34 91.2 5.40 <b>0.38</b> <0.0500 <b>16.5</b> <1.0	296 3.39 1.34 91.2 5.40 <b>0.38</b> 0.0500	172 15.66 4.42 108.2 21.6	72 2 66 19 42 4 3.2 11	236 19.42 4.35 117.6	289 26.43 1.03 3.4	269 3 22.86 1.8 37.2	243 3 17.1 2.66	3 376 5 20.85 6 1.39	380 26.37 0.55	502
Temperature	9 15.6 4 4.4 2 108 0 21.1 8 < 0.2 500 1.1 5 22.1 0 < 1.0 7 0.030 1 0.7	23.39 1.34 91.2 5.40 0.38 < 0.0500 16.5 < 1.0	3.39 1.34 91.2 5.40 0.38 0.0500	15.66 4.42 108.2 21.6	66 19 42 4 3.2 11	19.42 4.35 117.6	26.43 1.03 3.4	3 22.86 1.8 37.2	3 17.1 2.66	5 20.85 6 1.39	26.37 0.55	
Company   No.	2 108 0 21. 8 < 0.2 500 1.1' 5 22.1 0 < 1. 5 0.01' 7 0.03' 1 < 0.	91.2 5.40 0.38 < 0.0500 16.5 < 1.0	91.2 5.40 <b>0.38</b> 0.0500	108.2 21.6	3.2 11	117.6	3.4	37.2	_		_	
Turbiday   NTU   NA   NA   157   401   1.06   2370   417   9.27   9.09   4.09   9.68   10.56   4.09   9.53   3.15   7.5   5.40   5.00	8 < 0.2 500 1.1 5 22. 0 < 1. 5 0.01 7 0.03 1 < 0.	5.40  0.38  < 0.0500  16.5  < 1.0	<b>0.38</b> 0.0500	21.6				_	201.	0 70.0		0.24
National    B < 0.2 500 1.1 5 22. 0 < 1. 5 0.01 7 0.03 1 < 0.	0.38 < 0.0500 16.5 < 1.0	<b>0.38</b> 0.0500		.6		4.02		47.0		168.9	_	
Notice   Name    500 1.1 5 22.0 0 < 1. 5 0.010 7 0.030	< 0.0500 <b>16.5</b> < 1.0	0.0500	< 0.20				15.4	17.9	9 11.4	12.8	8.89	
None	500 1.1 5 22.0 0 < 1. 5 0.010 7 0.030	< 0.0500 <b>16.5</b> < 1.0	0.0500		.20 <	< 0.20	0.33	< 0.200	0 < 0.2	00 1.92	1.09	3.59
Suitide   mgt	0 < 1. 5 0.010 7 0.030 . < 0. 1 0.70	< 1.0	-	1.17		1.42	0.596				1.35	
Dissolved Manganees   mg/L   N/A	5 0.010 7 0.030 2 < 0. 1 0.70			22.0		22.4	24.7				64.5	
Total Manganese mg(L N/A N/A N/A	7 0.03 2 < 0. 1 0.7			< 1.0		< 1.0	< 1.0		_		< 1.0	
Ferrous fron   mg/L   N/A   N/A       < 0.10 HF   3.5 HF   < 0.010 HF   < 0.010           < 0.11   0.1   0.1   0.2	< 0. 1 <b>0.7</b>			0.0168		0.367 0.551	0.140 0.174				0.368 0.347	
Total Iron	1 0.7			< 0.1		< 0.1	0.1	0.1	< 0.1		0.206	
Methane	46			0.74		0.795	0.333	_			1.39	3.06
Dissolved Nirogen   mg/L   N/A   N/A   -   -   20   5.4   4.6   4.1   4.5   -   -   -   -   -   23   20   16   18				46		50	64	82	60		66	120
Dissolved Oxygen				0.95		3.9	2.4	10	3.5		11	87
Validic Organic Compounds				20 4.9		18 5.9	2.2	1.5	3.7		14 5.6	13 2.0
Entrope   Mg/L   5.0"   9.0   c5.0    , 1		2.0	7.0	, ,	0.0	,	1.0	1 0.7	, 0.7	0.0		
Carbon Disulfide		_			_	_						
Ethylberzene	0 < 5.	< 5.0	< 5.0	< 5.0	5.0 <	< 5.0	< 5.0		< 5.		< 5.0	
Foliage   1901   1,000   1,100   1,100   6.50   6												
Naphthalene   yg/L   31,000   200,000   e5.0   e5				< 5.0 < 5.0		< 5.0 < 5.0	< 5.0 < 5.0				< 5.0 < 5.0	
Semivolatile Organic Compounds   Acenaphthene   μg/L   2,000°   6,100   <0.50   4.1   <0.22				< 5.0		< 5.0	< 5.0				< 5.0	_
Acenaphthylene   μg/L   470   3,100   <1.0   4.0   <0.22												
Anthracene   μg/L   4,700   31,000   <0.050   0.12   <0.022   .				< 10		< 10	< 10		_		< 10	
Benzo[a]anthracene				< 10		< 10	< 10		_		< 10	
Benzo a pyrene	) < 10			< 10		< 10	< 10	< 10	< 10	0 < 10	< 10	< 10
Benzo[p fluoranthene   μg/L   1.17   3.92   <0.10   <0.10   <0.22   -												
Benzo[k]fluoranthene   μg/L   11.7   39.2   <0.050   <0.050   <0.022					-							
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$					-	-				-		
Dibenz(a,h)anthracene   μg/L   0.3*   0.39   <0.10   <0.10   <0.22		-										
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$												
Fluoranthene   μg/L   1,000*   4,100   <0.10   0.38   <0.22   ···   ···   ···   ···   ···   ···   ···   ···   ···   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <				< 10		< 10	< 10		_		< 10	
$ \begin{array}{ c c c c c c c c c c c c c c c c c c c$				< 10		< 10	< 10		_		< 10	
2-Methylphenol μg/L 780 5,100 <10 <10 <2.2 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10	) < 1	< 10	< 10	< 10	10 <	< 10	< 10	< 10	< 10	0 < 10	< 10	< 10
3 & 4 Methylphenol μg/L 78 510 <10 <10 <2.2 ··· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·												
Naphthalene   μg/L   20*   20*   <0.50   <0.50   <0.22   <5.0   <5.0   <10   <9.4   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10				< 10 < 10		< 10 < 10	< 10 < 10				< 10 < 10	
Phenanthrene   μg/L   470   3,100   <0.050   0.051   <0.22                   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <10   <1				< 10		< 10	< 10				< 10	
Pyrene         μg/L         1,000*         3,100         <0.050         0.84         < 0.22 <th< td=""><td></td><td></td><td></td><td>&lt; 10</td><td></td><td>&lt; 10</td><td>&lt; 10</td><td></td><td>_</td><td></td><td>&lt; 10</td><td></td></th<>				< 10		< 10	< 10		_		< 10	
				< 10		< 10	< 10				< 10	
$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	0 < 10	< 10	< 10	< 10	10 <	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Arsenic µg/L 50* 50* < 20 < 20 < 50 < 50 < 50	) [ - 4	- 10	- 10	< 40	10 -	< 40	< 40	< 40	< 40	0 < 40	< 40	< 40
				< 50		< 50	< 50				< 50	
Barium µg/L 2,000 7,200 112 90 120 89 83 140 112 98.1 356 156 97.8 119 114 142		142		83.2		106	121	120	_		180	325
Beryllium µg/L 31 200 <10 < 4.0					-							
Cadmium µg/L 7.8 51 <5.0 < 5.0												
Chromium         μg/L         100         310          <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <10         <				< 10 < 10		< 10 < 10	< 10 < 10				< 10 < 10	
Copper         µg/L         630         4,100          < 20         < 20         < 20         < 20         < 20         < 10         < 10         < 10         44.7         < 10         1,640         617         10.2         < 10           Lead         µg/L         15*         15*          < 10				< 10		< 10	< 10	_			< 10	_
Nickel µg/L 100 2,000 <40 <40 <40 <40 <40 <40 <20 <20 <20 <20 <20 <20 <20 <20 <20 <2		_		< 20		< 20	< 20		_		< 20	
Zinc μg/L 4,700 31,000 <20 <20 297 126 <20 22.6	6 < 2	22.6	22.6	< 20	20 <	< 20	< 20	24.3	47	36	< 20	37
				< 0.5				_			< 0.5	_
	) < 1	< 10	< 10	< 10	10 <	< 10	12	< 10	< 10	43	52	120
Zinc µg/L 4,700 31,000 < 20 < 20 <b>297 126</b> < 20 <b>22.6</b>	6 < 20 5 < 0.	<b>22.6</b> < 0.5	<b>22.6</b> < 0.5	< 20	20 < 0.5 <			24.3	<b>47</b> < 0.	<b>36</b> 5 < 0.5	< 20	

Barra i	11	Type 2	2 Type 4													MW-1	41												
Parameter	Units	RRS	RRS	02/23/17	08/25/16	04/05/16	02/04/13	02/15/12	02/22/11	02/23/10	08/11/09	06/06/06	03/09/06	12/21/05	09/28/05	03/15/05	12/15/04	09/30/04	07/15/04	06/09/04	03/03/04	12/16/03	09/08/03	06/11/03	03/11/03	03/03 DUP	12/10/02	09/17/02	11/08/01
Field Groundwater Quality	Parameters SU	N/A	N/A	5.93	6.24	6.52	6.69	5.83	5.87	6.18	5.95	6.24	6.17	6.11	6.31	6.15	7.39	6.15		6.10	6.11	6.2	5.15	6.38	6.27	6.27	6.08	6.13	6.17
Specific Conductance	μS/cm	N/A	N/A	298.50	514.8	0.32	269	250	278	315	423	448	416	401	432	399	417	467		463	393	436	421	421	453	453	429	464	461
Temperature	°Celsius	N/A	N/A	21.24	24.83	19.77	19.53	19.58	20.67	18.22	26.35	23.02	20.43	22.05	23.40	20.69	22.48	24.15		20.95	19.96	21.57	23.43	20.86	20.58	20.58	22.27	23.47	22.61
Dissolved Oxygen (YSI)	mg/L	N/A	N/A	0.11	0.19	0.21	0.32	0.85	0.39	1.46	5.67	0.20	0.40	0.42	0.55	1.71	0.19	0.28		0.21	0.57	0.22	0.34	0.03	0.09	0.09	0.06	0.16	0.19
ORP	mV NTU	N/A	N/A	56.60	-27.7	4.9	-56.4	41.2	-9.5	27	-9.9	-37.3	-8.2	-13.6	-5.9	-13.4	-148.1	-59.1		-86.6	58.0	-109.2	-79.3	-151.8	***	***	-43.2	-49.9	-79.4
Turbidity NTU N/A N/A 2.32 2.89 24.9 3.62 8.23 8.27 1.52 1.41 0.33 1.46 2.54 0.50 1.52 2.82 0.65 0.40 2.83 1.49 9.72 4.92 4.92 Laboratory Results - Natural Attenuation Parameters														2.30	1.31	9.50													
Nitrogen, Ammonia	mg/L	N/A	N/A	-	-											11.7	12.0	11.5		10.6	12.8	11.6	11.4	11.1	12	12.2	10.5	12.2	11.2
Nitrogen, Nitrate	mg/L	N/A	N/A				< 0.050	0.18	< 0.050	0.097	< 0.050					< 0.500	< 0.0500	< 0.0500		< 0.5	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	0.297
Sulfate	mg/L	N/A	N/A				44	18	54	32	41					47.3	39.5	39.6		73.7	49.0	47.7	32.0	17.2	36.9	39.6	43.2	40.5	31.5
Sulfide Dissolved Manganese	mg/L mg/L	N/A N/A	N/A N/A				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0					< 1.0 1.62	< 1.0 1.53	< 1.0 1.78		< 1.0 1.5	< 1.0 <b>1.57</b>	< 1.0 1.77	< 1.0 1.92	< 1.0 1.81	< 1.0 1.76	< 1.0 1.7	< 1.00 1.63	< 1.00 <b>1.66</b>	< 1.00 1.35
Total Manganese	mg/L	N/A	N/A	-	-											1.55	1.56	1.78		1.51	1.52	1.64	1.95	1.80	1.77	1.87	1.55	1.64	1.88
Ferrous Iron	mg/L	N/A	N/A				6.4 HF	< 0.10 HF	3.4 HF	7.5	6.8					17.7	12.2	13.5		16.7	6.2	6.5	12.6	13.0	12.2	13.4	14.5	14.1	11.1
Total Iron	mg/L	N/A	N/A				7.8	0.20	3.9	8.6	16					8.89	11.4	12.5		11.6	7.15	10.4	12.7	14.9	11.7	12.3	9.94	11.4	12.9
Carbon Dioxide Methane	mg/L mg/L	N/A N/A	N/A N/A				87 74	830 2.4	1.0 14	1.5 82	1.3 69					160 320	170 430	160 420		180 400	160 44	140 340	96 550	160 610	170 470	200 700	170 520	180 650	150 280
Dissolved Nitrogen	mg/L	N/A	N/A				18	5100	4.2	3.1	4.1					26	15	16		15	17	20	14	14	18	16	16	17	13
Dissolved Oxygen	mg/L	N/A	N/A				5.0	1800	1.4	1.0	1.4					4.2	1.1	1.2		0.44	0.89	3.6	0.53	0.66	2.9	0.55	6.6	6.4	0.79
Laboratory Results - Organ	ic Constituen	ts																											
Volatile Organic Compounds Benzene	µg/L	5.0*	9.0	<5.0	<5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	8.2	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Disulfide	μg/L μg/L	329	1,700	<5.0 <5.0	<5.0 <5.0	< 5.0 < 5.0	< 2.0			< 5.0		< 5.0			< 5.0 				< 5.0		< 5.0								< 5.0
Ethylbenzene	μg/L	700*	2,300	<5.0	<5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	16	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	10	7.7	< 5.0
Toluene	μg/L	1,000*	1,100	<5.0	<5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Naphthalene	µg/L	31,000	200,000	<5.0	<5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.3	< 5.0	< 5.0
Semivolatile Organic Compound Acenaphthene	μg/L	2,000*	6,100	1.9	4.1	4.4	3.4									38	48	43	< 5.0	24	20	29	38	57	<b>33</b> J	<b>37</b> J	35	36	< 10
Acenaphthylene	μg/L	470	3,100	1.8	4.0	3.3	1.2									< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	41
Anthracene	μg/L	4,700	31, 000	<0.050	0.12	0.056	< 0.19	-								< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzo[a]anthracene	μg/L	1.17	3.92	<0.050	<0.050	< 0.050	< 0.19																						
Benzo[a]pyrene Benzo[b]fluoranthene	μg/L μg/L	0.2* 1.17	0.392 3.92	<0.050 <0.10	<b>0.14</b> <0.10	< 0.050 < 0.10	< 0.19 < 0.19																						-
Benzo[g,h,i]perylene	μg/L	10	10	<0.10	<0.10	< 0.10	< 0.19														-								
Benzo[k]fluoranthene	μg/L	12	39	<0.050	< 0.050	< 0.050	< 0.19													-	-				-				
Chrysene	μg/L	117	392	<0.050	<0.050	< 0.050	< 0.19																						
Dibenz(a,h)anthracene 2,4-Dimethylphenol	μg/L μg/L	0.3* 700*	0.392 700*	<0.10 <10	<0.10 <10	< 0.10 < 10	< 0.19 < 1.9									< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	 < 10	< 10	< 10
Fluoranthene	μg/L	1,000*	4,100	0.11	0.38	0.11	0.48									< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Fluorene	μg/L	1,000*	4,100	0.77	<0.10	1.60	0.89									11	14	11	< 10	< 10	< 10	< 10	< 10	12	< 10	< 10	< 10	< 10	< 10
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	<0.050	1.9	< 0.050	< 0.19																						
2-Methylphenol 3 & 4 Methylphenol	μg/L μg/L	780 78	5,100 510	<10 <10	<10 <10	< 10 < 10	< 1.9 < 1.9									< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10
Naphthalene	μg/L	20*	20*	<0.50	<0.50	< 0.50	< 0.19	< 5.0	< 5.0	< 10	<9.9	< 10	80	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	23	19	21	58	48	24
Phenanthrene	μg/L	470	3,100	< 0.050	0.051	< 0.050	< 0.19	-						-		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Phenol Pyrene	μg/L	9,390 1,000*	61,000 3,100	<10 <b>0.29</b>	<10 <b>0.84</b>	< 10 <b>0.27</b>	1.2 0.93									< 10	< 10	< 10 < 10	< 10 < 10	< 10	< 10 < 10	< 10 < 10	< 10	< 10 < 10	< 10 < 10	< 10	< 10	< 10 < 10	< 10 < 10
Laboratory Results - Inorga	μg/L nic Constitue		3,100	0.29	0.84	0.27	0.93							-		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Antimony	μg/L	6.3	40		< 20	< 20	< 20									< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40
Arsenic	μg/L	50*	50*		< 50	< 50	< 20									< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Barium Beryllium	μg/L μg/L	2,000	7,200 200		112 < 10	<b>129</b> < 10	<b>71</b> < 4.0	180	180	300	220	276	281	287	301	296	292	339	292	292	277	292	369	343	379	404	314	314	394
Cadmium	μg/L μg/L	7.8	51		< 5.0	< 5.0	< 5.0							<del>-</del>										<del></del>					
Chromium	μg/L	100	310		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Copper	μg/L	630	4,100		< 10	< 10	< 20	< 20	< 20	< 20	< 20	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Lead Nickel	μg/L μg/L	15* 100	15* 2,000		< 10 < 20	< 10 < 20	< 10 < 40	< 10 < 40	< 10 < 40	< 10 < 40	< 10 < 40	< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20
Zinc	μg/L μg/L	4,700			< 20	20.9	< 40	< 40	< 40	< 40	< 40	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Mercury	μg/L	2*	2*		< 0.20	< 0.20	< 0.20	-						-		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Total Cyanide Notes:	μg/L	310	2,000		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	14	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Analyte was detected above Analyte concentration exce "Highest RRS equals Type 1 ft AMSL - feet Above Mean S RRS - Risk Reduction Standa SU - Stamdard Units µS/cm - microsiemens per ce µg/L - milligrams per liter mg/L - milligrams per liter m/ - millivolts NTU - nephelometric turbidity N/A - RRS are not applicable	eds the Type RRS; thereforment ea Level and ntimeter	2 RRS (R e, the clea	RS applicable			is chemical																							
Not Analyzed HF - Holding time of 15 minut Values are listed with the lab			of significant f	gures, which	varies betwee	en different co	onstituents with	hin the same	groundwater	r sample, an	d between th	e same cons	tituent in diffe	rent wells.															

Parameter	Units	Type 2	Type 4	00/02/15	00/0=115	0.4/0.2/1.0	4/40 5::5	00/45/15	00/4=115	00/02/12	00/46 5::=	00//:	20/46 5::-	00/05///	00/05/10	00/45/55		W-15	40/01/05	00/00/07	00/46/25	40/4:/2:	00/05/5	00/05/5/	00/00/01	40/40/05	00/00/00	00/45/22	00/46/00	40/46/22	00/40/00	44/00/0:
		RRS	RRS	02/23/17	08/25/16	04/06/16	4/16 DUP	08/12/15	02/17/15	02/06/13	02/13 DUP	02/14/12	02/12 DUP	02/23/11	02/25/10	08/12/09	06/06/06	03/08/06	12/21/05	09/28/05	03/16/05	12/14/04	09/30/04	U6/08/04	03/03/04	12/16/03	09/09/03	06/10/03	03/12/03	12/10/02	09/19/02	11/06/01
Field Groundwater Quality	SU SU	NI/A	NI/A	5.11	5.68	5.	45	5.71	5.09	1	64	4.	02	5.37	5.56	5.40	5.74	6.06	5.74	5.69	6.20	5.84	6.16	E 0E	5.98	5.69	5.77	6.05	6.11	5.80	5.99	5.98
Specific Conductance	μS/cm	N/A N/A	N/A N/A	979.90	811.3		00	880	851		)44		38	485	774	987	915	781	795	1165	6.20 568	828	650	5.95 1,022	1,000	1532	952	6.05 717	891	754	934	976
Temperature	°Celsius	N/A	N/A	18.47	26.16	20		24.28	14.83		.01	15		14.96	11.36	23.86	21.23	17.58	19.02	25.54	16.39	20.03	25.08	21.11	16.63	20.66	24.33	21.06	16.85	20.10	24.28	22.16
Dissolved Oxygen (YSI)	mg/L	N/A	N/A	0.23	0.24	0.	33	0.18	0.66	0.	47	0.	39	1.13	0.59	3.07	0.24	0.52	0.79	0.28	1.20	2.97	0.76	1.04	0.69	0.18	0.24	0.34	0.58	1.79	0.10	1.5
ORP	mV	N/A	N/A	180.00	24.1	11	6.5	-18.3	99.7	30	1.1	73	3.2	210.3	154.4	-187	192.3	157.2	220.8	-18.1	219.9	233.5	47.9	122.3	106.1	69.1	31.2	118.1	250.3	87.4	6.00	30.0
Turbidity	NTU	N/A	N/A	1.23	3.40	11	.10	3.28	8.81	1.	34	3.	95	4.67	9.82	0.46	0.23	1.66	4.98	1.36	4.90	2.6	1.11	1.06	1.49		4.45	6.53	17.7	1.82	1.50	9.02
Laboratory Results - Natur		Parameters			1	1	T	1		1		1		1	T					1												
Nitrogen, Ammonia	mg/L	N/A N/A	N/A	-						31	30	21	22	4.8	6.9	6.4					< 0.20 <b>13.6</b>	15.7 10.3	1.54 6.93	25.6 33.6	5.97 35.2	27.8 45.2	25.8 58.8	8.15 38.9	2.62 45.9	28.4 17.7	37.9 0.0654	36.0 0.515
Nitrogen, Nitrate Sulfate	mg/L mg/L	N/A	N/A N/A			-				370	370	310	310	310	330	350					124	4.83	95.8	248	240	153	116	71.9	100	201	263	281
Sulfide	mg/L	N/A	N/A			_				< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.00	< 1.00	< 1.00
Dissolved Manganese	mg/L	N/A	N/A	-		-															1.58	2.86	0.592	3.95	2.54	3.54	4.23	2.93	1.53	5.52	6.86	7.35
Total Manganese	mg/L	N/A	N/A	-														-			1.40	2.89	0.692	3.99	2.66	3.54	4.32	3.01	1.55	5.42	6.05	7.30
Ferrous Iron	mg/L	N/A	N/A	-						0.13 HF	0.28 HF	< 0.10 HF	0.11 HF	< 0.010 HF	< 0.010	< 0.010		-			< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.100	12.7	22.0	21.7
Total Iron	mg/L	N/A	N/A	-						0.18	0.18	0.16	0.18	0.12	0.50	< 0.010					0.213	0.230	0.159	0.166	0.293	0.104	0.338	0.781	1.89	9.12	21.4	19.9
Carbon Dioxide Methane	mg/L mg/L	N/A N/A	N/A N/A		-					110 2.4	99 2.2	2.7 1.8	2.8	1.7 <0.58	1.4 0.58	<b>1.2</b> <0.19					140 0.77	140 1.1	120 3.2	180 1.4	160 0.62	170 1.5	170 2.2	210 2.4	120 1.4	190 35	250 93	200 330
Dissolved Nitrogen	mg/L	N/A	N/A									5.1	5.3	3.8	4.1	4.3					26	21	17	17	18	15	14	14	16	16	16	12
Dissolved Oxygen	mg/L	N/A	N/A							6.6	7.2	1.6	1.7	1.3	1.3	1.6					6.8	2.6	4.4	0.97	1.6	1.1	1.8	1.3	3.6	7.5	5.5	1.8
Laboratory Results - Organ	nic Constituer	its		•	•		•			•	•	•			•	•	'		•		•	•	•	•	'			•	•	•		
Volatile Organic Compounds	s																															
Benzene	μg/L	5.0*	9.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Disulfide	μg/L	329	1700.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	5.0	 -5 O	5.0	 - 5 O	 -5.0	 -5 O	5.0	 -5.0	 -5 O	 - 5 O	5.0		 - E O	 -5.0		 -5.0	 -5 O	 -5.0	 -5 O	 -5.0	5.0
Ethylbenzene Toluene	μg/L μg/L	700* 1.000*	2,300 1.100	<5.0 <5.0	<5.0 <5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 1.0 < 1.0	< 1.0 < 1.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0				
Total Xylenes	ug/L	31.000	200.000	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Semivolatile Organic Compo	1.5	,,,,,,,,																														
Acenaphthene	μg/L	2,000*	6,100	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 10	< 0.21	< 0.21										< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acenaphthylene	μg/L	470	3,100	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 10	< 0.21	< 0.21										< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Anthracene	μg/L	4,700	31, 000	0.074	0.14	< 0.050	< 0.050	0.11	< 10	< 0.21	< 0.21										< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzo[a]anthracene Benzo[a]pyrene	μg/L μg/L	1.17 0.2*	3.92 0.39	<0.050 <0.050	0.13 0.14	< 0.050 < 0.050	< 0.050 < 0.050	< 0.050 < 0.050	< 0.050 < 0.050	< 0.21 < 0.21	< 0.21 < 0.21																					
Benzo[b]fluoranthene	μg/L	1.17	3.92	<0.10	0.14	< 0.030	< 0.10	< 0.10	< 0.030	< 0.21	< 0.21																					
Benzo[g,h,i]perylene	μg/L	10	10	<0.10	0.16	< 0.10	< 0.10	< 0.10	< 10	< 0.21	< 0.21																					
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 0.050	0.14	< 0.050	< 0.050	< 0.050	< 10	< 0.21	< 0.21																					
Chrysene	μg/L	117	392	<0.050	0.15	< 0.050	< 0.050	< 0.050	< 10	< 0.21	< 0.21							-						-								
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.21	< 0.21																					
2,4-Dimethylphenol Fluoranthene	μg/L μg/L	700* 1,000*	700* 4,100	<10 <0.10	<b>0.13</b> <0.10	< 10 < 0.10	< 10 < 0.10	< 10 < 0.10	< 10 < 10	< 2.1 < 0.21	< 2.1 < 0.21										< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10
Fluorene	μg/L	1,000*	4,100	<0.10	<0.10	< 0.10	< 0.10	< 0.10	< 10	< 0.21	< 0.21										< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ndeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	<0.050	0.15	< 0.050	< 0.050	< 0.050	< 0.050	< 0.21	< 0.21																					
2-Methylphenol	μg/L	780	5,100	<10	<10	< 10	< 10	< 10	< 10	< 2.1	< 2.1					-		1			< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3 & 4 Methylphenol	μg/L	78	510	<10	<10	< 10	< 10	< 10	< 10	< 2.1	< 2.1							-			< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Naphthalene	μg/L	20*	20*	<0.50	<0.50	< 0.50	< 0.50	< 0.50	< 10	< 0.21	< 0.21	< 5.0	< 5.0	< 5.0	<9.8	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Phenanthrene	μg/L	470 9,390	3,100 61.000	<0.050 <10	<0.050 <10	< 0.050 < 10	< 0.050 < 10	< 0.050 < 10	< 10 < 10	< 0.21 < 1.1	< 0.21 < 1.1										< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10
Phenol Pyrene	μg/L μg/L	1,000*	3,100	<0.050	0.055	< 0.050	< 0.050	< 0.050	< 10	< 0.21	< 0.21										< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Laboratory Results - Inorg			-,	٧٥.٥٥٥	0.000	V 0.000	V 0.000	V 0.000	V 10	\ U.Z.I	V 0.21			ļ Į						<u> </u>	V 10	V 10	V 10	V 10	\ 10	V 10	V 10	V 10	\ 10	V 10	V 10	V 10
Antimony	μg/L	6.3	40		< 20	< 20	< 20	< 20	< 20	< 20	< 20										< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40
Arsenic	μg/L	50*	50*		< 50	< 50	< 50	< 50	< 50	< 20	< 20							-			< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Barium	μg/L	2,000	7,200		31.7	31.5	32.6	33.6	50	16	16	19	18	41	49	35	21.8	33.7	28.5	38.7	84.7	38.3	87.3	35.4	80.8	48.7	74.6	105	119	34	34	35
Beryllium Cadmium	μg/L	7.8	200 51		< 10 < 5.0	< 10 < 5.0	< 10 < 5.0	< 10 < 5.0	< 10 < 5.0	< 4.0 < 5.0	< 4.0 < 5.0																					
Cadmium Chromium	μg/L μg/L	100	310		< 5.0	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 10	< 10	< 10	 < 10	< 10	 < 10	< 10	< 10	 < 10	 < 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Copper	μg/L	630	4,100		< 10	< 10	< 10	< 10	< 10	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
_ead	μg/L	15*	15*		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Nickel	μg/L	100	2,000		< 20	< 20	< 20	< 20	< 20	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Zinc	μg/L	4,700	31,000		23.9	50.0	50.6	< 20.0	297	320	330							-			< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Mercury Total Cyanide	μg/L μg/L	2* 310	2* 2,000		< 0.20 <b>14.1</b>	< 0.20	< 0.20	< 0.20 <b>11.3</b>	< 0.20 <b>108</b>	< 0.20 <b>120</b>	< 0.20 <b>120</b>	130	130	65	110	150	167	315	121	282	< 0.5 199	< 0.5 <b>355</b>	< 0.5 <b>216</b>	< 0.5 <b>236</b>	< 0.5 <b>403</b>	< 0.5 173	< 0.5 <b>189</b>	< 0.5 <b>51</b>	< 0.5 <b>248</b>	< 0.5 181	< 0.5 <b>276</b>	< 0.5 <b>227</b>
Notes:  Analyte was detected above Highest RRS equals Type 1 th AMSL - feet Above Mean 1 RRS - Risk Reduction Stands U - Stamdard Units uS/cm - microsiemens per cug/L - micrograms per liter mg/L - milligrams per liter nv - millivotts	ve laboratory of 1 RRS; therefor Sea Level dard	detection lim	nit		•		12		100	120	120	100	100			.00	10.	010	12.1	202	100	300	2.0	200	400		100	<u> </u>	240		210	TE,

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

D	11-11-	T 0 DDC	T 4 DDC			MW-21				MW-23	
Parameter	Units	Type 2 RRS	Type 4 RRS	02/27/17	08/25/16	04/06/16	04/30/15	07/12/06	02/13/12	02/24/11	03/05/04
ield Groundwater Qualit		_				_					
Н	SU	N/A	N/A	5.37	5.96	5.92	5.99		6.07	6.16	6.20
Specific Conductance	μS/cm	N/A	N/A	263.6	160.22	95	58		287	272	347
emperature	°Celsius	N/A	N/A	17.37	23.20	17.35	16.44		19.25	16.63	20.76
Dissolved Oxygen (YSI)	mg/L	N/A	N/A	1.78	3.06	0.19	0.98		6.32	1.42	1.86
ORP	mV	N/A	N/A	80.4	12	5.7	-44.1		0.5	9.1	42.5
Turbidity	NTU	N/A	N/A	2.65	16.6	6.8	14.1		3.89	0.56	10.65
Laboratory Results - Natu			1		T.		1	T	T	T.	T
Nitrogen, Ammonia	mg/L	N/A	N/A	-		-					
Nitrogen, Nitrate	mg/L	N/A	N/A						0.85	0.75	
Sulfate	mg/L	N/A	N/A						36	35	
Sulfide	mg/L	N/A	N/A	-		-			< 1.0	< 1.0	
Dissolved Manganese	mg/L	N/A	N/A								
Total Manganese	mg/L	N/A	N/A								< 0.005
Ferrous Iron	mg/L	N/A	N/A						< 0.10 HF	< 0.010 HF	
Total Iron	mg/L	N/A	N/A						< 0.10	< 0.010	0.171
Carbon Dioxide	mg/L	N/A	N/A						1.6	1.0	
Methane Disastrus d Nitrogen	mg/L	N/A	N/A						< 0.58 <b>5.0</b>	<0.58 <b>4.4</b>	
Dissolved Nitrogen	mg/L	N/A N/A	N/A			-					
Dissolved Oxygen	mg/L	N/A	N/A						1.6	1.5	
Laboratory Results - Organia Company											
Volatile Organic Compound		E 0*	0.0	<i>"</i> E ∩	<5.0	, E N	, E N	∠E ∩	4.5.0	.50	. 5.0
Benzene Carbon Disulfide	μg/L	5.0* 329	9.0 1,700	<5.0 <5.0	<5.0 <5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0	< 5.0	< 5.0
	μg/L	700*	2.300	<5.0 <5.0	<5.0 <5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene Toluene	μg/L	1,000*	1,100	<5.0 <5.0		< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0			
	μg/L	· · · · · · · · · · · · · · · · · · ·			<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Naphthalene Semivolatile Organic Comp	µg/L	31,000	200,000	<5.0	<5.0	₹ 5.0	₹ 5.0	< 5.0	< 5.0	< 5.0	< 5.0
•		2.000*	6.100	<0.50	<0.50	< 0.50	. 10	. 10		1	. 10
Acenaphthene	μg/L	,,,,,	3,100	<1.0	<1.0		< 10	< 10			< 10
Acenaphthylene	μg/L	470 4.700	31, 000	<0.050	<0.050	< 1.0 < 0.050	< 10	< 10			< 10
Anthracene	μg/L	1.17	31,000	<0.050	<0.050	< 0.050	< 10 < 0.050	< 10 < 0.050			< 10
Benzo[a]anthracene	μg/L	0.2*	0.39	<0.050	<0.050	< 0.050	< 0.050	< 0.050		•	
Benzo[a]pyrene Benzo[b]fluoranthene	μg/L	1.17	3.92	<0.10	<0.00	< 0.050	< 0.050	< 0.050			
	μg/L	1.17	10	<0.10	<0.10	< 0.10					
Benzo[g,h,i]perylene Benzo[k]fluoranthene	μg/L μg/L	11.7	39.2	<0.050	<0.050	< 0.10	< 10 < 10	< 10 < 10			
• • • • • • • • • • • • • • • • • • • •		11.7	39.2	<0.050	<0.050	< 0.050	< 10	< 0.050			
Chrysene Dibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.050	<0.050	< 0.050	< 0.10	< 0.050			
2,4-Dimehylphenol	μg/L μg/L	700*	700*	<10	<10	< 10	< 10	< 0.10			< 10
	10	1,000*	4,100	<0.10	<0.10	< 0.10	< 10	< 10			< 10
Fluoranthene Fluorene	μg/L	1,000*	4,100	<0.10	<0.10	< 0.10	< 10	< 10			< 10
Indeno[1,2,3-cd]pyrene	μg/L μg/L	1,000	3.92	<0.10	<0.10	< 0.10	< 0.050	< 0.050			< 10
2-Methylphenol	μg/L μg/L	780	5.100	<0.050	<0.050	< 0.050	< 10	< 0.050			< 10
3 & 4 Methylphenol	μg/L	78	5,100	<10	<10	< 10	< 10				< 10
Naphthalene	μg/L μg/L	20*	20*	<0.50	<0.50	< 0.50	< 10	< 10	< 5.0	< 5.0	< 10
Phenanthrene	μg/L μg/L	470	3,100	<0.050	<0.050	< 0.50	< 10	< 10	< 5.0	< 5.0	< 10
Phenol	μg/L	9,390	61,000	<10	<10	< 10	< 10				< 10
Pyrene	μg/L	1.000*	3,100	<0.050	<0.050	< 0.050	< 10	< 10			< 10
Laboratory Results - Inor		.,500	2,.00	~0.000	~0.000	\ 0.000	110	\ 10	-		<u> </u>
Antimony	µg/L	6.3	40		<0.0200	< 20	< 20	< 20			< 40
Arsenic	μg/L	50*	50*		<0.0500	< 50	< 50	< 50			< 50
Barium	μg/L	2,000	7,200		0.158	96.8	75.6	73	74	67	71.8
Beryllium	μg/L	31	200		<0.0100	< 10	< 10	< 10			71.0
Cadmium	μg/L	7.8	51		0.0055	< 5.0	< 5.0	< 5.0			
Chromium	μg/L	100	310		<0.0100	< 10	< 10	< 10	< 10	< 10	< 10
Copper	μg/L	630	4,100		0.0143	< 10	< 10	< 10	< 20	< 20	< 10
Lead	μg/L	15*	15*		<0.0143	< 10	< 10	< 10	< 10	< 10	< 10
Nickel	μg/L	100	2,000		<0.0200	< 20	< 20	< 20	< 40	< 40	< 20
Zinc	μg/L	4.700	31.000		0.134	165	< 20	< 20			< 20
Mercury	μg/L μg/L	2*	2*		<0.00020	< 0.20	< 0.20	< 0.20			< 0.5
Total Cyanide	μg/L μg/L	310	2,000		<0.00020	< 10	< 10	< 10	< 10	< 10	< 10
Notes:	μ9/L	310	2,000	<u> </u>	<b>\0.010</b>	<u> </u>	<u> </u>	< 10	< 10	< 10	< 10

Notes:

Analyte was detected above laboratory detection limit

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical
ft AMSL - feet Above Mean Sea Level
RRS - Risk Reduction Standard
SU - Stamdard Units

µS/cm - microsiemens per centimeter

µg/L - micrograms per liter
mg/L - milligrams per liter
mV - millivolts
NTU - nephelometric turbidity units
N/A - RRS are not applicable to this parameter
-- Not Analyzed
HF - Holding time of 15 minutes was exceeded
Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

Parameter	Units	Type 2 RRS	Type 4 RRS				MW-25			
		Type 2 KKS	Type 4 KKS	04/28/15	02/04/13	02/07/12	02/16/11	02/23/10	08/13/09	06/12/03
ield Groundwater Qual		•			•	•				
H	SU	N/A	N/A	5.16	4.48	5.35	5.45	5.44	5.08	5.33
pecific Conductance	μS/cm	N/A	N/A	409	342	391	331	398	346	334
emperature	°Celsius	N/A	N/A	20.52	21.08	18.99	19.16	15.26	23.74	21.73
issolved Oxygen (YSI)	mg/L	N/A	N/A	0.66	0.44	1.01	0.88	3.33	6.63	0.25
RP	mV	N/A	N/A	-31.1	523.5	79.2	447.3	175.9	-76.5	213.5
urbidity	NTU	N/A	N/A	1.3	6.39	1.85	0.80	8.42	2.82	7.09
aboratory Results - Na	tural Attenuation Para	ameters								
itrogen, Ammonia	mg/L	N/A	N/A		-	-				< 0.200
itrogen, Nitrate	mg/L	N/A	N/A		6.3	< 5.0	4.0	3.3	2.1	2.38
ulfate	mg/L	N/A	N/A		89	< 5.0	96	110	95	85.1
ulfide	mg/L	N/A	N/A		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
issolved Manganese	mg/L	N/A	N/A							0.0591
otal Manganese	mg/L	N/A	N/A							0.059
errous Iron	mg/L	N/A	N/A		0.11 HF	37 HF	< 0.010 HF	< 0.010	< 0.1	< 0.1
otal Iron	mg/L	N/A	N/A	-	0.15	45	< 0.010	0.24	< 0.1	< 0.1
arbon Dioxide	mg/L	N/A	N/A		170	4.2	0.96	2.1	0.74	230
ethane	mg/L	N/A	N/A	-	< 0.58	< 0.58	< 0.58	< 0.19	0.74	0.60
		N/A N/A	N/A N/A		< 0.58 <b>16</b>	< 0.58 <b>4.1</b>	< 0.58 <b>4.7</b>	< 0.19 <b>3.7</b>	4.2	14
issolved Nitrogen	mg/L	N/A N/A	N/A N/A		16 5.2					
issolved Oxygen	mg/L	IN/A	IN/A		3.2	0.96	1.6	1.3	1.5	1.3
aboratory Results - Or				r						
olatile Organic Compour		•	•			•	,		•	
enzene	μg/L	5*	9	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
arbon Disulfide	μg/L	329	1,700	< 5.0	< 2.0					
thylbenzene	μg/L	700*	2,300	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
oluene	μg/L	1,000*	1,100	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
otal Xylenes	μg/L	31,000	200,000	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
emivolatile Organic Com	pounds		•		•	•			•	•
cenaphthene	μg/L	2,000*	6,100	< 10	< 0.20					< 10
cenaphthylene	μg/L	470	3,100	< 10	< 0.20					< 10
nthracene	μg/L	4.700	31,000	< 10	< 0.20					< 10
enzo[a]anthracene	μg/L	1.17	3.92	< 0.050	< 0.20					
enzo[a]pyrene	μg/L	0.2*	0.39	< 0.050	< 0.20					
enzo[b]fluoranthene	μg/L	1.17	3.92	< 0.10	< 0.20					
enzo[g,h,i]perylene	μg/L	10	10	< 10	< 0.20			<del></del>		
		11.7								
enzo[k]fluoranthene	μg/L		39.2	< 10	< 0.20					
hrysene	μg/L	117	392	< 10	< 0.20	-				
ibenz(a,h)anthracene	μg/L	0.3*	0.39	< 0.10	< 0.20					
4-Dimethylphenol	μg/L	700*	700*	< 10	< 2.0					< 10
luoranthene	μg/L	1,000*	4,100	< 10	< 0.20					< 10
luorene	μg/L	1,000*	4,100	< 10	< 0.20					< 10
ideno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.050	< 0.20					
-Methylphenol	μg/L	780	5,100	< 10	< 2.0					< 10
& 4 Methylphenol	μg/L	78	510	< 10	< 2.0					< 10
aphthalene	μg/L	20*	20*	< 10	< 0.20	< 5.0	< 5.0	<9.5	< 10	< 10
henanthrene	μg/L	470	3,100	< 10	0.43					< 10
henol	μg/L	9,390	61,000	< 10	< 0.99					< 10
yrene	μg/L	1.000*	3,100	< 10	< 0.20					< 10
organic Constituents	r3/ -	.,500	0,100	\ 1U	\ ∪.∠∪					× 10
	110/1	6.2	40	. 20	- 20		1			. 40
ntimony	μg/L	6.3	40 50*	< 20	< 20					< 40
senic	μg/L	50*		< 50	< 20					< 50
arium	μg/L	2,000	7,200	33.6	32	820	33	40	32	33
eryllium	μg/L	31	200	< 10	< 4.0					
admium	μg/L	7.8	51	< 5.0	< 5.0					
hromium	μg/L	100	310	< 10	< 10	< 10	< 10	< 10	< 10	< 10
opper	μg/L	630	4,100	< 10	< 20	< 20	< 20	< 20	< 20	< 10
ead	μg/L	15*	15*	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ickel	μg/L	100	2,000	< 20	< 40	< 40	< 40	< 40	< 40	< 20
inc	μg/L	4,700	31,000	47	59					28
ercury	μg/L	2*	2*	< 0.20	< 0.20					< 0.5
otal Cyanide	μg/L	310	2,000	< 10	< 10	< 10	< 10	< 10	< 10	< 10
o.a. Oyumuo	P9/ <b>□</b>	010	_,500	< 10	< 10	< 10	< 10	< 10	< 10	< 10

Notes:

Analyte was detected above laboratory detection limit

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level
RRS - Risk Reduction Standard

SU - Stamdard Units µS/cm - microsiemens per centimeter

μS/cm - microsiemens per centimeter
μg/L - micrograms per liter
mg/L - milligrams per liter
m/- milligrams per liter
m/- milligrams per liter
m/- millivolts
NTU - nephelometric turbidity units
N/A - RRS are not applicable to this parameter
-- Not Analyzed
HF - Holding time of 15 minutes was exceeded
Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

B	H-N-	T 0 DDC	Town 4 DDC	MV	V-26		•	MW-28		•
Parameter	Units	Type 2 RRS	Type 4 RRS	08/23/16	02/05/13	8/24/2016	04/05/16	02/07/13	03/05/04	03/04 DUP
eld Groundwater Quality F	Parameters	•	•	•	•	•		•	•	•
1	SU	N/A	N/A	6.01	6.41	6.07	6.30	6.28	6.73	6.73
pecific Conductance	μS/cm	N/A	N/A	283.7	642	257.5	148	240	412	412
emperature	°Celsius	N/A	N/A	22.81	14.36	33.48	21.42	16.97	17.56	17.56
issolved Oxygen (YSI)	mg/L	N/A	N/A	0.18	0.65	0.14	2.16	1.96	0.42	0.42
)RP	mV	N/A	N/A	21.0	-28.2	-61.6	42.1	14.0	-125.5	-125.5
urbidity	NTU	N/A	N/A	5.25	2.02	1.31	48.4	8.27	20.2	20.2
aboratory Results - Natura	I Attenuation Paramet	ers	•	•	•	•	•	•	•	•
itrogen, Ammonia	mg/L	N/A	N/A							
litrogen, Nitrate	mg/L	N/A	N/A		< 0.050			0.12		
ulfate	mg/L	N/A	N/A		200			15		
Sulfide	mg/L	N/A	N/A		4.5			< 1.0		
Dissolved Manganese	mg/L	N/A	N/A							
otal Manganese	mg/L	N/A	N/A						6.11	6.14
		N/A	N/A		34 HF			9.2 HF		
errous Iron otal Iron	mg/L	N/A N/A	N/A N/A		50			9.2 HF	34.3	35.6
	mg/L	N/A N/A	N/A N/A		170			72.0		35.6
Carbon Dioxide	mg/L									
Methane	mg/L	N/A	N/A		32			82		
Dissolved Nitrogen	mg/L	N/A	N/A		18					
Dissolved Oxygen	mg/L	N/A	N/A		2.0			6.6		
aboratory Results - Organi	ic Constituents									
olatile Organic Compounds			•	1	•		,			
Senzene	μg/L	5.0*	9	<5.0	< 1.0	<5.0	< 5.0	< 1.0	< 5.0	< 5.0
arbon Disulfide	μg/L	329	1,700	<5.0	< 2.0	<5.0	< 5.0	< 2.0		
thylbenzene	μg/L	700*	2,300	<5.0	< 1.0	<5.0	< 5.0	< 1.0	< 5.0	< 5.0
oluene	μg/L	1,000*	1,100	<5.0	< 1.0	<5.0	< 5.0	< 1.0	< 5.0	< 5.0
laphthalene	μg/L	31,000	200,000	<5.0	< 2.0	<5.0	< 5.0	< 2.0	< 5.0	< 5.0
Semivolatile Organic Compou	ınds	•	•		•	•	•	•	•	•
Acenaphthene	μg/L	2,000*	6,100	< 0.50	< 2.0	<0.50	< 0.50	< 0.19	< 10	< 10
cenaphthylene	μg/L	470	3,100	<1.0	< 2.0	<1.0	< 1.0	< 0.19	< 10	< 10
Inthracene	μg/L	4,700	31, 000	< 0.050	< 2.0	< 0.050	< 0.050	< 0.19	< 10	< 10
Benzo[a]anthracene	μg/L	1.17	3.92	<0.050	< 2.0	< 0.050	< 0.050	< 0.19		
Benzo[a]pyrene	μg/L	0.2*	0.39	<0.050	< 2.0	<0.050	< 0.050	< 0.19		
enzo[b]fluoranthene	μg/L	1.17	3.92	<0.10	< 2.0	<0.10	< 0.10	< 0.19		
Benzo[g,h,i]perylene	μg/L	10	10	<0.10	< 2.0	<0.10	< 0.10	< 0.19		
Benzo[k]fluoranthene	μg/L	11.7	39.2	<0.050	< 2.0	<0.050	< 0.050	< 0.19		
Chrysene	μg/L	117	392	<0.050	< 2.0	<0.050	< 0.050	< 0.19		
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	< 2.0	<0.10	< 0.10	< 0.19		
,4-Dimethylphenol	μg/L	700*	700*	<10	< 20	<10	< 10	< 1.9	< 10	< 10
		1,000*	4,100		< 2.0	<0.10	< 0.10	< 0.19	< 10	< 10
luoranthene	μg/L			<0.10						
fluorene	μg/L	1,000*	4,100	<0.10	< 2.0	<0.10	< 0.10	< 0.19	< 10	< 10
ndeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	<0.050	< 2.0	<0.050	< 0.050	< 0.19		
-Methylphenol	μg/L	780	5,100	<10	< 20	<10	< 10	< 1.9	< 10	< 10
& 4 Methylphenol	μg/L	78	510	<10	< 20	<10	< 10	< 1.9	< 10	< 10
laphthalene	μg/L	20*	20*	<0.50	< 2.0	<0.50	< 0.50	< 0.19	< 10	< 10
henanthrene	μg/L	470	3,100	<0.050	< 2.0	0.053	< 0.050	< 0.19	< 10	< 10
Phenol	μg/L	9,390	61,000	<10	< 9.9	<10	< 10	< 0.97	< 10	< 10
yrene	μg/L	1,000*	3,100	< 0.050	< 2.0	< 0.050	< 0.050	< 0.19	< 10	< 10
aboratory Results - Inorga	nic Constituents									-
ntimony	μg/L	6.3	40	< 20	< 20	< 20	< 20	< 20	< 40	< 40
rsenic	μg/L	50*	50*	< 50	< 20	< 50	< 20	< 20	< 50	< 50
arium	μg/L	2,000	7,200	48.7	120	8.07	64.9	82	115	115
eryllium	μg/L	31	200	< 10.0	< 4.0	<10	< 10.0	< 4.0		
admium	μg/L	7.8	51	<5.0	< 5.0	< 5.0	40.3	< 5.0		
Chromium	μg/L	100	310	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Copper	μg/L	630	4,100	< 10	< 20	< 20	< 10	< 20	< 10	< 10
ead	μg/L	15*	15*	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	μg/L	100	2,000	< 20	< 40	< 40	< 20	< 40	< 20	< 20
lickel										~ ~0
			31,000		< 20		< 20	< 20	< 20	< 20
lickel inc fercury	μg/L μg/L μα/L	4,700 2*	31,000 2*	< 20 < 0.20	< 20 < 0.5	< 20 < 0.5				

Notes:

Analyte was detected above laboratory detection limit

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level
RRS - Risk Reduction Standard

SU - Stamdard Units µS/cm - microsiemens per centimeter

µg/L - micrograms per liter

mg/L - milligrams per liter

mV - millivolts

NTU - nephelometric turbidity units

N/A - RRS are not applicable to this parameter

-- Not Analyzed
HF - Holding time of 15 minutes was exceeded
Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

4th Semiannual Progress Report May 2017

Field Groundwater Quality Pa bH Specific Conductance	1	RRS	Type 4 RRS	02/23/17	08/25/16	04/07/16	4/16 DUP	08/13/15	02/18/15	08/07/13	08/13 DUP	02/07/13	02/13 DUP	11/07/12	11/12 DUP	08/09/12		IW-101 05/12 DUP	02/09/12	02/12 DUP	11/16/11	11/11 DUP	08/10/11	08/11 DUP	05/04/11	02/24/11	11/10/10	11/10 DUP	08/10/10	05/11/10	05/11 DUP
nocific Conductones	arameters SU	N/A	N/A	6.05	F 0.4		5.10	5.87	E 20	E	56		08	-	23	6.11	6	17		5.6	E	84	6	.54	101	6 1 5		: 20	6.01	6	12
	μS/cm	N/A N/A	N/A	6.05 366.20	5.94 370.8		100	5.87	5.38 490		56 98		14		.23 049	1125		76		328		97		185	4.84 404	6.15 696		5.29 954	958		48
mperature	°Celsius	N/A	N/A	20.08	26.25	_	1.77	27.35	13.50		.36		.94		1.1	25.58		.62		7.07		.14		3.85	20.26	17.84		3.54	28.39		.57
solved Oxygen (YSI)	mg/L	N/A	N/A	0.08	0.38	_	0.16	0.19	1.57		41		78		.59	0.66		81		.89	0.			.19	0.89	1.29	_	.21	0.30		68
P	mV	N/A	N/A	98.3	21.4	1	7.3	-23.1	125.0		23.0	20	0.8		3.6	-6.1		3.2		1.3	29	9.4	-7	3.3	173.2	-19.8	_	79.4	-3.3	-21	1.0
rbidity	NTU	N/A	N/A	3.65	6.43	2	23	4.65	9.50	7.	07	1.	05	1	8.9	3.80	3.	16	8	.35	1	55	4.	.02	2.44	9.98	3	3.3	3.14	5.1	17
ooratory Results - Natural	Attenuatio	n Paramete	rs																												
ogen, Ammonia	mg/L	N/A	N/A																												
rogen, Nitrate	mg/L	N/A	N/A									69	69						69	72						3.4					
ulfate	mg/L	N/A	N/A									120	<b>120</b> < 1.0						170	160						280					
ulfide ssolved Manganese	mg/L mg/L	N/A N/A	N/A N/A									< 1.0	< 1.0						< 1.0	< 1.0						5.9					
otal Manganese	mg/L	N/A	N/A																												
errous Iron	mg/L	N/A	N/A									5.5 HF	5.6 HF						2.8 HF	2.4 HF						10 HF					
otal Iron	mg/L	N/A	N/A									5.6	5.5						3.2	3.1						12					
arbon Dioxide	mg/L	N/A	N/A									76	69						1.3	1.3						0.62					
lethane	mg/L	N/A	N/A									3.5	3.4						10	11						61					
issolved Nitrogen	mg/L	N/A	N/A																5.8	4.9						4.7					
issolved Oxygen	mg/L	N/A	N/A									7.2	12						2.3	1.5						1.5					
aboratory Results - Organic	c Constitue	nts																													
olatile Organic Compounds	110/1	E*	0	<5.0	.E 0	6.5	6.3	~ E ^	49	, E N	, E O	25	20	27	26	E4	13	11	25	26	24	20	e =	74	10	120	150	150	120	1/0	120
enzene arbon Disulfide	μg/L μg/L	329	9 1,700	<5.0 <5.0	<5.0 <5.0	<b>6.5</b> < 5.0	<b>6.3</b> < 5.0	< 5.0 < 5.0	< 5.0	< 5.0 < 5.0	< 5.0 < 5.0	<b>25</b> < 2.0	<b>20</b> < 2.0	<b>27</b> < 2.0	<b>26</b> < 2.0	<b>51</b> < 2.0	<b>43</b> < 5.0	<b>44</b> < 5.0	25	26	24	20	65	74	19	120	150	150	130	140	130
thylbenzene	μg/L μg/L	700*	2,300	<5.0 <5.0	<5.0 <5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0	< 5.0	< 5.0 < 5.0	9.6	< 2.0 <b>5.9</b>	< 2.0 <b>5.0</b>	5.6	< 2.0 12	< 5.0 <b>8.7</b>	< 5.0 <b>8.3</b>	11	9.9	7.9	6.9	<25	<25	6.7	61	<del></del>	-			
oluene	μg/L	1,000*	1,100	<5.0	<5.0	< 5.0	< 5.0	< 5.0	6.9	< 5.0	< 5.0	14	9.3	< 1.0	< 1.0	< 1.0	15	15	6.4	6.1	< 5.0	< 5.0	<25	<25	7.8	64		-			
otal Xylenes	μg/L	31,000	200,000	<5.0	<5.0	< 5.0	< 5.0		18	< 5.0	< 5.0	18	12	< 2.0	< 2.0	9.9	32	31	9.6	8.3	< 5.0	< 5.0	<25	<25	12	88					
emivolatile Organic Compoun																															
cenaphthene	μg/L		6,100	1.4	4.1	3.7	3.9	11	< 10	< 10	< 10	11	7.0	17	16	19	18	26													
cenaphthylene	μg/L	470	3,100	<1.0	1.4	1.3	1.3	5.2	< 10	< 10	< 10	3.8	2.2	4.7	4.4	6.8	7.1	9.4													
nthracene	μg/L	4,700	31,000	0.22	0.43	0.25	0.25	0.78	< 10	< 10	< 10	0.77	0.40	0.81	0.97	< 0.20	0.65	< 2.1													
Benzo[a]anthracene	μg/L	1.17	3.92	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 2.1													
Benzo[a]pyrene Benzo[b]fluoranthene	μg/L μg/L	0.2* 1.17	0.39 3.92	<0.050 <0.10	<0.050 <0.10	0.070 < 0.10	< 0.050 < 0.10	< 0.050 < 0.10	< 0.050 < 0.10	< 0.20 < 0.20	< 0.20 < 0.20	< 0.20 < 0.20	< 0.20 < 0.20	< 0.20 < 0.20	< 0.20 < 0.20	< 0.20 < 0.20	< 0.20 < 0.20	< 2.1 < 2.1													
enzo[g,h,i]perylene	μg/L μg/L	10	10	<0.10	<0.10	0.10	< 0.10	< 0.10	< 10	< 10	< 10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 2.1													
enzo[k]fluoranthene	μg/L	11.7	39.2	<0.050	<0.050	0.085	< 0.050	< 0.050	< 10	< 10	< 10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 2.1													
hrysene	μg/L	117	392	< 0.050	< 0.050	0.054	< 0.050	< 0.050	< 10	< 10	< 10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 2.1													
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	<0.10	0.16	< 0.10	< 0.10	< 0.10	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 2.1				-			-						
2,4-Dimethylphenol	μg/L	700*	700*	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 21													
Fluoranthene	μg/L	1,000*	4,100	0.12	0.73	0.31	0.3	1.2	< 10	< 10	< 10	0.59	0.34	1.3	1.4	1.5	0.55	< 2.1													
luorene	μg/L	1,000*	4,100	1.7	2.1	2.7	2.8	9.5	< 10	< 10	< 10	13	8.1	12	13	22	15	22													
ndeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	<0.050	<0.050	0.11	< 0.050	< 0.050	< 0.050	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 2.1													
2-Methylphenol 3 & 4 Methylphenol	μg/L μg/L	780 78	5,100 510	<10 <10	<10 <10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 2.0 < 2.0	< 2.0 < 2.0	< 2.0 < 2.0	< 2.0 < 2.0	< 2.0 < 2.0	< 2.0 < 2.0	< 21 < 21													
Naphthalene	μg/L	20*	20*	43	<0.50	12	14	< 0.50	310	< 10	< 10	290	180	4.1	3.2	170 D	490	410	120	100	14	16	1100	1300	160	1700	1100	840	1900	770	990
Phenanthrene	μg/L	470	3,100	1.0	0.062	0.35	0.35	0.28	< 10	< 10	< 10	5.4	3.1	8.7	9.5	16	4.8	7.4													
Phenol	μg/L	9,390	61,000	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	1.4	< 0.99	< 0.99	< 0.99	< 0.98	0.99	< 11													
Pyrene	μg/L	1,000*	3,100	0.084	0.51	0.21	0.22	0.92	< 10	< 10	< 10	0.44	0.35	1.1	1.1	1.1	0.38	< 2.1													
norganic Constituents																															
Antimony	μg/L	6.3	40		< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20													
Arsenic	μg/L	50*	50*		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 20	< 20	< 20	< 20	< 20	< 20	< 20													
Barium	μg/L	2,000	7,200		39.4	86.1	88.6	45.3	76.7	126	132	150	150	20	18	20	82	79	270	290	33	38	22	22	47	35					
Beryllium Cadmium	μg/L	7.8	200 51		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0													
Chromium	μg/L μg/L	100	310		< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 10	< 10	< 10	< 10	< 10	 < 10	< 10	< 10					
Copper	μg/L	630	4,100		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20		-			
ead.	μg/L	15*	15*		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10					
lickel	μg/L	100	2,000		< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40		-			
inc	μg/L	4,700	31,000		< 20	< 20	< 20	< 20	26.3	78.5	50.6	190	180	< 20	< 20	< 20	53	53	-	-								-			
Mercury	μg/L	2*	2*		< 0.20											< 0.20						-					-		-		
otal Cyanide	μg/L	310	2,000		66	13	< 10	39	30	40	21	110	110	230	190	160	55	100	83	60						140					

### Historical Data Summary - Alluvial Groundwater Analytical Data November 2001 through February 2017 **Atlanta Gas Light Company Former Manufactured Gas Plant Site** Macon, Georgia

		Tues 2	Turns 4	1											MIN 404 (4	Continued											
Parameter	Units	Type 2 RRS	Type 4 RRS	08/13/09	06/08/06	03/10/06	12/22/05	09/30/05	03/14/05	03/05 DUP	12/15/04	12/04 DUP	10/01/04	10/04 DUP	06/10/04	Continued)	03/04 DUP	12/16/03	12/03 DUP	09/09/03	09/03 DUP	06/10/03	06/03 DUP	03/12/03	12/11/02	09/19/02	09/02 DUP
Field Groundwater Quality F	Paramotors	KNO	KKS	06/13/09	06/06/06	03/10/00	12/22/03	03/30/03	03/14/03	03/03 DOI	12/13/04	12/04 DOI	10/01/04	10/04 DOI	00/10/04	03/04/04	03/04 DOI	12/10/03	12/03 DOI	03/03/03	03/03 DOI	00/10/03	00/03 DOI	03/12/03	12/11/02	03/13/02	03/02 DOI
nH	SU	N/A	N/A	6.4	6.45	6.45	6.48	6.65	6.42	6.42	6.38	6.38	6.37	6.37	6.81	6.81	6.81	6.46	6.46	6.61	6.61	6.68	6.68	6.57	6.35	6.36	6.36
Specific Conductance	μS/cm	N/A	N/A	1191	634	772	732	756	664	664	793	793	820	820	841	740	740	1.114	1.114	610	610	591	591	743	726	757	757
Temperature	°Celsius	N/A	N/A	31.69	21.71	18.15	20.96	26.36	18.04	18.04	22.48	22.48	25.85	25.85	21.74	18.65	18.65	22.16	22.16	25.38	25.38	21.86	21.86	20.03	22.88	27.31	27.31
Dissolved Oxygen (YSI)	mg/L	N/A	N/A	5.37	0.13	0.30	0.37	0.06	2.61	2.61	1.58	1.58	0.34	0.34	0.74	0.38	0.38	0.22	0.82	0.15	0.15	0.02	0.02	0.10	0.06	0.02	0.02
ORP	mV	N/A	N/A	-85.3	-75.9	-75.0	-99.9	-99.1	-70.9	-70.9	-103.1	-103.1	-101.4	-101.4	-85.2	-147.3	-147.3	-161.2	-161.2	-125.8	-125.8	-128	-128	-96.1	-87.3	-88.6	-88.6
Turbidity	NTU	N/A	N/A	3.79	1.79	4.36	3.60	4.34	2.90	2.90	5.1	5.1	0.68	0.68	1.80	4.64	4.64			3.59	3.59	13.9	13.9	7.95	31.7	10.5	10.5
Laboratory Results - Natura				0.10			0.00		2.00	2.00	0	0	0.00	0.00	1.00			ı	l .	0.00	0.00	10.0		7.00	0		
Nitrogen, Ammonia	mg/L	N/A	N/A	T					24.5	23.6	23.1	20.2	21.4	23.2	22.4	19.2	22.2	19.9	22.8	21.4	21.4	22.8	22.4	27.9	29.8	35.8	33.7
Nitrogen, Nitrate	mg/L	N/A	N/A	6.5					0.514	0.478	0.337	0.341	1.31	1.01	< 0.5	< 0.500	< 0.0500	0.0384	0.0686	0.306	0.330	< 0.500	< 0.500	0.224	0.113	< 0.0500	< 0.0500
Sulfate	mg/L	N/A	N/A	340					75.1	73.9	121	124	130	131	212	111	118	79.0	75.5	50.2	36.8	25.1	24.1	35.1	40.3	48.8	48.2
Sulfide	mg/L	N/A	N/A	< 1.0					< 1.0	< 1.0	1.0	1.0	2.9	4.5	5.8	2.8	2.4	2.8	3.0	< 1.0	2.3	< 1.0	< 1.0	< 1.0	< 1.00	< 1.00	< 1.00
Dissolved Manganese	mg/L	N/A	N/A						1.68	1.68	1.44	1.45	1.46	1.49	1.64	1.63	1.62	1.47	1.48	1.38	1.33	1.53	1.56	2.35	1.89	2.12	2.15
Total Manganese	mg/L	N/A	N/A						1.72	1.65	1.47	1.51	1.45	1.42	1.72	1.7	1.79	1.53	1.55	1.42	1.44	1.67	1.69	2.34	2.07	1.94	1.99
Ferrous Iron	mg/L	N/A	N/A	14					37.5	37.4	31.9	32.8	21.5	22.3	11.7	59.4	31.3	20.2	19.5	29.1	29.8	16.0	15.0	34.9	34.0	28.6	27.7
Total Iron	mg/L	N/A	N/A	28					36.5	35.4	29.6	29.8	30.0	29.5	42.7	36.2	37.6	34.0	34.8	30.9	31.2	34.0	34.4	36.7	35.5	31.4	33
Carbon Dioxide	mg/L	N/A	N/A	0.41					160	170	150	140	120	110	75	99	98	100	100	110	110	120	120	180	220	200	220
Methane	mg/L	N/A	N/A	0.49					170	150	210	300	190	200	250	300	280	340	390	230	54	390	400	390	280	250	300
Dissolved Nitrogen	mg/L	N/A	N/A	4.8					25	25	18	19	16	15	17	23	21	14	16	15	13	15	14	20	14	12	14
Dissolved Oxygen	mg/L	N/A	N/A	1.7					2.5	2.9	1.8	0.68	0.60	0.53	0.55	0.89	0.87	0.67	0.22	1.5	1.8	0.59	0.54	0.58	5.0	2.6	3.1
Laboratory Results - Organi	c Constitue	ents	1		1		1							, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,													
Volatile Organic Compounds	• • • • • • • • • • • • • • • • • • • •																										
Benzene	μq/L	5.0*	9	27	< 5.0	< 5.0	< 5.0	7.0	< 5.0	< 5.0	41	40	440	440	1,200	160	150	100	97	350	330	51	51	48	77	100	100
Ethylbenzene	µg/L	700*	2.300	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.1	< 5.0	71	74	250	25	24	11	11	30	27	15	15	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	μg/L	1.000*	1,100	< 10	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	130	130	670	17	16	< 5.0	5.7	22	19	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Naphthalene	µg/L	31,000	200,000	19	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	82	91	400	20	19	8.6	8.7	39	36	11	11	< 5.0	< 5.0	< 5.0	< 5.0
Semivolatile Organic Compou	nds	,			•	•	•	•	•	•			•			•		•	•	•	18		•			•	-
2,4-Dimethylphenol	μg/L	700*	700*						< 10	< 10	< 10	< 10	< 10	< 10	12	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
2-Methylphenol	μg/L	780	5,100						< 10	< 10	< 10	< 10	< 10	< 10	23	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3 & 4 Methylphenol	μg/L	78	510						< 10	< 10	< 10	< 10	< 10	< 10	39	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acenaphthene	μg/L	2,000*	6,100						27	26	29	30	26	26	45	30	32	32	34	32	31	26	25	31	31	23	26
Acenaphthylene	μg/L	470	3,100						< 10	< 10	< 10	< 10	< 10	< 10	14	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Anthracene	μg/L	4,700	31, 000						< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Fluoranthene	μg/L	1,000*	4,100						< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Fluorene	μg/L	1,000*	4,100						21	21	15	15	< 10	< 10	< 10	< 10	< 10	14	15	14	< 10	20	20	32	32	33	34
Naphthalene	μg/L	20*	20*	450	< 10	< 10	< 10	< 10	< 10	< 10	10	11	700	850	3,600	400	450	160	170	390	420	340	370	< 10	49	130	64
Phenanthrene	μg/L	470	3,100						< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Phenol	μg/L	9,390	61,000						< 10	< 10	< 10	< 10	< 10	< 10	49	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Pyrene	μg/L	1,000*	3,100						< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Laboratory Results - Inorgai	nic Constitu	ients																									
Antimony	μg/L	6.3	40						< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40
Arsenic	μg/L	50*	50*						< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Barium	μg/L	2,000	7,200	76	79.7	101	81.1	84.0	72.3	70.3	68.7	68.2	74.9	73.6	88	109	114	110	110	108	109	91.1	91.7	99	124	111	117
Chromium	μg/L	100	310	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Copper	μg/L	630	4,100	< 20	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Lead	μg/L	15*	15*	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Mercury	μg/L	2*	2*						< 0.2	< 0.2	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Nickel	μg/L	100	2,000	< 40	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	20	< 20	< 20
Zinc	μg/L	4,700	31,000						< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	20	< 20	< 20
Total Cyanide	μg/L	310	2,000	130	67	77	15	58	81	86	112	114	55	50	107	64	71	98	97	50	52	19	24	43	55	97	84
Notes:		_									_				_												

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Stamdard Units

μS/cm - microsiemens per centimeter

μg/L - micrograms per liter

mg/L - milligrams per liter

mV - millivolts

NTU - nephelometric turbidity units

N/A - RRS are not applicable to this parameter

-- Not Analyzed

HF - Holding time of 15 minutes was exceeded

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

4th Semiannual Progress Report ERM

B 1	11. 14	Type 2	Type 4																				MW-102																	$\overline{}$
Parameter	Units	RRS	RRS	02/27/17	7 08/2	25/16 0-	04/06/16	08/11/15	02/18/1	5 08/0	06/13 02	2/05/13	11/06/12	08/07/12	05/15/12	02/13/12	11/15/11	08/10/11	05/04/11	02/24/11	11/10/10	08/10/10	05/11/10	02/25/10	08/12/09	06/06/06	03/08/06	12/20/05	09/28/05	03/16/05	12/14/04	09/30/04	06/08/04	03/03/04	12/16/03	09/10/03	06/10/03	03/12/03	12/11/02***	09/19/02
Field Groundwater Quality P	Parameters SU	N/A	N/A	5.56	5	72	5.05	5.80	6.49	5	03	6.54	6.53	5.5	5.05	6.54	5.77	6.08	6.07	6.41	6.06	6.25	6.61	6.66	5.03	5.03	6.20	6.64	6.17	634	6.24	6 70	633	6.34	63	6.4	6.69	6.08	NIM	6.34
Specific Conductance	μS/cm			760.7	87	76.0	300	888	451	70	06	824	575	645	739	711	594	472					320				341		277		358				705					799
Temperature	°Celsius		N/A		25	5.40	16.08	27.50	13.84	24	.87	20.69 0.51	20.89		23.47			27.53					19.87				17.74				20.28		22.74		20.69		22.39	17.59		25.75
Dissolved Oxygen (YSI)	mg/L mV		N/A	0.97 109.0				0.98			.71	0.51	1.75	0.81			0.97	0.92 79.1	0.90	2.03 142.8							0.59 135.2	0.44		0.63 -59.1			8.10 <sup>2</sup>		0.23	0.40 -75.5		0.12		0.50
Turbidity	NTU			0.71																5.05	0.12	2.42	7.12	5.21	3,45	0.21	0.02	1.58	2.71	2.50	2.2	0.2	109.2	1.96		1.87				18.0
Laboratory Results - Natural		Parameters																													•			•				•	•	
Nitrogen, Ammonia	mg/L		N/A				-				-			-																	0.32					4.71				14.5 0.114
Nitrogen, Nitrate Sulfate	mg/L mg/L		N/A N/A		-							0.13 350				0.26 220				0.064 66				29	0.81 220						0.459 4.83				50.0	< 0.0500 104		< 0.0500 <b>94.1</b>		105
Sulfide	mg/L	N/A	N/A						-			< 1.0		-	-	< 1.0				< 1.0				< 1.0						< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.00	< 1.00
Dissolved Manganese	mg/L		N/A				-				-	-		-											-						1.75					1.72				1.14
Total Manganese Ferrous Iron	mg/L mg/L		N/A N/A		-						<1	0 10 HF				< 0.10 HF				< 0.010 HF				0.12	< 0.010						1.82 0.6			2.03		1.74 15.2				0.968 3.72
Total Iron	mg/L mg/L	N/A	N/A					-	-	-		0.11		-	-	< 0.10				0.13				0.6						2.60	0.915	1.24	10.2	3.79	0.515	15.8	8.97	7.93	4.94	6.83
Carbon Dioxide			N/A N/A						-			37				<b>0.97</b> < 0.58				0.78 3.5			-	0.45	1.1 0.23					100	83 74	49	160	120 0.87	98	120	90	49		150 27
Methane Dissolved Nitrogen	mg/L mg/L		N/A N/A		-							< 0.58 19		-		< 0.58 <b>5.0</b>				4.5				3.9							15			22		7.8 13				16
Dissolved Oxyger	mg/L		N/A									7.8		-		1.6				1.5					1.5									1.1		0.47				
Laboratory Results - Organic	ic Constituents	3																																						
Volatile Organic Compounds Benzene	ug/l	F*	9	<5.0		5.0	< 5.0	< 5.0	-50	-	5.0	< 1.0	-10	-10	< 1.0	< 5.0	~ F.O	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	~ F.O	< 5.0	~ F.O	< 5.0	~ F.O	< 5.0
Carbon Disulfide	μg/L μg/L		1,700	<5.0	<	5.0	< 5.0	< 5.0	< 5.0	< :	5.0	< 2.0	< 2.0	< 2.0	< 2.0				-	-					-		-			-	-				-		-		-	
Ethylbenzene	μg/L	700*	2,300	<5.0	<	5.0	< 5.0	< 5.0	< 5.0	< 5	5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0		-	-	-	< 5.0				< 5.0		< 5.0		< 5.0	< 5.0			< 5.0		< 5.0		< 5.0
Toluene Total Xylenes	μg/L ug/l			<5.0												< 5.0		< 5.0		< 5.0 < 5.0					< 5.0		< 5.0 < 5.0									< 5.0 < 5.0				< 5.0
Semivolatile Organic Compour	μg/L unds	31,000	200,000	<b>C</b> 3.0		5.0	₹ 3.0	₹ 3.0	₹ 3.0		3.0	C 2.0	₹ 2.0	₹ 2.0	₹ 2.0	₹ 3.0	₹ 3.0	₹ 3.0	₹ 3.0	₹ 3.0				₹ 3.0	₹ 3.0	₹ 3.0	₹ 3.0	₹ 3.0	₹ 3.0	₹ 3.0	₹ 3.0	₹ 3.0	₹ 3.0	₹ 3.0	₹ 3.0	₹ 3.0	₹ 3.0	₹ 3.0	₹ 3.0	₹ 3.0
Acenaphthene	μg/L	2,000*	6,100	< 0.50	<(	0.50	< 0.50	< 0.50	< 10	<	10 •					-							-		-						< 10					< 10				< 10
Acenaphthylene Anthracene	μg/L μg/L			<1.0 <0.050											< 0.22 < 0.22	-				-	-				-	-	-				< 10 < 10			< 10 < 10		< 10 < 10				< 10 < 10
Benzo[a]anthracene	μg/L			0.069								< 0.25		< 0.19						<del>-</del>			-			-		-												
Benzo[a]pyrene	μg/L	0.2*	0.39	< 0.050	<0	.050 <	< 0.050	< 0.050	< 0.050	) < 0	0.20	< 0.25	< 0.20		< 0.22	-				-			-		-										-	-			-	
Benzo[b]fluoranthene Benzo[g,h,i]perylene	μg/L μg/L			<0.10 <0.10											< 0.22	-				-					-	-	-						-						-	
Benzo[k]fluoranthene	μg/L			<0.050											< 0.22					<del>-</del>			-		<del>-</del>	-		-					-		<del></del>	-			-	
Chrysene	μg/L		392					< 0.050				< 0.25		< 0.19		-				-			-		-										-	-			-	
Dibenz(a,h)anthracene	μg/L		0.39	<0.10 <10	<(	0.10	< 0.10	< 0.10 < 10	< 0.10	< 0			< 0.20	< 0.19	< 0.22 < 2.2	-				-			-		-	-	-			 < 10	10	< 10	< 10	< 10	< 10	 < 10	 < 10	 < 10	 < 10	< 10
2,4-Dimethylpheno Fluoranthene	μg/L μg/L			<0.10								< 2.5 < 0.25			< 0.22	-				-					-							< 10	< 10			< 10				< 10
Fluorene	μg/L			<0.10											< 0.22	-														< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Indeno[1,2,3-cd]pyrene 2-Methylpheno	μg/L		3.92 5,100					< 0.050 < 10					< 0.20		< 0.22 < 2.2	-									-					 < 10	 < 10	< 10	 < 10	< 10	 < 10	< 10	 < 10	 < 10	< 10	 < 10
3 & 4 Methylphenol	μg/L μg/L			<10		:10	< 10	< 10	< 10	-	10	< 2.5	< 2.0		< 2.2					<del>-</del>	-		-		<del>-</del>	-		-			< 10	< 10	< 10	< 10		< 10				< 10
Naphthalene	μg/L	20*	20*	< 0.50	<(	0.50	< 0.50	< 0.50	< 10	<		< 0.25			< 0.22		< 5.0	< 5.0	< 5.0		< 5.0				<9.8	< 10	< 10	< 10	< 10		< 10		< 10			< 10				37
Phenanthrene Phenol	μg/L ug/l			<0.050 <10									< 0.20	< 0.19	< 0.22	-									-	-	-	-	-		< 10 < 10		< 10 < 10			< 10 < 10				< 10 < 10
Pyrene	μg/L μg/L	1,000*	3,100	<0.050	<0	.050 <	< 0.050	< 0.050	< 10	<		< 0.25			< 0.22	-				-			-		-	-	-	-			< 10					< 10			< 10	< 10
Inorganic Constituents																																				•				
Antimony	μg/L		40	-				< 20					< 20	< 20		-				-	-		-	-	-	-	-				< 40	< 40				< 40		< 40		< 40
Arsenic Barium	μg/L μg/L	50* 2,000	50* 7.200				< 50	< 50 <b>210</b>	< 50	1			< 20 110	< 20 110	< 20 110	97	120	290	180	88	-		-	82	220	154	158	116	125	< 50 147	< 50 129	< 50 106	< 50 146	< 50 149	< 50 104	< 50 163	< 50 137	< 50 <b>104</b>	< 50 180	< 50 183
Beryllium	μg/L	31	200					< 10					< 4.0	< 4.0							-		-																	
Cadmium	μg/L		51	-				< 5.0				< 5.0			< 5.0	-	-	-		-	-	-	-	-	-	-	-	-	-			-	-	-	-	-	-		-	
Chromium Copper	μg/L ug/L	100 630	310 4,100					< 10 < 10		<			< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20				< 10 < 20	< 10 < 20	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10		< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10
Lead	μg/L μg/L	15*	15*	<del></del>	<	10	< 10	< 10	< 10	<	10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<u> </u>	<u> </u>		< 10	< 10	< 10		< 10		< 10	< 10	< 10	20.1	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Nickel	μg/L		2,000		<	20 (	0.0408	< 20	< 20	<	20	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40		-		< 40		< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Zinc Mercury	μg/L μg/l		31,000 2*					<b>242</b> < 0.20					<b>28</b> < 0.20	< 20	<b>30</b> < 0.20						-		-	-			-	-	-		< 20 < 0.5			< 20 < 0.5		< 20 < 0.5		< 20 < 0.5		< 20 < 0.5
Total Cyanide	μg/L μg/L	310	2,000					< 10.0		10			21	180	170	34				55	-		-	46	390	57	56	57	59	41	35	90	95		159	133	46		293	283
Analyte was detected above Analyte concentration excee 'Highest RRS equals Type 1 ft AMSL - feet Above Mean Se RRS - Risk Reduction Standar SU - Stamdard Units  µS/cm - microsiemens per cen  µg/L - milligrams per liter  m/- millivolts  NTU - nephelometric turbidity  N/A - RRS are not applicable t  - Not Analyzed  HF - Holdring time of 15 minute	RRS; therefore, lea Level and entimeter units to this paramet	RRS (RRS the cleanup	applicable			or this chem	mical																																	
Values are listed with the labor			ignificant fi	jures, which v	varies be	tween diffe	erent const	tituents withi	in the same	groundwa	ater sample	e, and betwe	en the sam	e constituen	in different v	rells.																								

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Part																									
Selection Controllers   Selection   Select	Parameter	Units	Type 2	Type 4		I				00/05/40		20/20/22	20//2/22	00/00/05	MW-103	10115101	40/04/04	1 00//0/0/	00/04/04	10/10/00	1			10/11/00	
Second Company   Seco	Field Committee Condition B		RRS	RRS	2/24/2017	8/24/2016	2/6/2013	02/13/12	2/22/2011	02/25/10	08/12/09	06/06/06	03/16/06	09/29/05	03/14/05	12/15/04	10/01/04	06/10/04	03/04/04	12/16/03	09/10/03	06/11/03	03/11/03	12/11/02	09/19/02
September   Sept	Field Groundwater Quality P			T 11/4		5.00	= 00	T = 10				0.00	0.47	2.42		0.00			0.07	0.54		0.07	0.50		0.54
Secretary   Change   West	pH																								
Secretary   Prof.   No.   No.   14.0   292   112   039   271   281   124   135   1																				,					
Property																									
The control of the co																									
Section   Proceedings   Proceeding   Proceeding   Proceeding   Procedure   P	****																								
Trigger from the control of the cont					3.75	2.11	1.49	9.00	5.73	0.57	3.59	0.58	4.15	1.71	2.23	3.0	1.7	2.52	9.81		4.71	8.34	6.8	4.58	2.8
mings					ī	1		1	1		1					25.2			0.5.4	4.00					
Anthony Control (1942) 1942 1943 1943 1943 1943 1943 1943 1943 1943																									
inference in the property of t																						_			
Part																									
Supplier Sup																									
margin   m	<u> </u>																								
mate method by 1 NA NA 064 027 039 100 049 100 0																									
Part																									
Interior   Page																									
Page																									
Transfer Feetler Company Compa																									
Accessed Pages Company																									
Solution Composed Sequences (1994) 5.65   P.   450   4				N/A			1.2	2.4	1.4	1.2	1.7			-	2.9	0.97	1.2	0.//	1.1	1.4	2.4	1.7	0.72	5.4	5.1
Part		constituen	เร																						
Part		//	F 0*	T 0	-5.0	.5.0	.40		0	. 5.0		. 5.0	. 5.0	. 5.0		. 5.0		1 .50	. 5.0	. 5.0	45	.50		. 5.0	.50
Part				-				< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		< 5.0	< 5.0	< 5.0	< 5.0
Description   Pipe   1,000   1,100   450																									
Important   Impo	. ,			,																					
semioral Program Compounds  semioral Page Comp																									
Compaphthene   Pight   2,000   6,100   c10   c			31,000	200,000	<5.0	<5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Competitivities   pigl.   470   3,100   ct.0   ct	<u> </u>		2.000*	6 100	-0.50	40 E0	- 0.20	1		1	1	1			- 10	- 10	- 10	1 20	44	<b>50</b>	60	20	22	24	24
withfreenene upt 4,700 31,000 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500 < 0.0500			,	-,																					
Semental part   1.17   3.92   4.050				-,						-															
Nemoclaphymene   pgl.   0.2°   0.39   0.050   0.050   0.000   0.20   0.0000   0.0000   0.0000   0.00										<del></del>					< 10		< 10	< 10		< 10	< 10			< 10	
Semolphipmenheme   Light   1.17   3.92   0.10   0.10   0.20   0.10   0										-															
Nemocylapherwine   pgl   10   10   0.   0.10   0.10   0.20   0.   0.   0.   0.   0.   0.																		_							
Netrophysion   191																									
Diffusion   pgl.   117   332   0.050																									
Debra Calibratification   pg  0.   0.3°   0.30   0.30   0.01   0.010   0.020															1			1							-
## A-Dimethylphenol   µg/L   700°   700°   4100   <10   <10   <10   <20	_ ·																-					1			-
Figure   F										<b>—</b>					< 10		< 10		< 10	< 10	< 10			< 10	
Supplied   1,000   4,100   0,100   0,100   0,100   0,200										<b>—</b>															
	Fluorene																								
Methylphenol   Meth																									
3.4 Methylphenol   µg/L   78   510   <10   <10   <20															< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Appthalene   μg/L   20°   20°   40.50   40.	3 & 4 Methylphenol			-,																					
Phenalthrene   μg/L   470   3,100   <0,050   <0,050   <0,020	Naphthalene								< 5.0	< 9.8															
Phenol																									
Prime   pg/L   1,000°   3,100   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050   <0.050	Phenol																								
Aboratory Results - Inorganic Constituents    Nationary   Mg/L   6.3   4.0     < 20   < 20	Pyrene																								
Antimony   pg/L   6.3   40     < 20   < 20								•			•														
Assentic Hg/L 50* 50* < 20 < 20 < 50 < 50 < 50	Antimony			40		< 20	< 20								< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40
Sarium	Arsenic																								
Seryllium	Barium							160	28	75	250	193	251	135											
Admium pg/L 7.8 51 < 10 < 5.0	Beryllium									1													1		
Chromium   pg/L   100   310     < 20   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   <	Cadmium																								
Copper         µg/L         630         4,100          < 10	Chromium							< 10	< 10				< 10				< 10	< 10	< 10		< 10		< 10	< 10	
lead																									
lickel µg/L 100 2,000 < 20 < 40 < 40 < 40 < 40 < 40 < 20 < 20	Lead																								
Tine   pg/L   4,700   31,000     < 0.20   < 20	Nickel																								
Mercury         µg/L         2*         2*          <10	Zinc																								
otal Cyanide µg/L 310 2,000 <0.010 <10 <10 <10 <10 12 12 13 22 38 37 <10 23 14 21 19 <10 <10 <10 57 <10	Mercury																								
	Total Cyanide				1			< 10	61	< 10	12		13	22											
	Notes:	r3'-		, ,					·									,							,

Notes:

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Stamdard Units

\*Stem microsiomors per continuous.

μS/cm - microsiemens per centimeter μg/L - micrograms per liter mg/L - milligrams per liter mV - millivolts

NTU - nephelometric turbidity units
N/A - RRS are not applicable to this parameter

-- Not Analyzed
HF - Holding time of 15 minutes was exceeded
Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

-																							
Parameter	Units	Type 2	Type 4	0/04/0047	0/05/0040	4/5/0040	0/5/0040	0/4 4/0040	0/04/0044	0/04/0040	0/44/0000	02/4 E/0E		/-104	00/00/04	02/02/04	40/47/00	00/00/02	00/44/02	02/42/02	40/44/00	00/47/00	00/02 DUD
Field Groundwater Quality	Parameters	RRS	RRS	2/24/2017	8/25/2016	4/5/2016	2/5/2013	2/14/2012	2/21/2011	2/24/2010	8/11/2009	03/15/05	12/16/04	09/30/04	06/09/04	03/03/04	12/17/03	09/08/03	06/11/03	03/12/03	12/11/02	09/17/02	09/02 DUP
nH	SU	N/A	N/A	5.73	5.40	6.53	5.73	5.36	5.52	5.85	6.28	5.56	6.21	5.48	5.80	5.60	5.68	5.60	5.65	5.62	5.41	5.24	5.24
Specific Conductance	μS/cm	N/A	N/A	179.2	181.8	300	159	154	168	127	241	217	238	259	280	273	280	279	271	298	316	361	361
Temperature	°Celsius	N/A	N/A	22.49	28.60	21.37	19	17.14	20.02	9.88	31.71	18.90	22.42	26.87	22.72	18.69	20.9	27.19	22.71	17.16	21.96	27.62	27.62
Dissolved Oxygen (YSI)	mg/L	N/A	N/A	2.47	0.43	4.83	1.89	3.77	0.98	5.1	5.76	2.15	1.78	1.20	1.45	2.09	0.77	0.23	0.66	1.45	0.42	0.21	0.21
ORP	mV	N/A	N/A	149.6	171.1	65.8	215.6	7.7	-1.4	122.9	-110	227.9	78.9	148.6	136.8	101.6	215.4	26.5	120.1	232.5	253.1	231.8	231.8
Turbidity	NTU	N/A	N/A	7.60	8.27	3.95	5.55	8.05	6.07	9.21	8.84	4.51	8.69	9.0	1.74	3.52		1.82	0.9	4.93	28.9	0.81	0.81
Laboratory Results - Natura												_											
Nitrogen, Ammonia	mg/L	N/A	N/A									< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.200	< 0.200	< 0.200	< 0.200	< 0.200
Nitrogen, Nitrate	mg/L	N/A	N/A				1.5	2.7	1.9	0.79	2.2	1.54	1.44	1.63	2.61	2.36	1.87	1.57	2.11	3.15	2.74	2.63	2.61
Sulfate	mg/L	N/A	N/A				60	47	44	40	55	74.2	70.7	69.8	79.5	70.4	76.6	87.5	61.8	84	101	111	118
Sulfide	mg/L	N/A	N/A				< 1.0	12	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.00	< 1.00	< 1.00
Dissolved Manganese	mg/L	N/A	N/A									0.0475	0.0482	0.0301	0.106	0.105	0.138	0.248	0.183	0.192	0.200	0.262	0.264
Total Manganese	mg/L	N/A	N/A									0.0782	0.0556	0.0327	0.104	0.12	0.145	0.233	0.177	0.192	0.212	0.256	0.237
Ferrous Iron	mg/L	N/A	N/A				< 0.10 HF	< 0.10 HF	< 0.010 HF	< 0.010	<0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.100	< 0.200	< 0.200	< 0.200
Total Iron	mg/L	N/A	N/A				0.22	1.0	0.47	0.50	<0.1	0.571	0.471	0.230	< 0.1	0.189	0.415	< 0.100	0.208	0.371	0.157	2.31	1.07
Carbon Dioxide	mg/L	N/A	N/A				60	1.3	0.77	0.59	2.2	100	110	110	130	110	130	110	120	120	120	150	150
Methane	mg/L	N/A	N/A				< 0.58	< 0.58	<0.58	<0.19	<0.19	0.53	2.6	7.4	1.4	0.55	1.3	1.6	1.9	1.0	2.6	0.96	0.92
Dissolved Nitrogen	mg/L	N/A	N/A				18	6.4	4.8	4.1	4.4	25	15	11	16	22	18	13	16	20	14	16	14
Dissolved Oxygen	mg/L	N/A	N/A				8.1	2.1	1.7	1.5	1.6	5.5	3.0	4.5	1.6	4.4	2.2	2.2	1.6	3.0	7.1	7.4	6.5
Laboratory Results - Organ		ents																					
Volatile Organic Compounds								T															
Benzene	μg/L	5.0*	9	<5.0	<5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Disulfide	μg/L	329	1,700	<5.0	<5.0	< 5.0	< 2.0																
Ethylbenzene	μg/L	700*	2,300	<5.0	<5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	μg/L	1,000*	1,100	<5.0	<5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Naphthalene	μg/L	31,000	200,000	<5.0	<5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Semivolatile Organic Compo Acenaphthene		2.000*	0.400	-0.50	-0.50	.0.50	.0.20	1	1		1	. 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	. 10	. 40	< 10	< 10
Acenaphthylene	μg/L μg/L	2,000* 470	6,100 3,100	<0.50 <1.0	<0.50 <1.0	< 0.50 < 1.0	< 0.20 < 0.20					< 10 < 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 < 10	< 10 < 10	< 10	< 10
Anthracene	μg/L μg/L	4,700	31, 000	<0.050	<0.050	< 0.050	< 0.20					< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzo[a]anthracene	μg/L μg/L	1.17	3.92	<0.050	<0.050	< 0.050	< 0.20																
Benzo[a]pyrene	μg/L	0.2*	0.39	<0.050	<0.050	< 0.050	< 0.20																
Benzo[b]fluoranthene	μg/L	1.17	3.92	<0.00	<0.10	< 0.10	< 0.20																
Benzo[g,h,i]perylene	μg/L	10	10	<0.10	<0.10	< 0.10	< 0.20																
Benzo[k]fluoranthene	μg/L	11.7	39.2	<0.050	<0.050	< 0.050	< 0.20																
Chrysene	μg/L	117	392	<0.050	< 0.050	< 0.050	< 0.20																
Dibenz(a.h)anthracene	μg/L	0.3*	0.39	<0.10	<0.10	< 0.10	< 0.20																
2,4-Dimethylphenol	μg/L	700*	700*	<10	<10	< 10	< 2.0					< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Fluoranthene	μq/L	1,000*	4,100	<0.10	<0.10	< 0.10	< 0.20					< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Fluorene	μg/L	1,000*	4,100	<0.10	<0.10	< 0.10	< 0.20					< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.050	< 0.050	< 0.050	< 0.20										-					-	
2-Methylphenol	μg/L	780	5,100	<10	<10	< 10	< 2.0					< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3 & 4 Methylphenol	μg/L	78	510	<10	<10	< 10	< 2.0					< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Naphthalene	μg/L	20*	20*	< 0.50	<0.50	< 0.50	< 0.20	< 5.0	< 5.0	<9.4	<9.4	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Phenanthrene	μg/L	470	3,100	< 0.050	< 0.050	< 0.050	< 0.20					< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Phenol	μg/L	9,390	61,000	<10	<10	< 10	< 0.99					< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Pyrene	μg/L	1,000*	3,100	<0.050	< 0.050	< 0.050	< 0.20					< 10	< 10	< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10	< 10
Laboratory Results - Inorga	anic Consti																						
Antimony	μg/L	6.3	40		< 20	< 20	< 20					< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40
Arsenic	μg/L	50*	50*		< 50	< 50	< 20					< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Barium	μg/L	2,000	7,200		36.1	109	21	24	28	34	30	29.8	29.9	37.4	29.9	29.9	31.5	30.7	30.2	25	35	38	36
Beryllium	μg/L	31	200		< 10	< 10	< 4.0																
Cadmium	μg/L	7.8	51		< 5.0	< 5.0	< 5.0																
Chromium	μg/L	100	310		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Copper	μg/L	630	4,100		< 10	< 10	< 20	< 20	< 20	< 20	< 20	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Lead	μg/L	15*	15*		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Nickel	μg/L	100	2,000		< 20	< 20	< 40	< 40	< 40	< 40	< 40	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Zinc	μg/L	4,700 2*	31,000 2*		< 20	< 20	< 20					< 20 < 0.5	< 20	< 20 < 0.5	< 20	< 20	< 20	< 20	< 20	< 20	< 20 < 0.5	< 20	< 20
Mercury Total Cyanida	μg/L				< 0.20	< 0.20							< 0.5		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5		< 0.5	< 0.5
Total Cyanide	μg/L	310	2,000		< 10	< 10	< 10	< 10	< 10	< 10	12	< 10	< 10	< 10	< 10	< 10	< 10	10	< 10	< 10	< 10	11	11
Notes:																							

Notes:

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Stamdard Units

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SU - Stamdard Units

µS/cm - microsiemens per centimeter

µg/L - micrograms per liter

mg/L - milligrams per liter

my - milligrams per liter

mY - millivolts

NTU - nephelometric turbidity units

N/A - RRS are not applicable to this parameter

- Not Analyzed

HF - Holding time of 15 minutes was exceeded

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

		Type 2	Type 4								84147	1041								1	M\N/ 40E	
Parameter	Units	Type 2 RRS	Type 4 RRS	2/5/2012	2/14/2012	2/21/2011	2/2//2010	9/11/2000	03/15/05	12/15/04		-104I 6/9/2004	03/03/04	12/17/03	09/08/03	06/11/03	03/11/03	12/11/02	09/19/02	04/07/16	MW-105 02/06/13	06/11/03
Field Groundwater Quality F	Parameters	KNO	KKO	2/3/2013	2/14/2012	2/21/2011	2/24/2010	8/11/2009	03/13/03	12/15/04	09/30/04	6/9/2004	03/03/04	12/11/03	09/06/03	00/11/03	03/11/03	12/11/02	09/19/02	04/07/16	02/00/13	00/11/03
nH	SU	N/A	N/A	5.90	5.74	5.73	6.00	6.20	5.80	7.14	5.42	6.05	5.91	6.02	4.82	6.07	5.93	5.78	5.47	5.56	5.04	5.39
Specific Conductance	μS/cm	N/A	N/A	151	137	153	128	218	224	242	248	257	274	275	303	326	318	316	308	607	317	238
Temperature	°Celsius	N/A	N/A	20.51	16.86	20.42	12.32	31.7	19.35	24.08	27.6	22.61	18.45	21.89	27.81	23.02	18.57	23.5	27.9	19.95	20.97	21.75
Dissolved Oxygen (YSI)	mg/L	N/A	N/A	0.81	3.82	0.42	2.01	5.46	0.77	0.44	0.35	0.79	0.70	0.50	0.30	0.08	0.23	0.07	0.10	1.08	1.80	1.51
ORP	mV	N/A	N/A	166.1	-21	-10.8	71.6	-134.2	212.4	-68.1	56.8	130.8	73.9	199.2	20.5	72.5	190.2	218.3	208	98.7	257.2	208.7
Turbidity	NTU	N/A	N/A	0.1	6.03	9.25	8.72	0.91	4.51	3.82	3.97	1.19	3.74		4.91	0	3.11	2.80	3.51	8.43	9.9	12.8
Laboratory Results - Natura	Attenuation Pa	rameters																				
Nitrogen, Ammonia	mg/L	N/A	N/A						< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.200	< 0.200	< 0.200	< 0.200			< 0.200
Nitrogen, Nitrate	mg/L	N/A	N/A	0.77	1.6	0.63	0.63	0.85	0.85	0.764	0.851	0.909	1.25	0.367	0.362	0.977	1.24	0.935	0.757		3.8	2.10
Sulfate	mg/L	N/A	N/A	31	29	33	33	36	48.4	50.6	51.1	53.1	60.2	58.3	58.8	48.6	69.8	72.4	85.4		100	41.8
Sulfide	mg/L	N/A	N/A	< 1.0	110	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.00	< 1.00		< 1.0	< 1.0
Dissolved Manganese	mg/L	N/A	N/A						0.166	0.160	0.197	0.429	0.414	0.503	0.502	0.529	0.697	0.694	0.79			0.0382
Total Manganese	mg/L	N/A	N/A						0.268	0.174	0.191	0.429	0.444	0.504	0.514	0.532	0.706	0.705	0.735			0.0522
Ferrous Iron	mg/L	N/A	N/A	< 0.10 HF	< 0.10 HF	< 0.010 HF	< 0.010	<0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	< 0.100	< 0.200	< 0.200		< 0.10 HF	< 0.1
Total Iron	mg/L	N/A	N/A	< 0.10	< 0.10	0.58	0.58	<0.1	5.73	0.533	1.75	0.209	< 0.1	0.496	3.52	0.118	0.475	< 0.100	6.93		0.21	0.662
Carbon Dioxide	mg/L	N/A	N/A	62	1.3	0.61	0.61	0.25	110	120	130	110	110	110	110	110	120	110	130		140	170
Methane	mg/L	N/A	N/A	0.7	< 0.58	0.48	0.48	<0.19	0.37	1.8	2.9	0.55	1.9	4.1	6.5	4.0	1.7	1.5	7.9		< 0.58	0.93
Dissolved Nitrogen	mg/L	N/A	N/A	17	5.0	4.1	4.1	4.4	26	17	16	16	20	20	13	16	21	16	22			13
Dissolved Oxygen	mg/L	N/A	N/A	6.9	1.7	1.4	1.4	1.6	4.2	2.0	3.0	1.2	2.0	3.2	1.2	1.3	1.8	7.5	8.9		7.1	2.4
Laboratory Results - Organi	c Constituents																					
Volatile Organic Compounds		F 0+		.40	T .50	.50		.50						.50	.50					.50		
Benzene Carban Diaulfida	μg/L	5.0*	9	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 5.0
Carbon Disulfide	μg/L	329 700*	1,700 2,300	< 2.0 < 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 < 5.0	< 2.0 < 1.0	< 5.0
Ethylbenzene Toluene	μg/L μg/L	1,000*	1,100	< 1.0	< 5.0	< 5.0	< 5.0 < 5.0	< 5.0	< 5.0	< 5.0 < 5.0	< 5.0	< 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0	< 5.0 < 5.0	< 1.0	< 5.0
Naphthalene	μg/L	31,000	200,000	< 2.0	< 5.0	< 5.0	< 5.0 < 5.0	< 5.0	< 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0	< 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0	< 5.0 < 5.0	< 2.0	< 5.0
Semivolatile Organic Compou		31,000	200,000	₹ 2.0	₹ 3.0	< 5.0	< 5.0	< 5.0	₹ 3.0	₹ 5.0	< 5.0	₹ 5.0	₹ 5.0	₹ 3.0	< 5.0	₹ 3.0	< 5.0	₹ 3.0	< 5.0	< 5.0	< 2.0	< 5.0
Acenaphthene	µg/L	2.000*	6.100	< 0.20					< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 0.50	< 0.20	< 10
Acenaphthylene	μg/L	470	3,100	< 0.20					< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1.0	< 0.20	< 10
Anthracene	μg/L	4,700	31, 000	< 0.20					< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 0.050	< 0.20	< 10
Benzolalanthracene	μg/L	1.17	3.92	< 0.20	<u> </u>															< 0.050	< 0.20	
Benzo[a]pyrene	μg/L	0.2*	0.39	< 0.20																< 0.050	< 0.20	
Benzo[b]fluoranthene	µg/L	1.17	3.92	< 0.20																< 0.10	< 0.20	
Benzo[g,h,i]perylene	μg/L	10	10	< 0.20																< 0.10	< 0.20	
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 0.20																< 0.050	< 0.20	
Chrysene	μg/L	117	392	< 0.20																< 0.050	< 0.20	
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	< 0.20																< 0.10	< 0.20	
2,4-Dimethylphenol	μg/L	700*	700*	< 2.0					< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 2.0	< 10
Fluoranthene	μg/L	1,000*	4,100	< 0.20					< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 0.10	< 0.20	< 10
Fluorene	μg/L	1,000*	4,100	< 0.20					< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 0.10	< 0.20	< 10
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.20																< 0.050	< 0.20	
2-Methylphenol	μg/L	780	5,100	< 2.0					< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 2.0	< 10
3 & 4 Methylphenol	μg/L	78	510	< 2.0					< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 2.0	< 10
Naphthalene	μg/L	20*	20*	< 0.20	< 5.0	< 5.0	< 10	<11	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 0.50	< 0.20	< 10
Phenanthrene	μg/L	470	3,100 61,000	< 0.20					< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 0.050	< 0.20	< 10
Phenol Pyrene	μg/L μg/L	9,390 1,000*	3,100	< 0.99 < 0.20					< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10	< 10 < 0.050	< 0.99 < 0.20	< 10 < 10
•		1,000	5,100	< 0.20					< 10	< 10	< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10	< 0.050	< 0.20	< 10
Laboratory Results - Inorga	•	6.0	40	- 200		ı	1	ı	- 40	. 40	. 40	- 40	. 40	. 40	. 40	- 40	. 40	. 40	- 40	- 0 0000	1 .00	140
Antimony Arsenic	μg/L μg/L	6.3 50*	40 50*	< 20 < 20					< 40 < 50	< 40 < 50	< 40 < 50	< 40 < 50	< 40 < 50	< 40 < 50	< 40 < 50	< 40 < 50	< 40 < 50	< 40 < 50	< 40 < 50	< 0.0200 < 0.0500	< 20 < 20	< 40 < 50
Barium	μg/L μg/L	2,000	7,200	< 20 <b>20</b>	21	22	24	28	37.2	36.7	38.2	<b>35.5</b>	34.8	39.6	44.0	38.8	< 50 38	< 50 <b>42</b>	< 50 <b>40</b>	< 0.0500 <b>49</b>	< 20 <b>32</b>	<b>59.6</b>
Beryllium	μg/L	31	200	< 4.0						36.7	36.2	33.3	34.0	39.0	44.0					< 0.0100	< 4.0	39.0
Cadmium	μg/L	7.8	51	< 5.0																< 0.0100	< 5.0	
Chromium	μg/L	100	310	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 0.0100	< 10	< 10
Copper	μg/L	630	4,100	< 20	< 20	< 20	< 20	< 20	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 0.0100	< 20	< 10
Lead	μg/L	15*	15*	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 0.0100	< 10	< 10
Nickel	μg/L	100	2,000	< 40	< 40	< 40	< 40	< 40	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 0.0200	< 40	< 20
	μg/L	4,700	31,000	< 20					< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 0.0200	< 20	< 20
Zinc	µu/L																					
Zinc Mercury	μg/L μg/L	2*	2*	< 0.20					< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.00020	< 0.20	< 0.5
					 < 10	 < 10	 < 10	 < 10														

Notes:

Analyte was detected above laboratory detection limit

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level
RRS - Risk Reduction Standard

SU - Stamdard Units µS/cm - microsiemens per centimeter

µg/L - micrograms per liter

mg/L - milligrams per liter

mV - millivolts

NTU - nephelometric turbidity units

N/A - RRS are not applicable to this parameter

- Not Analyzed
HF - Holding time of 15 minutes was exceeded
Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

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Parameter	Units	Type 2 RRS	Type 4	00/04/40	0.4/0.0/4.5	00/00/40	00/00/00	00/00/00	40/00/05	MW-106	00/45/05	40/45/04	40/04/04	00/00/04	40/40/00	00/40/00	04/04/40	00/00/40	00/00/00	00/00/00	40/04/05	00/00/05	MW-107 12/15/04	40/04/04	00/00/04	00/04 DUD	40/40/00	00/40/00	09/03 DUP
Field Groundwater Quality	Darameters	KKS	KKS	08/24/16	04/29/15	02/06/13	06/06/06	03/08/06	12/22/05	09/29/05	03/15/05	12/15/04	10/01/04	03/02/04	12/16/03	09/10/03	04/04/16	02/06/13	06/06/06	03/08/06	12/21/05	09/29/05	12/15/04	10/01/04	03/02/04	03/04 DUP	12/16/03	09/10/03	09/03 DUP
n⊔ Groundwater Quality	SU	N/A	N/A	5.69	3.56	5.55	5.53	5.64	5.90	5.49	5.09	5.24	5.18	5.12	4.95	3.87	6.16	6.13	6.38	6.35	6.39	6.29	6.15	6.28	6.05	6.05	5.93	5.92	5.92
Specific Conductance	μS/cm	N/A	N/A	450.2	3.30	451	515	425	557	553	361	426	550	516	849	393	303	469	556	483	488	524	527	502	448	448	789	496	496
Temperature	°Celsius	N/A	N/A	24.40	17.43	20.93	21.51	21.04	22.55	23.83	20.49	22.8	23.61	21.44	22.61	24.22	21.23	18.88	21.80	19.53	21.21	25.83	22.49	26.05	19.69	19.69	21.69	24.89	24.89
Dissolved Oxygen (YSI)	mg/L	N/A	N/A	0.83	3.56	0.73	0.35	0.42	0.75	0.20	0.43	3.07	0.30	0.45	0.25	0.33	0.19	0.17	0.19	0.22	0.42	0.22	1.79	0.39	0.35	0.35	0.40	0.15	0.15
ORP	mV	N/A	N/A	419.6	59.4	148.4	186.8	180.6	158.2	-33.7	267.5	154.7	81.1	113.4	123.8	180.5	51.6	-58.3	-89.1	-90.7	-66.7	-110.6	-81.6	-193.3	28.3	28.3	-111.7	-94	-94
Turbidity	NTU			1.27	9.02	2.07	3.93	4.9	4.7	5.98	4.32	3.7	7.10	7.55		15.1	31.7	9.83	3.20	4.2	4.87	4.54	5.0	2.93	10.6	10.6		4.8	4.8
Laboratory Results - Natura	al Attenuation I	Parameters		u .			u .				u .											<u> </u>			<u> </u>	<u> </u>			
Nitrogen, Ammonia	mg/L	N/A	N/A								< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20							2.26	1.08	1.76	1.02	35.2	1.46	1.46
Nitrogen, Nitrate	mg/L	N/A	N/A			0.37					1.68	0.588	< 0.0500	0.124	0.0649	< 0.0500		< 0.050					< 0.0500	< 0.0500	< 0.250	< 0.0500	< 0.0500	< 0.0500	< 0.0500
Sulfate	mg/L	N/A	N/A			120					143	63.6	135	147	128	147		130					82.1	82.9	122	83.7	94.5	159	155
Sulfide	mg/L	N/A	N/A			< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0		< 1.0					< 1.0	1.2	< 1.0	1.3	< 1.0	< 1.0	< 1.0
Dissolved Manganese	mg/L	N/A	N/A		-						0.266	0.209	0.239	0.358	0.512	0.511							0.480	0.528	0.691	0.696	0.792	1.03	1.03
Total Manganese	mg/L	N/A	N/A								0.276	0.215	0.231	0.368	0.507	0.487							0.511	0.504	0.72	0.724	0.778	1.00	1.02
Ferrous Iron	mg/L	N/A	N/A			< 0.10 HF					< 0.1	< 0.1	< 0.1	< 0.1	< 0.1	0.3		9.3 HF					5.2	5.5	6.5	8.9	5.0	7.7	7.8
Total Iron	mg/L	N/A	N/A	-	-	0.28					0.544	< 0.100	0.202	0.302	0.340	0.610		9.6					5.55	5.54	7.16	7.23	8.33	8.30	8.62
Carbon Dioxide	mg/L	N/A	N/A			140					200	210	250	230	240	75		100					120	140	150	150	110	81	73
Methane Disablyod Nitrogon	mg/L	N/A	N/A			1.3					0.44	3.8	33	3.8 20	27	1.9		< 0.58					590	680	750	650 21	900	560	490 13
Dissolved Nitrogen Dissolved Oxygen	mg/L mg/L	N/A N/A	N/A N/A		-	6.4					23 4.2	21 2.6	15 1.8	2.4	16 1.4	18 2.8		5.6					16 3.5	12 0.76	20 1.0	1.3	16 2.1	14 0.98	0.94
Laboratory Results - Organ			IN/A	-	-	0.4	-				4.2	2.0	1.0	2.4	1.4	2.8		შ.ნ					ა.ე	0.76	1.0	1.3	2.1	0.98	0.94
Volatile Organic Compounds	iic Constituents	3																											
Benzene	ug/L	5.0*	9	<5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Disulfide	ug/L	329	1.700	<5.0	< 5.0	< 2.0	< 5.0 	< 5.0 			< 5.0 					< 5.0 	< 5.0	< 2.0			< 5.0 		< 5.0	< 5.0 			< 5.0	< 5.0	
Ethylbenzene	μg/L	700*	2.300	<5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Naphthalene	µg/L	1,000*	1,100	<5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Xylenes	ug/L	31.000	200.000	<5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Semivolatile Organic Compou	unds	, , , , , , , , , , , , , , , , , , , ,														,													
Acenaphthene	μg/L	2,000*	6,100	< 0.50	< 10	< 0.22					< 10	< 10	< 10	< 10	< 10	< 10	1.3	1.6					< 10	< 10	< 10	< 10	< 10	10	< 10
Acenaphthylene	μg/L	470	3,100	<1.0	< 10	< 0.22	-				< 10	< 10	< 10	< 10	< 10	< 10	< 1.0	< 0.20				-	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Anthracene	μg/L	4,700	31, 000	0.062	< 10	< 0.22					< 10	< 10	< 10	< 10	< 10	< 10	0.082	< 0.20					< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzo[a]anthracene	μg/L	1.17	3.92	<0.050	<0.050	< 0.22											< 0.050	< 0.20										-	
Benzo[a]pyrene	μg/L	0.2*	0.39	<0.050	< 0.050	< 0.22											< 0.050	< 0.20											
Benzo[b]fluoranthene	μg/L	1.17	3.92	<0.10	< 0.10	< 0.22											< 0.10	< 0.20											
Benzo[g,h,i]perylene	μg/L	10	10	<0.10	< 10	< 0.22											< 0.10	< 0.20											
Benzo[k]fluoranthene	μg/L	11.7 117	39.2 392	<0.050 <0.050	< 10 < 10	< 0.22 < 0.22											< 0.050 < 0.050	< 0.20 < 0.20											
Chrysene Dibenz(a.h)anthracene	μg/L μg/L	0.3*	0.39	<0.050	< 0.10	< 0.22			<del></del>								< 0.050	< 0.20	<del>-</del>									-	
2,4-Dimethylphenol	μg/L	700*	700*	<10	< 10	< 2.2		<del></del>	<del></del>		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 2.0					< 10	< 10	< 10	< 10	< 10	< 10	< 10
Fluoranthene	μg/L	1,000*	4.100	<0.10	< 10	< 0.22					< 10	< 10	< 10	< 10	< 10	< 10	< 0.10	0.28					< 10	< 10	< 10	< 10	< 10	< 10	< 10
Fluorene	μg/L	1,000*	4,100	<0.10	< 10	< 0.22					< 10	< 10	< 10	< 10	< 10	< 10	0.41	1.3					< 10	< 10	< 10	< 10	< 10	< 10	< 10
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	<0.050	< 0.050	< 0.22											< 0.050	< 0.20											
2-Methylphenol	μg/L	780	5,100	<10	< 10	< 2.2					< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 2.0					< 10	< 10	< 10	< 10	< 10	< 10	< 10
3 & 4 Methylphenol	μg/L	78	510	<10	< 10	< 2.2					< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 2.0		[			< 10	< 10	< 10	< 10	< 10	< 10	< 10
Naphthalene	μg/L	20*	20*	<0.50	< 10	< 0.22	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	47	0.79	< 0.20	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	69	62
Phenanthrene	μg/L	470	3,100	< 0.050	< 10	< 0.22					< 10	< 10	< 10	< 10	< 10	< 10	< 0.050	< 0.20	-				< 10	< 10	< 10	< 10	< 10	< 10	< 10
Phenol	μg/L	9,390	61,000	<10	< 10	< 1.1	-				< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1.0	-				< 10	< 10	< 10	< 10	< 10	< 10	< 10
Pyrene	μg/L	1,000*	3,100	0.47	< 10	< 0.22					< 10	< 10	< 10	< 10	< 10	< 10	0.36	1.4					< 10	< 10	< 10	< 10	< 10	< 10	
Laboratory Results - Inorga	anic Constituen																												
Antimony	μg/L	6.3	40	< 20	< 20	< 20					< 40	< 40	< 40	< 40	< 40	< 40	< 20	< 20					< 40	< 40	< 40	< 40	< 40	< 40	< 40
Arsenic	μg/L	50*	50*	< 50	< 50	< 20					< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 20					< 50	< 50	< 50	< 50	< 50	< 50	< 50
Barium	μg/L	2,000	7,200	34.9	32.8	25	29.8	25.8	30.1	< 20	31.1	26.9	29.2	33.5	33.7	33.3	49.1	26.0	42.8	39.2	44.5	41.6	50.2	38.3	44.3	44.0	52.8	65.3	67.3
Beryllium	μg/L	31	200	< 10	< 10	< 4.0 < 5.0											< 10 < 5.0	< 4.0										-	
Cadmium Chromium	μg/L ug/L	7.8 100	51 310	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 10.0	< 10.0	< 10.0	< 10	< 10	< 10	< 10	 < 10	< 10	< 10	< 5.0 < 10	< 5.0 < 10	< 10.0	< 10.0	< 10.0	< 10	< 10	 < 10	< 10	< 10	< 10	< 10	 < 10
	μg/L μg/L	630	4,100	< 10	< 10	< 10	< 10.0	< 10.0 < 10.0	< 10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10.0	< 10.0	< 10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Copper Lead	μg/L μg/L	15*	4,100 15*	< 10	11.9	< 10	< 10.0	< 10.0	< 10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10.0	< 10.0	< 10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Nickel	μg/L μg/L	100	2.000	< 20	< 20	< 40	< 20.0	< 20.0	< 20.0	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 40	< 20.0	< 20.0	< 20.0	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Zinc	μg/L μg/L	4,700	31.000	< 20	< 20	< 20			< 20.0		< 20	< 20	< 20	24.7	< 20	< 20	< 20	< 20			< 20.0		< 20	< 20	< 20	< 20	< 20	< 20	< 20
Mercury	μg/L	2*	2*	< 0.20	< 0.20	< 0.20	-				< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.20	< 0.20					< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Total Cyanide	μg/L	310	2,000	72	94	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	10	< 10	14	< 10	13	< 10	12	< 10	< 10	< 10	< 10	11	< 10	16
Notes:	r-y-																												

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level
RRS - Risk Reduction Standard

SU - Stamdard Units

SU - Stamdard Units
μS/cm - microsiemens per centimeter
μg/L - micrograms per liter
mg/L - milligrams per liter
mV - millivolts
NTU - nephelometric turbidity units
N/A - RRS are not applicable to this parameter

-- Not Analyzed
HF - Holding time of 15 minutes was exceeded
Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

RRS RRS  N/A N/A N/A  N/A	6.37 465.90 A 21.79 A 0.09 A -59.60 A 1.76	08/24/16  6.11 469.0 23.55 0.28 -36.6 7.15	04/29/15  6.10  376  19.09  0.61  -39.40  7.97	02/06/13 6.02 286 21.19 1.25 154.9 4.07	5.99 271 20.71 1.46 9.2 9.37	02/18/11 6.13 275 20.4 0.32 39.9 2.91	6.09 227 18.59 1.99 64.3 9.51	6.5 225 28.28 2.15 47 4.96	03/15/05 6.19 182 20.07 4.13 50.9 1.74	5.29 215 22.74 0.43 -57	6.11 220 25.13 0.98	6.45 203 22.15 0.99	4.90 170.20 20.92	5.08 172.5 29.53	4.86 169 19.49	08/08/13 4.85 146 25.55	<b>02/06/13</b> 4.53 122	4.43 130	02/16/11 4.4 13 20.	7	4.75 140 17.49	08/12/09 4.51 152 25.85	4.71 207 20.31	5.93
N/A	465.90 21.79 0.09 -59.60 1.76	469.0 23.55 0.28 -36.6 7.15	376 19.09 0.61 -39.40 7.97	286 21.19 1.25 154.9 4.07	271 20.71 1.46 9.2 9.37	275 20.4 0.32 39.9	227 18.59 1.99 64.3	225 28.28 2.15 47	182 20.07 4.13 50.9	215 22.74 0.43	220 25.13 0.98	203 22.15	170.20 20.92	172.5	169	146	122	130	13	7	140	152	207	5.93
N/A	465.90 21.79 0.09 -59.60 1.76	469.0 23.55 0.28 -36.6 7.15	376 19.09 0.61 -39.40 7.97	286 21.19 1.25 154.9 4.07	271 20.71 1.46 9.2 9.37	275 20.4 0.32 39.9	227 18.59 1.99 64.3	225 28.28 2.15 47	182 20.07 4.13 50.9	215 22.74 0.43	220 25.13 0.98	203 22.15	170.20 20.92	172.5	169	146	122	130	13	7	140	152	207	5.9
N/A eters N/A	21.79 0.09 -59.60 1.76	23.55 0.28 -36.6 7.15	19.09 0.61 -39.40 7.97	21.19 1.25 154.9 4.07	20.71 1.46 9.2 9.37	20.4 0.32 39.9	18.59 1.99 64.3	28.28 2.15 47	20.07 4.13 50.9	22.74 0.43	25.13 0.98	22.15	20.92											140
N/A N/A N/A N/A N/A N/A eters N/A N/A N/A N/A N/A N/A N/A N/A	0.09 -59.60 1.76	0.28 -36.6 7.15	0.61 -39.40 7.97	1.25 154.9 4.07	1.46 9.2 9.37	0.32 39.9	1.99 64.3	2.15 47	4.13 50.9	0.43	0.98						20.78	20.69						24.0
N/A N/A eters N/A	1.76	7.15	7.97	4.07	9.37					-57		0.99	1.70	0.21	0.169	1.23	6.08	1.47	6.2		4.41	3.38	5.25	5.82
N/A	\ \ \					2.91	9.51	4.96	1 74		46.5	36.6	151.2	134.4	-38.3	189.2	342.6	10.2	41	3	153.20	-140.5	242.9	152.
\(\frac{1}{1}\)\/A \(\frac{1}\)\/A \(\frac{1}{1}\)\/A \(\frac{1}\)\/A \(\fr	\ \	-	-						1.74	3.09	0.00	33.3	0.27	0.66	1.36	0.48	1.62	4.54	9.1	2	2.34	0.51	5.64	18.3
N/A N/A N/A N/A N/A N/A N/A N/A	\ \	-	-																					
N/A N/A N/A N/A N/A N/A		_			0.40				< 0.20	< 0.20	< 0.20	< 0.20											< 0.20	< 0.2
N/A N/A N/A N/A			-	0.07 36	0.12 33	0.38 24	0.07 24	< 0.050 <b>25</b>	0.304 9.63	0.0596 13.5	< 0.05 <b>16.4</b>	0.131 14.3					0.37 29	0.52 30	0.055 27	0.064 26	0.29 31	0.1 37	1.46 54.1	0.98
N/A N/A				< 1.0	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0					< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.
V/A N/A			-						0.144	0.178	0.164	0.182											0.164	0.21
	٠		-						0.157	0.173	0.162	0.183											0.181	0.17
N/A N/A			-	0.29 HF	2.2 HF	3.1 HF	1.4	0.87	1.9	1.4	2.2	0.7					< 0.10 HF	< 0.10 HF	< 0.010 HF	< 0.010	< 0.010	< 0.1	< 0.1	< 0.
N/A N/A		-	-	0.61	2.6	3.2	2.8	1.2	2.09	1.56	1.58	1.71					31	< 0.10	0.36	0.22	0.11	< 0.010	1.47	0.30
N/A N/A	_	-	-	81	1.3	0.56	0.8	0.69	76	72	75	69					180	1.9	0.76	0.65	1.30	0.83	120	10
N/A N/A N/A N/A		-		8.1	11 5 0	3.0	16 3.7	5.4	13	8.5 16	11	11					< 0.58	0.70	<0.58	<0.58	0.51	1.6	2.6	8.6
				7.3																				7.2
		1	1								0.0						0.0						0.0	
5.0* 9	<5.0	<5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5
		<5.0	< 5.0	< 2.0	-				-				<5.0	<5.0	< 5.0	< 5.0	< 2.0			- 1	-	- 1		-
																								< 5
																								< 5 < 5
,000   200,00	<5.0	<5.0	< 5.0	₹ 2.0	₹ 3.0	₹ 5.0	₹ 5.0	< 5.0	₹ 3.0	₹ 5.0	₹ 5.0	₹ 5.0	<5.0	<5.0	< 5.0	< 5.0	< 2.0	₹ 5.0	< 5.0	< 5.0	₹ 5.0	₹ 5.0	< 5.0	< 5
000* 6.100	00 <0.50	< 0.50	< 10	< 0.25					< 10	< 10	< 10	< 10	< 0.50	< 0.50	< 10	< 10	4.4						< 10	< 1
170 3,100		<1.0	< 10	< 0.25					< 10	< 10	< 10	< 10	<1.0	<1.0	< 10	< 10	11						< 10	< 10
		0.23	< 10	< 0.25					< 10	< 10	< 10	< 10	0.099	< 0.050	< 10	< 10	1.8						< 10	< 10
.17 3.92		< 0.050	< 0.050	< 0.25									<0.050	< 0.050	<0.050	< 0.20	2.6							
							-																	
											-													
117 392			< 10										<0.050	<0.050	< 10	< 10	2.5							
0.39	9 <0.10	<0.10	< 0.10	< 0.25	-		1		-				<0.10	<0.10	< 0.10	< 0.20	0.30							
700* 700*		<10	< 10	< 2.5					< 10	< 10	< 10	< 10	<10	<10	< 10	< 10	< 2.0						< 10	< 10
																								< 10
																		-						< 10
																		-						< 10
																								< 10
20* 20*	< 0.50	4.1	< 10	< 0.25	< 5.0	< 5.0	<9.8	<9.4	< 10	< 10	< 10	< 10	<0.50	<0.50	< 10	< 10	44	< 5.0	< 5.0	< 5.0	<9.4	<11	< 10	< 10
		0.064	< 10	< 0.25					< 10	< 10	< 10	< 10	0.10	< 0.050	< 10	< 10	8.7						< 10	< 10
, ,																								< 10
000* 3,100	0.27	0.30	< 10	< 0.25					< 10	< 10	< 10	< 10	<0.050	<0.050	< 10	< 10	7.4						< 10	< 10
62   40	. 1	- 20	1 20	- 20		1		1	- 40	- 40	- 40	1 . 40	ı	- 20	- 20	- 20	- 20		1	1	1		- 10	< 40
		_																						< 40
		39.3	61.1	79		61	62	54	47.2		51.7	56.9		82.3		73.4	36	75	97	98	77	58	164	402
31 200		< 10	< 10	< 4.0										< 10	< 10	< 10	< 4.0							
7.8 51		< 5.0	< 5.0	< 5.0			-			-				< 5.0	< 5.0	< 5.0	< 5.0							
100 310		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
																								< 10
		_																						< 10
, , , , , , ,		_			< 40 		< 40	< 40										< 40 	< 40 	< 40 	< 40 			< 20
2* 2*		< 0.20	< 0.20	< 0.20					< 0.5	< 0.5	< 0.5	< 0.5		< 0.20	< 0.20	< 0.20	< 0.20						< 0.5	< 0.5
310 2,000		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	30
		•																						
N/.  N/.  N/.  N/.  N/.  N/.  N/.  N/.	A N/A  N/A  N/A  N/A  N/A  N/A  N/A  N/A	A N/A  N/A  N/A  N/A  9 1700	N/A	N/A	N/A	N/A	N/A	N/A	A   N/A         7.3   1.8   1.5   1.3   1.6     Y   9   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0   <5.0	N/A	N/A	N/A	N/A	No.   No.	Name	NA	N   N   N   N   N   N   N   N   N   N	N   N	N N	No.   -   -   7.3	No   No   No   No   No   No   No   No	No	No.   No.	No.   No.

													MW-201 (Aba	ndoned)									
Units	Type 2 RRS	Type 4 RRS	08/08/13	02/06/13	11/08/12	08/08/12	05/17/12	02/16/12	11/17/11	08/11/11	05/04/11	2/15/2011			08/10 DUP	5/11/2010	02/24/10	08/13/09	08/09 DUP	06/08/06	03/10/06	12/22/05	09/29/0
neters														0,10,20									
SU	N/A	N/A	5.05	5.18	5.34	4.38	5.31	5.16	5.05	5.09	5.41	5.36	4.89	5.69	5.69	5.42	5.38	5.14	5.14	5.61	4.52	5.02	6.23
																							537
																							25.74
																							0.65 -69.1
																							3.52
		14//1	0.51	1.51	1.07	003	1.55	2.75	1.07	7.5	0.03	0.75	1.41	3.37	3.37	1.54	1.42	0.00	0.00	7.54	4.0	4.50	0.02
	N/A	N/A		< 0.050				0.083				0.32					< 0.050	0.077	0.074				
mg/L	N/A	N/A		< 5.0			-	60				66					120	110	110				
mg/L	N/A	N/A		< 1.0				1.9				< 1.0					< 1.0	< 1.0	< 1.0				
										1				1	1								
					1					1				1									
	N/A	N/A						4.6				4.2					4	4.2	4.2				
mg/L	N/A	N/A		5.8				1.6				1.4					1.3	1.5	1.5				
nstituents																							
μg/L	5*	9	390	1,700	2,400	2,300	2,500	550	2,500	2,900	510	730	3,300	2,500	2,700	1,100	350	310	410	4,400	710	2,600	1,900
										4 200										4 000			
																						_	840 40
																							1,200
pg/L	01,000	200,000	555	2,100	2,000	1,400	0,200	700	2,400	0,000	020	1,100			1	ı	020	240	200	0,000	120	2,000	1,200
μg/L	2,000*	6,100	< 10	19	17	30	47																
μg/L	470	3,100	< 10	< 2.0	< 0.22	< 2.0	< 0.22																
μg/L	4,700	31,000	< 10	2.9	3.0	4.7	7.3						-					-	-				-
										1				1	1								
														-									
										1													
μg/L	117	392	< 10	< 2.0	< 0.22	< 2.0	< 2.2																
μg/L	0.3*	0.39	< 0.20	< 2.0	< 0.22	< 2.0	< 2.2																
μg/L	700*	700*	< 10	40	< 2.2	69	130						-					-	-				
								1										-					
																							-
μg/L	78	510	< 10	< 20	< 2.2	< 20	< 22																
μg/L	20*	20*	490	1,600	2,900	1,800 D	4,900	2,100	3,500	5,700 *	1,700	2,200	5,500	4,800	5,900	1,500	200	670	580	2,400	600	2,500	1,900
μg/L	470	3,100	20	60	110	150	160																
		3,100	< 10	< 2.0	1.8	2.9	2.4																
		40	< 20	< 20	< 20	< 20	< 20																
μg/L	50*	50*	< 50	< 20	< 20	< 20	< 20					-	-			-							-
μg/L	2,000	7,200	25.9	860	990	1,000	1,000	370	1,100	910	280	370	-				100	190	170	943	190	635	< 20
μg/L	31	200	< 10	< 4.0	< 4.0	< 4.0	< 4.0											-					
μg/L	7.8	51	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0																
																							< 10
														1	1								< 10 < 10
μg/L μg/L	100	2.000	< 20	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40					< 40	< 40	< 40	< 20	< 20	< 20	< 20
μg/L	4,700	31,000	< 20	< 20	< 20	100	< 20																
	2*	2*	< 0.20	< 0.20	< 0.20	0.24	< 0.20						-										
μg/L μg/L	310	2,000	< 10	< 10	< 10	< 10	< 10	< 10				< 10					< 10	< 10	< 10	< 10	< 10	< 10	< 10
r	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	°Celsius N/A mg/L N/A mg/L N/A nV N/A NTU N/A nuation Parameters mg/L N/A stituents  pg/L 329 pg/L 700° pg/L 1,000° pg/L 470 pg/L 1,000° pg/L 470 pg/L 1.17 pg/L 1.19 pg/L 1.17 pg/L	°Celsius N/A N/A Mg/L N/A Mg/L N/A	°Celsius N/A N/A 23.23 mg/L N/A N/A N/A 5.62 mV N/A N/A N/A -7.52 NTU N/A N/A N/A 0.51 nuation Parameters mg/L N/A N/A N/A mg/L N/A N/A N/A mg/L N/A N/A N/A mg/L N/A N/A N/A mg/L N/A N/A N/A N/A mg/L N/A N/A N/A mg/L N/A N/A N/A mg/L N/A N/A N/A N/A N/A N/A mg/L N/A N/A N/A N/A N/A N/A mg/L N/A N/A N/A N/A N/A N/A N/A mg/L N/A N/A N/A N/A N/A N/A N/A N/A mg/L N/A N/A N/A N/A N/A N/A N/A mg/L N/A N/A N/A N/A N/A N/A N/A mg/L N/A N/A N/A N/A N/A N/A N/A N/A N/A mg/L N/A	°Celsius         N/A         N/A         23.23         21.42           mg/L         N/A         N/A         5.62         0.54           mV         N/A         N/A         -5.52         18           NTU         N/A         N/A         -75.2         18           Mg/L         N/A         N/A         -7         < 5.0	**Celsius         N/A         N/A         23.23         21.42         16.87           mg/L         N/A         N/A         N/A         5,62         0.54         1.48           mV         N/A         N/A         N/A         7.52         18         16.83           NTU         N/A         N/A         N/A         0.51         1.31         1.67           nuation Parameters         mg/L         N/A         N/A          <0.050	°Celsius         N/A         N/A         23.23         21.42         16.87         22.75           mg/L         N/A         N/A         N/A         5.62         0.54         1.48         1.58           mV         N/A         N/A         N/A         N/A         1.67         683           NTU         N/A         N/A         N/A         0.51         1.31         1.67         683           nuation Parameters         mg/L         N/A         N/A          < 5.0	"Celsius         N/A         N/A         23.23         21.42         16.87         22.75         23.04           mg/L         N/A         N/A         5.62         0.54         1.48         1.58         6.21           mV         N/A         N/A         N/A         -75.2         18         16.3         123.3         2.5           NTU         N/A         N/A         -75.2         18         16.3         123.3         2.5           NTU         N/A         N/A         -75.2         18         16.3         123.3         2.5           NTU         N/A         N/A         N/A         0.51         1.31         1.67         683         1.95           mg/L         N/A         N/A         N/A	**Celsius         N/A         N/A         23.23         21.42         16.87         22.75         23.04         20.10           mg/L         N/A         N/A         5.62         0.54         1.48         1.58         6.21         0.32           mV         N/A         N/A         N/A         75.2         18         16.3         123.3         2.5         3.0           NTU         N/A         N/A         N/A         0.51         1.31         1.67         683         1.95         2.73           matuation Parameters         mg/L         N/A         N/A          <-0.050            0.08           mg/L         N/A         N/A          <-0.050            60           mg/L         N/A         N/A          <-1.0             60           mg/L         N/A         N/A          28            1.5         15           mg/L         N/A         N/A          250              1.5 </td <td>**Celsius         N/A         N/A         23.23         21.42         16.87         22.75         23.04         20.10         23.12           mg/L         N/A         N/A         N/A         5.62         0.54         1.48         1.58         6.21         0.32         0.20           mV         N/A         N/A         N/A         1.75         2         18         16.3         123.3         2.5         3.0         44.6           NTU         N/A         N/A         N/A         -         &lt;.0.50</td> -         -         -         0.083         -           mutation Parameters         mg/L         N/A         N/A         N/A         -         <.0.50	**Celsius         N/A         N/A         23.23         21.42         16.87         22.75         23.04         20.10         23.12           mg/L         N/A         N/A         N/A         5.62         0.54         1.48         1.58         6.21         0.32         0.20           mV         N/A         N/A         N/A         1.75         2         18         16.3         123.3         2.5         3.0         44.6           NTU         N/A         N/A         N/A         -         <.0.50	**Celsius         N/A         N/A         N/A         23.33         21.42         16.87         22.75         23.04         20.10         23.12         26.09           mg/L         N/A         N/A         5.68         0.54         1.58         6.21         0.32         0.20         0.088           mV         N/A         N/A         N/A         1.31         1.67         683         1.95         2.73         1.07         4.5           nuation Parameters         ***********************************	**Celsius*         N/A         N/A         23,323         21,42         16,87         22,75         23,04         20,10         23,12         26,92         20,23           mg/L         N/A         N/A         6,62         0,54         1,48         1,58         6,21         0,32         0,28         0,54           mV         N/A         N/A         N/A         5,51         1,81         16,3         12,33         2,5         3,0         44,6         262,4         28,6           my/L         N/A         N/A         0,51         1,31         1,67         883         1,95         2,73         1,07         4,5         0,88         0,54         2,273         1,07         4,5         0,88         0,54         2,278         2,30         4,46         262,4         2,286         N/A         N/A         N/A         0,083	"Celsus         NA         N/A         23.23         21.42         16.87         22.75         23.04         20.10         23.12         26.92         20.23         20.47           my         N/A         N/A         5.62         0.54         1.48         15.86         6.21         0.32         2.02         0.88         0.54         0.72           my         N/A         N/A         0.51         1.31         1.67         683         1.95         2.73         1.07         4.6         0.85         0.75           myL         N/A         N/A         0.05         -         -         -         0.083         -         -         -         0.52         4.6         0.85         0.75           mgL         N/A         N/A         -         <         0.05         -         -         -         -         0.083         -         -         -         -         -         -         0.032           mgL         N/A         N/A         -           -         -         -         -         -         -         -         -         -         -         -         -         -         -         - <t< td=""><td>  **Celsius</td><td>***Celsius         N/A         N/A         23.23         21.42         16.87         22.75         23.04         20.10         23.12         26.92         20.23         20.47         24.36         23.76           my         N/A         N/A         N/A         5.62         0.54         1.48         1.58         6.21         0.32         0.20         0.88         0.54         0.72         0.27         3.30           mV         N/A         N/A         N/A         0.54         1.48         1.58         1.33         2.6         3.0         4.46         262.4         -28.6         39.9         71.5         99.2           my         N/A         N/A         N/A         0.88         0.54         1.48         1.83         1.23         2.5         3.0         4.46         262.4         -28.6         39.9         71.5         99.2         99.2         1.41         3.3         1.86         2.73         1.07         4.8         0.75         1.41         3.3         1.8         2.8         0.75         1.41         3.3         2.6         3.0         0.8         2.9         1.1         3.2         2.8         1.1         1.8         1.1         1.1         1.</td><td>  Compage   NA</td><td>  **Commons   NA</td><td>  Control   Con</td><td>**Control N/A** NA**</td><td>**Colored NA** NA**   22.23   21.42   16.97   22.75   22.04   20.10   22.12   26.02   20.23   20.47   24.58   22.76   22.76   21.14   16.98   22.55   25.58    **Total NA** NA**   A. S. /td><td>  Control   NA   NA   223   2142   1687   2275   2304   2010   2312   2882   2021   2047   2438   2376   2376   2376   2376   2376   2375   2355   2441   2376   23</td><td>                                     </td><td>  Color   Colo</td></t<>	**Celsius	***Celsius         N/A         N/A         23.23         21.42         16.87         22.75         23.04         20.10         23.12         26.92         20.23         20.47         24.36         23.76           my         N/A         N/A         N/A         5.62         0.54         1.48         1.58         6.21         0.32         0.20         0.88         0.54         0.72         0.27         3.30           mV         N/A         N/A         N/A         0.54         1.48         1.58         1.33         2.6         3.0         4.46         262.4         -28.6         39.9         71.5         99.2           my         N/A         N/A         N/A         0.88         0.54         1.48         1.83         1.23         2.5         3.0         4.46         262.4         -28.6         39.9         71.5         99.2         99.2         1.41         3.3         1.86         2.73         1.07         4.8         0.75         1.41         3.3         1.8         2.8         0.75         1.41         3.3         2.6         3.0         0.8         2.9         1.1         3.2         2.8         1.1         1.8         1.1         1.1         1.	Compage   NA	**Commons   NA	Control   Con	**Control N/A** NA**	**Colored NA** NA**   22.23   21.42   16.97   22.75   22.04   20.10   22.12   26.02   20.23   20.47   24.58   22.76   22.76   21.14   16.98   22.55   25.58    **Total NA** NA**   A. S.	Control   NA   NA   223   2142   1687   2275   2304   2010   2312   2882   2021   2047   2438   2376   2376   2376   2376   2376   2375   2355   2441   2376   23		Color   Colo

NATE and the deplication of this parameter.

- Not Analyzed

HF - Holding time of 15 minutes was exceeded

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

Parameter	Units	Type 2 RRS	Type 4 RRS		(Aband.)	02/44/42	11/00/12	00/00/40	00/40 DUD	05/47/40	02/44/42	11/10/44		Destroyed)	02/25/44	44/40/40	00/40/40	00/40 DUD	05/44/40	02/24/40	00/43/03
		,,		02/11/13	09/29/05	02/11/13	11/08/12	08/08/12	08/12 DUP	05/17/12	02/14/12	11/16/11	08/11/11	05/04/11	02/25/11	11/10/10	08/10/10	08/10 DUP	05/11/10	02/24/10	08/13/09
Field Groundwater Quality Parar		N/A	N/A	5.08	5.9	6.23	6.04	6.44	6.44	6.77	C 4.4	6.07	6.44	5.99	6.12	6.47	6.11	6.44	6.00	6.20	6.78
Specific Conductance	SU μS/cm	N/A N/A	N/A N/A	257	377	292	6.21 287	6.41 144	6.41 144	6.77 134	6.14 150	6.27 186	6.44 188	327	276	6.17 293	246	6.11 246	6.00 175	6.38 76	120
Temperature	°Celsius	N/A	N/A	20.38	26.15	20.59	19.64	24.47	24.47	22.91	18.42	23.92	26.94	19.86	18.71	293	24.32	24.32	20.26	12.11	29.32
Dissolved Oxygen (YSI)	mg/L	N/A	N/A	2.23	0.40	1.42	0.91	0.50	0.50	2.40	0.50	0.16	0.50	0.23	0.42	0.19	1.78	1.78	1.25	1.24	5.83
ORP	mV	N/A	N/A	48.5	-23	-33.5	-7.4	-11.4	-11.4	69.6	30.8	-51.7	-55.0	-76.3	-18.2	-60.6	-45.9	-45.9	36.2	50.7	22.1
Turbidity	NTU	N/A	N/A	6.97	3.93	2.71	1.21	6.79	6.79	3.14	9.21	2.54	9.52	5.68	8.6	20.6	9.63	9.63	7.57	24.2	4.5
Laboratory Results - Natural Att				0.01	0.00	2.71	1.21	0.70	0.70	0.14	U.Z.1	2.04	0.02	0.00	0.0	20.0	0.00	0.00	7.07	27.2	7.0
Nitrogen, Nitrate (as N)	mg/L	N/A	N/A	0.062		< 0.050					< 0.050				0.15					0.26	< 0.050
Sulfate	mg/L	N/A	N/A	40		9.2					9.0				< 5.0					< 5.0	310
Sulfide	mg/L	N/A	N/A	< 1.0		< 1.0					2.3				< 1.0					< 1.0	< 1.0
Ferrous Iron	mg/L	N/A	N/A	16 HF		15 HF					0.99 HF				13 HF					< 0.010	< 0.010
Total Iron	mg/L	N/A	N/A	18		31					2.2				26					1	0.34
Carbon Dioxide	mg/L	N/A	N/A	160		110					750				1.6					0.16	1.7
Methane	mg/L	N/A	N/A	600		97					19				230					2.4	1.1
Dissolved Nitrogen	mg/L	N/A	N/A							1	5400				4.2					4	4.2
Dissolved Oxygen	mg/L	N/A	N/A	4.6		5.6				-	1700				1.3					1.3	1.5
Laboratory Results - Organic Co	onstituent	s																			
Volatile Organic Compounds																					
Benzene	μg/L	5*	9	1,000	1,900	8.2	< 1.0	2.2	1.2	1.5	25	60	65	400	430	< 5.0	150	150	220	< 5.0	< 5.0
Carbon Disulfide	μg/L	329	1,700	< 20		< 2.0	< 2.0	< 2.0	< 2.0	< 2.0											
Ethylbenzene	μg/L	700*	2,300	720	1,100	7.0	< 1.0	< 1.0	< 1.0	< 1.0	13	7.1	9.9	120	170					< 5.0	< 5.0
Toluene	μg/L	1,000*	1,100	23	23	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	<25					< 5.0	< 5.0
Total Xylenes	μg/L	31,000	200,000	470	660	2.9	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 5.0	< 5.0	20	43					< 5.0	< 5.0
Semivolatile Organic Compounds											1		1		1	1	1		1		
Acenaphthene	μg/L	2,000*	6,100	13		19	2.8	1.5	0.92	0.83											
Acenaphthylene	μg/L	470	3,100	< 2.1		< 0.20	< 0.24	< 0.21	< 0.20	< 0.23											
Anthracene	μg/L	4,700	31,000	2.1		0.20	< 0.24	< 0.21	< 0.20	< 0.23											
Benzo[a]anthracene	μg/L	1.17	3.92	< 2.1		< 0.20	< 0.24	< 0.21	< 0.20	< 0.23											
Benzo[a]pyrene	μg/L	0.2* 1.17	0.39 3.92	< 2.1 < 2.1		< 0.20 < 0.20	< 0.24 < 0.24	< 0.21 < 0.21	< 0.20 < 0.20	< 0.23 < 0.23		<del></del>									
Benzo[b]fluoranthene Benzo[g,h,i]perylene	μg/L μg/L	1.17	10	< 2.1		< 0.20	< 0.24	< 0.21	< 0.20	< 0.23		<del>-</del>									
Benzo[k]fluoranthene	μg/L μg/L	11.7	39.2	< 2.1		< 0.20	< 0.24	< 0.21	< 0.20	< 0.23											
Chrysene	μg/L μg/L	11.7	39.2	< 2.1		< 0.20	< 0.24	< 0.21	< 0.20	< 0.23											
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	< 2.1		< 0.20	< 0.24	< 0.21	< 0.20	< 0.23											
2,4-Dimehylphenol	μg/L	700*	700*	< 21		< 2.0	< 2.4	< 2.1	< 2.0	< 2.3											
Fluoranthene	μg/L	1,000*	4.100	< 2.1		0.30	0.24	< 0.21	< 0.20	< 0.23											
Fluorene	µg/L	1.000*	4,100	11		6.4	0.83	0.52	0.30	< 0.23											
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 2.1		< 0.20	< 1.9	< 0.21	< 0.20	< 0.23											
2-Methylphenol	μg/L	780	5,100	< 21		< 2.0	< 2.4	< 2.1	< 2.0	< 2.3											
3 & 4 Methylphenol	μg/L	78	510	< 21		< 2.0	< 2.4	< 2.1	< 2.0	< 2.3											
Naphthalene	μg/L	20*	20*	1,900	1,300	4.7	< 0.24	1.30	0.56	0.30	7.2	21	8.4 *	220	550	< 5.0	91	80	230	< 9.9	< 9.7
Phenanthrene	μg/L	470	3,100	69		0.38	< 0.24	< 0.21	< 0.20	< 0.23											
Phenol	μg/L	9,390	61,000	< 10		< 1.0	< 1.2	3.7	2.9	< 1.1											
Pyrene	μg/L	1,000*	3,100	< 2.1		0.33	0.26	< 0.21	< 0.20	< 0.23											
Laboratory Results - Inorganic C	Constituer	nts																			
Antimony	μg/L	6.3	40	< 20		< 20	< 20	< 20	< 20	< 20											
Arsenic	μg/L	50*	50*	< 20		< 20	< 20	< 20	< 20	< 20											
Barium	μg/L	2,000	7,200	560	41.6	320	200	97	96	58	120	130	210	510	520					36	44
Beryllium	μg/L	31	200	< 4.0		< 4.0	< 4.0	< 4.0	< 4.0	< 4.0											
Cadmium	μg/L	7.8	51	< 5.0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0											
Chromium	μg/L	100	310	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10					< 10	< 10
Copper	μg/L	630	4,100	< 20	< 10	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20					< 20	< 20
Lead	μg/L	15*	15*	17	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10					< 10	< 10
Nickel	μg/L	100	2,000	< 40	< 20	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40					< 40	< 40
Zinc	μg/L	4,700	31,000	62		45	92	550	540	160											
Mercury	μg/L μg/L	2* 310	2,000	< 0.20		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20											
Total Cvanide				< 10	12	< 10	< 10	< 10	< 10	< 10	< 10				< 10	l				< 10	19

### Analyte was detected above laboratory detection limit

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Stamdard Units

S(m - microsiemens per centimeter)

μS/cm - microsiemens per centimeter μg/L - micrograms per liter mg/L - milligrams per liter mV - millivolts

NTU - nephelometric turbidity units
N/A - RRS are not applicable to this parameter

-- Not Analyzed

HF - Holding time of 15 minutes was exceeded

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

4										MAN	/ 204 / Abanda	and)						
Parameter	Units	Type 2 RRS	Type 4 RRS	08/05/13	02/11/13	11/06/12	08/07/12	05/15/12	02/13/12	11/17/11	/-204 (Abandoi 08/09/11	05/03/11	02/15/11	11/09/10	08/11/10	05/11/10	02/24/10	08/14/09
Field Groundwater Qualit	y Paramete	ers																
рН	SU	N/A	N/A	5.19	6.03	5.72	5.05	5.72	5.78	5.72	5.55	5.69	5.84	5.77	5.94	5.86	6.10	6.12
Specific Conductance	μS/cm	N/A	N/A	702	287	668	673	680	497	719	680	678	385	543	658	601	501	794
Temperature	°Celsius	N/A	N/A	26.72	20.92	20.85	24.52	23.72	19.43	21.54	24.92	20.84	21.05	25.05	25.42	21.91	13.95	25.39
Dissolved Oxygen (YSI)	mg/L	N/A	N/A	1.53	0.86	0.35	0.24	0.35	0.89	0.28	0.91	0.20	1.25	0.36	0.58	0.57	1.68	1.71
ORP	mV	N/A	N/A	-68.0	-12.2	30.6	197.8	173.0	36.8	103.3	106.4	-15.0	103.4	149.0	1.3	57.2	74.9	109.3
Turbidity	NTU	N/A	N/A	1.39	0.44	6.25	2.40	0.58	9.27	5.06	7.67	3.31	9.82	2.33	7.61	8.19	9.34	4
Laboratory Results - Natu																		
Nitrogen, Nitrate (as N)	mg/L	N/A	N/A		< 0.050				0.060				0.062				< 0.050	0.056
Sulfate	mg/L	N/A	N/A		54				140				110				150	6.8
Sulfide	mg/L	N/A	N/A		< 1.0 <b>0.15</b> HF				< 1.0				< 1.0				< 1.0	< 1.0
Ferrous Iron Total Iron	mg/L mg/L	N/A N/A	N/A N/A		< 0.10				0.11 HF 0.36				0.11 HF				< 0.010 <b>0.82</b>	0.13
Carbon Dioxide	mg/L	N/A	N/A		< 0.10 <b>120</b>				1.4				1.9 1.1				2.1	1.3 0.079
Methane	ma/L	N/A	N/A		< 0.58				1.1				<0.58				7.1	4.1
Dissolved Nitrogen	mg/L	N/A	N/A						4.5				4.3				2.9	1.7
Dissolved Oxygen	mg/L	N/A	N/A		5.9				1.5				1.5				0.98	1.7
Laboratory Results - Orga	Ü		14//		0.0				1.0			l	1.0	I	l	l	0.00	
Volatile Organic Compound		ituonio																
Benzene	μg/L	5*	9	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Disulfide	μg/L	329	1,700	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0										
Ethylbenzene	μg/L	700*	2,300	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0				< 5.0	< 5.0
Toluene	μg/L	1,000*	1,100	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0				< 5.0	< 5.0
Total Xylenes	μg/L	31,000	200,000	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0				< 5.0	< 5.0
Semivolatile Organic Comp	ounds			_														
Acenaphthene	μg/L	2,000*	6,100	< 10	< 0.20	< 0.20	< 0.19	< 0.23										
Acenaphthylene	μg/L	470	3,100	< 10	< 0.20	< 0.20	< 0.19	< 0.23										
Anthracene	μg/L	4,700	31,000	< 10	< 0.20	< 0.20	< 0.19	< 0.23										
Benzo[a]anthracene	μg/L	1.17	3.92	< 0.20	< 0.20	< 0.20	< 0.19	< 0.23										
Benzo[a]pyrene	μg/L	0.2*	0.39	< 0.20	< 0.20	< 0.20	< 0.19	< 0.23										
Benzo[b]fluoranthene	μg/L	1.17	3.92	< 0.20	< 0.20	< 0.20	< 0.19	< 0.23										
Benzo[g,h,i]perylene	μg/L	10	10	< 10	< 0.20	< 0.20	< 0.19	< 0.23										
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 10	< 0.20	< 0.20	< 0.19	< 0.23	-									
Chrysene	μg/L	117 0.3*	392 0.39	< 10	< 0.20 < 0.20	< 0.20 < 0.20	< 0.19	< 0.23 < 0.23										
Dibenz(a,h)anthracene 2,4-Dimehylphenol	μg/L μg/L	700*	700*	< 0.20 < 10	< 2.0	< 2.0	< 0.19 < 1.9	< 2.3										
Fluoranthene	μg/L μg/L	1.000*	4.100	< 10	< 0.20	< 0.20	< 0.19	< 0.23										
Fluorene	μg/L	1,000*	4,100	< 10	< 0.20	< 0.20	< 0.19	< 0.23										
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.20	< 0.20	< 0.20	< 0.19	< 0.23										
2-Methylphenol	μg/L	780	5,100	< 10	< 2.0	< 2.0	< 1.9	< 2.3										
3 & 4 Methylphenol	μg/L	78	510	< 10	< 2.0	< 2.0	< 1.9	< 2.3										
Naphthalene	μg/L	20*	20*	< 10	< 0.20	3.0	< 0.19	< 0.23	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<9.9	<9.4
Phenanthrene	μg/L	470	3,100	< 10	< 0.20	< 0.20	< 0.19	< 0.23										
Phenol	μg/L	9,390	61,000	< 10	< 0.99	< 1.0	< 0.96	< 1.1										
Pyrene	μg/L	1,000*	3,100	< 10	< 0.20	0.36	< 0.19	< 0.23	-	-								
Laboratory Results - Inor	ganic Cons	stituents																
Antimony	μg/L	6.3	40	< 20	< 20	< 20	< 20	< 20										
Arsenic	μg/L	50*	50*	< 50	< 20	< 20	< 20	< 20										
Barium	μg/L	2,000	7,200	54.5	44	44	59	41	43	42	53	48	47				41	57
Beryllium	μg/L	31	200	< 10	< 4.0	< 4.0	< 4.0	< 4.0										
Cadmium	μg/L	7.8	51	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-									
Chromium	μg/L	100	310	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10				< 10	< 10
Copper	μg/L	630	4,100	< 10	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20				< 20	< 20
Lead	μg/L	15*	15*	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10				< 10	< 10
Nickel	μg/L	100	2,000	< 20	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40				< 40	< 40
Zinc	μg/L	4,700	31,000	< 20	< 20	21	28	< 20										
Morcury	μg/L	2*	2*	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20										
Mercury Total Cyanide	μg/L	310	2,000	< 10	10	< 10	15	21	< 10				< 10				< 10	< 10

Notes:

Analyte was detected above laboratory detection limit

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level
RRS - Risk Reduction Standard
SU - Stamdard Units

µS/cm - microsiemens per centimeter
µg/L - micrograms per liter
my/L - milligrams per liter
mV - millivolts

TILL - populometric turbidity units

NTU - nephelometric turbidity units
N/A - RRS are not applicable to this parameter

-- Not Analyzed
HF - Holding time of 15 minutes was exceeded

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

<b>Paramete</b> SU	ers	1	02/22/17	08/24/16	04/27/15	08/06/13	02/07/13	11/07/12	08/07/12	05/17/12	02/14/12	11/15/11	08/10/11	05/03/11	02/23/11			11/10 DUP	08/10/10				02/11/13
SU																1 1 1 1 1	11/03/10	11/10 001	00/10/10	00/10/201	05/10/10	02/23/10	02/11/10
01	N/A	N/A	6.37	5.80	6.45	8.08	6.32	6.28	6.17	6.74	6.16	6.34	6.18	6.08	6.39	6.39	6.24	6.24	4.16	4.16	6.25	6.37	5.8
μS/cm °Celsius	N/A N/A	N/A N/A	289.0 22.40	65.3 31.13	272 20.23	293 24.72	244 18.09	276 20.72	297 24.17	295 22.74	251 19.10	293 22.57	289 23.92	323 20.23	273 19.7	273 19.7	314 22.24	314 22.24	328 23.68	328 23.68	314 19.18	339 17.18	521 19.01
mg/L	N/A	N/A	0.91	0.14	1.0	0.06	1.29	1.35	2.0	0.34	2.05	0.22	0.28	0.17	0.32	0.32	0.25	0.25	0.27	0.27	0.73	3.77	0.24
mV	N/A	N/A	-69.80	5.8	-62.7	-94.1	-27.1	-43.5	7.6	-66.6	-29.9	-100.0	146.2	-102.1	-105.6	-105.6	-1.0	-1.0	79.5	79.5	-102.8	-45.6	-3.1
			5.50	12.70	0.56	1.96	5.81	0.95	1.59	3.58	3.11	7.26	2.02	0.89	2.43	2.43	1.18	1.18	0.65	0.65	2.97	3.61	32.9
			T	T	_		< 0.050		_	T	< 0.050	I	1		< 0.050	0.07		T 1			_	< 0.050	< 0.05
	N/A	N/A					12				7.2				< 5.0	< 5.0						< 5.0	150
mg/L	N/A	N/A					< 1.0				< 1.0				< 1.0	< 1.0						< 1.0	< 1.0
												1						1					14 HF 15
																							150
mg/L	N/A	N/A					22				42				55	62						150	7.1
mg/L	N/A	N/A									6.5				4.3	4.5						3.3	
		N/A					5.0				1.9				1.3	1.4						0.98	6.6
	ituents																						
μg/L	5*	9	35	<5.0	66	53	5.8	24	16	42	26	62	350	37	19	55	580	33	33	33	63	91	< 1.0
μg/L	329	1,700	<5.0	<5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0		-						-	-				< 2.0
																							< 1.0 < 1.0
																							< 1.0 < 2.0
ounds	- 1,000															L L							
μg/L	2,000*	6,100	25	9.1	72	55	36	47	34	49													< 0.20
																							< 0.20
	1.17	3.92	0.11	0.12	0.20	< 0.20	0.19	< 0.23	< 0.21	0.28					-						-	-	< 0.20
μg/L	0.2*	0.39	< 0.050	< 0.050	< 0.050	< 0.20	< 0.19	< 0.23	< 0.21	< 0.21					-								< 0.20
μg/L			<0.10	<0.10	< 0.10	< 0.20																	< 0.20
																							< 0.20
	117	392	0.12	0.11	< 10	< 10	0.26	< 0.23	0.22	0.31													< 0.20
μg/L	0.3*	0.39	<0.10	<0.10	< 0.10	< 0.20	< 0.19	< 0.23	< 0.21	0.22													< 0.20
																+		-					< 2.0
																							< 0.20 < 0.20
μg/L	1.17	3.92	< 0.050	< 0.050	< 0.050	< 0.20	< 0.19	< 0.23	< 0.21	< 0.21					1							-	< 0.20
μg/L	780	5,100	<10	<10	< 10	< 10	< 1.9	< 2.3	< 2.1	< 2.1													< 2.0
											130	79	940	140		330	120	100	63	63	270		< 2.0 < 0.20
	470	3,100	5.9	2.1	29	17	3.7	9.4	5.8	14													< 0.20
μg/L	9,390	61,000	<10	<10	< 10	< 10	1.0	< 1.1	< 1.0	< 1.0													< 1.0
		3,100	1.8	1.2	< 10	< 10	4.1	3.8	4.1	4.3													< 0.20
		1 40	T	< 20	- 20	- 20 I	~ 20	< 20	~ 20	< 20			1		_	т т		т			_	_	< 20
	50*	50*		< 50	< 50	< 50						-	-										< 20
μg/L	2,000	7,200		21.9	90.8	91.5	51	64	58	68	63	87	190	71	82	64						110	29.0
μg/L	31	200		< 10	< 10	< 10	< 4.0	< 4.0	< 4.0	< 4.0													< 4.0
																							< 5.0 < 10
μg/L μg/L	630	4,100		< 10	< 10	< 10	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20			-		-	< 20	< 20
μg/L	15*	15*		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10						< 10	< 10
μg/L				< 20	< 20	< 20	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40						< 40	< 40 < 20
		. ,	-																			-	< 0.20
μg/L	310	2,000		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10				< 10	< 10						< 10	< 10
						•							1										
			to the well !	-4!-w\																			
1 RRS; the	refore, the clea				emical																		
Sea Level dard																							
ontimate:																							
entimeter																							
ty units																							
e to this pa	ııameter																						
utes was e	xceeded																						
		of significant fig	gures, which var	ies between diff	ferent constituer	nts within the sam	ne groundwater	sample, and be	etween the same	e constituent in	different wells.												
III S	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	ral Attenuation Paramet mg/L N/A mg/L N	ral Attenuation Parameters mg/L N/A N/A N/A mg/L 1,000 1,000 µg/L 1,000* 1,100 µg/L 1,000* 1,100 µg/L 1,000* 1,100 µg/L 1,000* 1,100 µg/L 1,177 3,92 µg/L 1,000* 4,100 µg/L 1,000* 3,100 µg/L 2,000 7,200 µg/L 3,000* 3,100 µg/L	NTU	NTU	NTU	NTU	NTU	NA	NTL   NA   NA   S.50   12.70   0.56   1.96   5.81   0.35   1.59   and attenuation Parameters	NA	NA	NA	NA	N/N   N/N   S.50   1270   O.555   1.96   O.58   O.58   O.59   O	No.   No.   No.   No.   No.   No.   S.   1.50   1	No.   No.   No.   Sept.   198   19	No.   No.   No.   Color   No.   Color   No.   Color   No.   Color   No.   No	No.   No.   No.   20	No.   No.   No.   Sp.   C.   C.   C.   C.   C.   C.   C.	NOV NO. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10	101 00 00 10 10 00 10 10 00 10 00 10 00 10 00 10 00 0	100   100

4th Semiannual Progress Report May 2017

						MW	/-400			MW	-401
Parameter	Units	Type 2 RRS	Type 4 RRS	2/23/2017	DUP-3	8/24/2016	8/16 DUP	4/6/2016	04/29/15	02/24/17	08/24/16
oundwater Quality Para	meters		•	•	•	•	•	•			
H	SU	N/A	N/A	5.	41	5.	.53	5.54	5.90	6.05	5.73
Specific Conductance	μS/cm	N/A	N/A	80	6.5	81	7.2	1000	520	339.9	201.2
Temperature	°Celsius	N/A	N/A	21	.88	30	).62	21.48	16.72	21.43	25.01
Dissolved Oxygen (YSI)	mg/L	N/A	N/A		24	3.	.81	0.24	2.71	0.88	0.27
ORP	mV	N/A	N/A	14	8.1	15	51.5	119.7	-7.1	61.3	48.4
Turbidity	NTU	N/A	N/A	3.	12	1.	.38	4.37	9.2	9.1	8.19
Laboratory Results - Na	tural Attenuation Pa	rameters									
Nitrogen, Nitrate (as N)	mg/L	N/A	N/A								
Sulfate	mg/L	N/A	N/A								
Sulfide	mg/L	N/A	N/A								
Ferrous Iron	mg/L	N/A	N/A				-		-	-	
Total Iron	mg/L	N/A	N/A								
Carbon Dioxide	mg/L	N/A	N/A						-	-	
Methane	mg/L	N/A	N/A								
Dissolved Nitrogen	mg/L	N/A	N/A							-	
Dissolved Oxygen	ma/L	N/A	N/A							-	
Laboratory Results - Or	<u> </u>				ı	t.	1	1			
Volatile Organic Compour											
Benzene	μg/L	5*	9	<5.0	<5.0	<5.0	<5.0	11	< 5.0	<5.0	<5.0
Carbon Disulfide	μg/L μg/L	329	1,700	<5.0 <5.0	<5.0 <5.0	<5.0 <5.0	<5.0 <5.0	< 5.0	< 5.0 < 5.0	<5.0 <5.0	<5.0 <5.0
Ethylbenzene	μg/L μg/L	700*	2,300	<5.0 <5.0	<5.0 <5.0	<5.0 <5.0	<5.0 <5.0	< 5.0 < 5.0	< 5.0 < 5.0	<5.0 <5.0	<5.0 <5.0
Toluene	μg/L	1,000*									
Total Xylenes		31,000	1,100 200,000	<5.0	<5.0 <5.0	<5.0 <5.0	<5.0	< 5.0	< 5.0	<5.0	<5.0
•	µg/L	31,000	200,000	<5.0	<5.0	<0.0	<5.0	< 5.0	< 5.0	<5.0	<5.0
Semivolatile Organic Com		2.000*	6.100	<0.50	<0.50	<0.50	0.52	1.0	< 10	0.83	<0.50
Acenaphthene	µg/L	470	-,					1.30			
Acenaphthylene	μg/L		3,100	<1.0	<1.0	<1.0	<1.0		< 10	<1.0	<1.0
Anthracene	μg/L	4,700	31,000	0.11	0.12	0.14	0.17	0.15	< 10	0.060	0.093
Benzo[a]anthracene	μg/L	1.17	3.92	<0.050	<0.050	<0.050	<0.050	< 0.050	<0.050	<0.050	<0.050
Benzo[a]pyrene	μg/L	0.2*	0.39	<0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050	<0.050	<0.050
Benzo[b]fluoranthene	μg/L	1.17	3.92	<0.10	<0.10	<0.10	<0.10	< 0.10	< 0.10	<0.10	<0.10
Benzo[g,h,i]perylene	μg/L	10	10	<0.10	<0.10	<0.10	<0.10	< 0.10	< 10	<0.10	<0.10
Benzo[k]fluoranthene	μg/L	11.7	39.2	<0.050	<0.050	<0.050	<0.050	< 0.050	< 10	<0.050	<0.050
Chrysene	μg/L	117	392	<0.050	<0.050	<0.050	<0.050	< 0.050	< 10	<0.050	<0.050
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	<0.10	<0.10	<0.10	< 0.10	< 0.10	<0.10	<0.10
2,4-Dimehylphenol	μg/L	700*	700*	<10	<10	<10	<10	< 10	< 10	<10	<10
Fluoranthene	μg/L	1,000*	4,100	0.10	<0.10	<0.10	<0.10	0.11	< 10	<0.10	<0.10
Fluorene	μg/L	1,000*	4,100	<0.10	<0.10	0.19	0.21	0.28	< 10	<0.10	<0.10
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	<0.050	<0.050	< 0.050	<0.050	< 0.050	< 0.050	<0.050	<0.050
2-Methylphenol	μg/L	780	5,100	<10	<10	<10	<10	< 10	< 10	<10	<10
3 & 4 Methylphenol	μg/L	78	510	<10	<10	<10	<10	< 10	< 10	<10	<10
Naphthalene	μg/L	20*	20*	0.56	0.55	<0.50	<0.50	1.70	< 10	<0.50	<0.50
Phenanthrene	μg/L	470	3,100	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 10	<0.050	<0.050
Phenol	μg/L	9,390	61,000	<10	<10	<10	<10	< 10	< 10	<10	<10
Pyrene	μg/L	1,000*	3,100	0.14	0.14	0.13	0.13	0.14	< 10	1.0	1.0
Inorganic Constituents											
Antimony	μg/L	6.3	40			< 20.0	< 20.0	< 20.0	< 20.0		< 20.0
Arsenic	μg/L	50*	50*			< 50.0	< 50.0	< 50.0	< 50.0	-	< 50.0
Barium	μg/L	2,000	7,200			68	67.6	67.6	38.1		122
Beryllium	μg/L	31	200			< 10.0	< 10.0	< 10.0	< 10.0	-	< 10.0
Cadmium	μg/L	7.8	51		-	< 5.0	< 5.0	< 5.0	< 5.0	-	< 5.0
Chromium	μg/L	100	310			< 10.0	< 10.0	< 10.0	< 10.0		< 10.0
Copper	μg/L	630	4,100			< 10.0	< 10.0	< 10.0	< 10.0		< 10.0
Lead	μg/L	15*	15*			< 10.0	< 10.0	< 10.0	< 10.0		< 10.0
Nickel	µg/L	100	2,000			< 20.0	< 20.0	< 20.0	< 20.0	-	< 20.0
Zinc	μg/L	4,700	31,000			145	147	88.7	< 20.0		166
Mercury	μg/L	2*	2*			<0.20	<0.20	< 0.20	< 0.20		<0.20
Total Cyanide	μg/L	310	2,000			288	167	< 10	9.9		<10
Notes:	µ9/∟	310	2,000			200	107	_ \ 10	3.3		<u></u>

Notes:

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Stamdard Units

µS/cm - microsiemens per centimeter

µg/L - micrograms per liter

my - milliyotts

NTU - nephelometric turbidity units

N/A - RRS are not applicable to this parameter

- Not Analyzed

-- Not Analyzed

HF - Holding time of 15 minutes was exceeded

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

4th Semiannual Progress Report May 2017

### **Historical Data Summary - Bedrock Groundwater Analytical Data** November 2001 through February 2017 **Atlanta Gas Light Company** Former Manufactured Gas Plant Site

illulacti	ai Cu	Gas	•	
Macon,	Geo	rgia		

Parameter	Units	Type 2 RRS	Type 4 RRS	04/07/45	MW-08D	40/07/00
	Onits	Type 2 KKG	Type 4 KKG	04/27/15	08/06/14	12/07/06
ield Groundwater Quality Parameters	SU	I N/A	N/A	E 61	7.00	
pecific Conductance	μm/cm	N/A	N/A	5.61 336	7.22 338	
emperature	°Celsius	N/A N/A	N/A N/A			
				21.31	22.45	
issolved Oxygen	mg/L	N/A	N/A	0.49	0.95	
)RP	mV	N/A	N/A	-66.2	-105.7	
urbidity	NTU	N/A	N/A	14.8	2.24	
aboratory Results - Natural Attenuation						
itrogen, Nitrate (as N)	mg/L	N/A	N/A			
ulfate	mg/L	N/A	N/A			
Sulfide	mg/L	N/A	N/A			
errous Iron	mg/L	N/A	N/A			
otal Iron	mg/L	N/A	N/A			
Carbon Dioxide	mg/L	N/A	N/A			
Methane	mg/L	N/A	N/A			
	mg/L	N/A	N/A			
Dissolved Nitrogen Dissolved Oxygen	mg/L	N/A N/A	N/A N/A			
, 0		IV/A	11/71			
aboratory Results - Organic Constituent	IS					
olatile Organic Compounds	<del></del>					
enzene	μg/L	5*	9	< 5.0	< 5.0	< 5
arbon Disulfide	μg/L	329	1,700	< 5.0	< 5.0	< 5
thylbenzene	μg/L	700*	2,300	< 5.0	< 5.0	< 5
oluene	μg/L	1.000*	1.100	< 5.0	< 5.0	< 5
otal Xylenes	μg/L	31.000	200,000	< 5.0	< 5.0	< 5
Semivolatile Organic Compounds		,,,,,,				
cenaphthene	μg/L	2,000*	6,100	< 10	< 10	< 10
cenaphthylene	µg/L	470	3,100	< 10	< 10	< 10
nthracene	μg/L	4,700	31.000	< 10	< 10	< 10
enzo[a]anthracene	μg/L	1.17	3.92	< 0.050	< 0.050	< 10
		0.2*	0.39			
Benzo[a]pyrene	μg/L			< 0.050	< 0.050	< 10
enzo[b]fluoranthene	μg/L	1.17	3.92	< 0.10	< 0.10	< 10
Benzo[g,h,i]perylene	μg/L	10	10	< 10	< 10	< 10
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 10	< 10	< 10
Chrysene	μg/L	117	392	< 10	< 10	< 10
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	< 0.10	< 0.10	< 10
,4-Dimehylphenol	μg/L	700*	700*	< 10	< 10	< 10
Tuoranthene	μg/L	1,000*	4,100	< 10	< 10	< 10
luorene	μg/L	1,000*	4,100	< 10	< 10	< 10
ndeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.050	< 0.050	< 10
-Methylphenol	µg/L	780	5,100	< 10	< 10	
& 4 Methylphenol	μg/L	78	510	< 10	< 10	
Naphthalene	μg/L	20*	20*	< 10	< 10	< 10
		470	3,100			
Phenanthrene	μg/L			< 10	< 10	< 10
henol	μg/L	9,390	61,000	< 10	< 10	< 10
yrene	μg/L	1,000*	3,100	< 10	< 10	< 10
norganic Constituents						
ntimony	μg/L	6.3	40	< 20	< 20	
rsenic	μg/L	50*	50*	< 50	< 50	
arium	μg/L	2,000	7,200	902	9790	
eryllium	μg/L	31	200	< 10	< 10	
admium	μg/L	7.8	51	< 5.0	< 5.0	
hromium	µg/L	100	310	< 10	< 10	
opper	μg/L	630	4,100	< 10	< 10	
ead	μg/L μg/L	15*	15*			
		100	2.000	< 10	< 10	
lickel	μg/L			< 20	< 20	
linc	μg/L	4,700	31,000	< 20	< 20	
Mercury	μg/L	2*	2*	< 0.20	< 0.20	
otal Cvanide	μg/L	310	2000	< 10	12	

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Standard Units

μS/cm - microsiemens per centimeter

μg/L - micrograms per liter

mg/L - milligrams per liter mV - millivolts

NTU - nephelometric turbidity units

N/A - RRS are not applicable to this parameter

-- Not Analyzed

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

ERM 4th Semiannual Progress Report

eters	S RRS	02/19/14	08/05/14 8	8/05 DUP 1	08/07/13	02/07/13	11/07/12	08/09/12	05/16/12	02/07/12	11/16/11	11/16 DUP	08/11/11	08/11 DUP		V-09D (Aban 02/18/11		08/10/10	05/10/10	02/23/10	02/10 DUP	08/13/09	06/08/06	03/10/06	12/22/05	12/05 DUP	09/29/05	02/28/05	02/05 DUP
			00/00/14 (	5,00 DOF	30/0//13	02/01/13	11/0//12	00/03/12	00/10/12	V24V1112	11/10/11		30/11/11		00/00/11	JE 10/11	11/03/10	00/10/10	33/10/10	OZIZJI IU	024 TO DOF	50/13/03	00/00/00	00/10/00	12,22,03	1200 DUF	00/20/00	V2/20/03	02/00 DUF
J N/A		6.29	6.80		7.31	6.11	6.22	6.37	6.65	6.67 374	6.58	6.58	6.78	6.78	6.86	6.31	6.41 270	6.17	6.17	7.18	7.18	7.12	6.82	6.58	6.70	6.70	7.06	8.85	8.85 355
om N/A	1 1071	257 20.80	23.63		419 23.28	243 14.62	225 19.58	400 25.52	273 25.18	18.94	385 23.14	385 23.14	433 24.60	433 24.60	425 21.24	243 22.43	24.41	281 24.69	278 21.61	404 20.41	404 20.41	362 24.67	320 22.62	285 19.72	277 20.77	277 20.77	21.94	355 19.84	355 19.84
/L N/		0.31	0.34		0.15	0.17	1.65	0.84	1.13	1.32	0.24	0.24	0.70	0.70	0.32	0.12	0.22	0.33	1.16	1.28	1.28	4.31	0.22	0.31	0.46	0.46	0.20	1.53	1.53
/ N//		78.3	-30.4		-91.6	-82.4	41.8	-35.2	-27.9	-77.6	-88.5	-88.5	150.5	150.5	-104.6	-73.1	-88.3	-60.8	-36.9	-120.6	-120.6	-47.4	-127.8	-105.0	-96.4	-96.4	-70.1	-65.8	-65.8
U N/A	N/A	0.76	1.37	7	0.39	0.69	2.51	2.97	2.45	0.54	0.53	0.53	8.82	8.82	5.26	0.63	0.65	0.27	0.71	1.23	1.23	0	0.79	1.2	2.69	2.69	3.14	11.7	11.7
																													< 0.20
																													< 0.500
																۷ 0.0													<b>4.42</b> < 1.0
			<del> +</del>									-																	0.0825
/L N/	N/A		1 - 1																		-							0.141	0.142
		< 0.100				<0.100				1.0 HF						0.55 HF				0.17	< 0.010	0.34						0.4	0.4
			<del></del>								-													-					1.59
			<del></del>		-										-			-						-			-		2.6 340
			<del> +</del>		-						-														-				20
		4.7	<del></del>	-	-	4.7		-		1.6						1.3				1.1	1.3	1.5		-				4.8	2.6
stituents	•			<u> </u>																								•	
			,																										
	9	< 5.0	77	86	350	< 1.0	< 1.0	< 1.0	< 5.0	16	44	38	91	93	13	5.6	13	7.5	7.0	94	88	23	59	58	45	44	120	550	550
											7.5				 E 4									7.2					5.7
																													<b>5.7</b> < 5.0
																													45
	200,000	1 0.0	10.0	10.0	1 0.0	1 2.0	12.0	7 2.0	1 0.0	10.0	1 0.0	1 0.0	1 0.0	1 0.0	1 0.0	1 0.0				1 0.0	1 0.0	1 0.0	10.0	0.0		0.2			
			< 10	< 10	< 10	0.87	< 0.19	0.71	< 0.21			-																< 10	< 10
			< 10	< 10	< 10	< 0.26	< 0.19	< 0.19	< 0.21	-	-		-		-	-		-		-	-		-	-		-	-		< 10
																													< 10
	0.02	4 0.000	4 0.000	4 0.000	1 0.E0		7 0.10																	-		-			
	10	< 10	< 10	< 10	< 10	< 0.26	< 0.19	< 0.19	< 0.21		-											-	-						
L 11.		< 10	< 10	< 10	< 10	< 0.26	< 0.19	< 0.19	< 0.21		-		-			-			-		-	-		-					
		< 10	< 10	< 10	< 10	< 0.26	< 0.19	< 0.19	< 0.21																				
											-																		
																								-				48	<b>44</b> < 10
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				< 0.050	< 0.20	< 0.26	< 0.19	< 0.19	< 0.21		-											-	-						
L 78			< 10	< 10	< 10	< 2.6	< 1.9	< 1.9	< 2.1																			< 10	< 10
																													< 10
																													100
																													< 10 < 10
											-											-							< 10
																								T.		ı			
		< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20																			< 40	< 40
																													< 50
													2,600	2,600	2,700	2,000					2,100	2,100	1,650	1,580	1,480	1,470		1,100	1,110
		1 10	7 10	1 10	7 10													<del></del> -						<del></del>			-	<del>                                     </del>	
			< 10	< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10				< 10	< 10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10	< 10	< 10
	4,100	< 10	< 10	< 10	< 10	< 20	21	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20				< 20	< 20	< 20	< 10.0	< 10.0	< 10.0	< 10.0	< 10	< 10	< 10
L 15	15*	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10				< 10	< 10	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10	< 10	< 10
			< 20	< 20	< 20	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40				< 40	< 40	< 40	< 20.0	< 20.0	< 20.0	< 20.0	< 20	< 20	< 20
	0 31,000		< 20	< 20	< 20	< 20	23	< 20	< 20	-											-						-	< 20	< 20
L 2*		< 0.20	< 0.20	< 0.20 < 10	< 10		-				16		-		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10.5	< 0.5 < 10					
	N/P/	N/A   N/A							N/A   N/A		N/A					N/A   N/A   0.25	N/A   N/A	N/A   N/A   C   C   C   C   C   C   C   C   C		NA NA NA	N/A   N/A   -  -  -  -  -  -  -  -  -  -  -  -  -	NAN   NAN   -0.2	NAN   NAN   Cast   Ca	NA   NA   NA   Cas	NA   NA   NA   NA   NA   NA   NA   NA	NA   NA   NA   NA   NA   NA   NA   NA	NA   NA   NA   CA   CA   CA   CA   CA	No.   No.	No.   No.

### Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017

### Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

		1		1										
				02/24/17	08/22/16	04/05/16	00/40/45	00/45 DUD	MW-12DR 02/16/15	R 02/18/14	02/14 DUP	08/05/14	08/14 DUP	08/06/13
Parameter Field Groundwater Quality Par	Units	Type 2 RRS	Type 4 RRS	02/24/1/	08/22/16	04/05/16	08/13/15	08/15 DUP	02/16/15	02/18/14	02/14 DUP	08/05/14	08/14 DUP	08/06/13
		NI/A	NI/A	C 40	0.24	C 40		20	C F 4	1 0	00		44	0.00
pH Specific Conductance	SU	N/A N/A	N/A N/A	6.42 493.6	6.34 399.0	6.48 540		36 30	6.54 438		68 45		41 04	6.33 521
	μm/cm °Coloius	N/A N/A	N/A N/A	21.91	26.70	22.43		.82	17.65		.79		5.69	25.49
Temperature	°Celsius					0.37		32			22			
Dissolved Oxygen ORP	mg/L	N/A	N/A	0.18	0.16 -107.9				0.55				38	0.58
Turbidity	mV NTU	N/A N/A	N/A N/A	1.00 0.74	0.5	-108.91 1.84		0.70 65	-60.0 4.20		6.1 45		12.4 52	-94.7 9.41
Laboratory Results - Natural A			IN/A	0.74	0.5	1.84	0.	00	4.20	] 1.	45	0.	.52	9.41
Nitrogen, Nitrate (as N)		N/A	N/A		1				< 0.25	< 0.25	< 0.25		1	
Sulfate	mg/L mg/L	N/A N/A	N/A N/A						1.4	1.1	< 1.0			
Sulfide	mg/L	N/A	N/A						< 1.0	< 1.0	< 1.0			
Ferrous Iron	5	N/A	N/A						3.98	2.1	1.92			
Total Iron	mg/L mg/L	N/A	N/A						5.19	5.53	5.61			
Carbon Dioxide	mg/L	N/A	N/A						94	85	84			
Carbon Monoxide	mg/L	N/A	N/A						< 1.0	< 1.0	< 1.0			<del></del>
Methane	mg/L	N/A	N/A						920	840	780			
Dissolved Nitrogen	mg/L	N/A	N/A						21	20	19			
Dissolved Oxygen	mg/L	N/A	N/A						2.7	2.6	2.0			
Laboratory Results - Organic			13//3		I			l	2	2.0	2.0		iI	
Volatile Organic Compounds	Constituents													
Benzene	μg/L	5.0*	9.0	470	220	96	250	180	280	280	290	340	370	460
Carbon Disulfide	μg/L	329	1,700	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	μg/L μg/L	700*	2,300	150	76	36	110	77	100	120	130	130	160	180
Toluene	μg/L μg/L	1,000*	1,100	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	6.9	7.0	5.4	5.9	9.8
Total Xvlenes	μg/L μg/L	31.000	200,000	140	48	22	60	43	100	94	98	56	65	100
Semivolatile Organic Compound		31,000	200,000	140	70	22	- 00	73	100	34	30	30	05	100
Acenaphthene	μg/L	2,000*	6.100	36	10	< 50	39	31	< 10	35	35	39	33	30
Acenaphthylene	μg/L	470	3,100	6.5	<1.0	8.9	9.6	7.5	< 10	12	12	16	14	14
Anthracene	μg/L	4,700	31, 000	4.5	0.65	1.7	3.7	3.0	< 10	< 10	< 10	< 10	< 10	< 10
Benzo[a]anthracene	μg/L	1.17	3.92	0.15	0.16	0.140	0.23	0.30	0.079	0.29	0.27	0.17	0.14	< 0.20
Benzo[a]pyrene	µg/L	0.2*	0.39	<0.050	<0.050	< 0.050	< 0.050	0.083	< 0.050	0.087	< 0.050	< 0.050	< 0.050	< 0.20
Benzo[b]fluoranthene	μg/L	1.17	3.92	<0.10	<0.10	< 0.10	< 0.10	0.11	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20
Benzo[g,h,i]perylene	μg/L	10	10	<0.10	<0.10	< 0.10	< 0.10	0.12	< 10	< 10	< 10	< 10	< 10	< 10
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 0.050	< 0.050	< 0.050	< 0.050	0.10	< 10	< 10	< 10	< 10	< 10	< 10
Chrysene	μg/L	117	392	0.12	0.13	0.12	0.14	0.22	< 10	< 10	< 10	< 10	< 10	< 10
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	<0.10	< 0.10	< 0.10	0.11	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20
2,4-Dimethylphenol	μg/L	700*	700*	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Fluoranthene	μg/L	1,000*	4,100	5.0	3.6	4.6	6.3	5.8	< 10	< 10	< 10	< 10	< 10	< 10
Fluorene	μg/L	1,000*	4,100	32	14	31	36	28	31	40	41	48	42	35
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.050	< 0.050	< 0.050	< 0.050	0.11	< 0.050	0.087	< 0.050	< 0.050	< 0.050	< 0.20
2-Methylphenol	μg/L	780	5,100	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3 & 4 Methylphenol	μg/L	78	510	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Naphthalene	μg/L	20*	20*	1600	8.9	260	550	550	770	530	570	1,000	870	1,400
Phenanthrene	μg/L	470	3,100	17.00	0.66	7.6	18	13	13	14	17	25	23	28
Phenol	μg/L	9,390	61,000	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Pyrene	μg/L	1,000*	3,100	5.3	3.7	5.2	7.1	6.2	< 10	< 10	< 10	< 10	< 10	< 10
Laboratory Results - Inorganic	Constituent	s												
Antimony	μg/L	6.3	40		< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Arsenic	μg/L	50*	50*		< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0	< 50.0
Barium	μg/L	2,000	7,200		1100	1,390	1,680	1,620	1,550	1,420	1,430	1,610	1,630	1,530
Beryllium	μg/L	31	200		< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Cadmium	μg/L	7.8	51		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium	μg/L	100	310		< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Copper	μg/L	630	4,100		< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Lead	μg/L	15*	15*		< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0	< 10.0
Nickel	μg/L	100	2,000		< 20.0	42.1	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0	< 20.0
Zinc	μg/L	4,700	31,000		< 20.0	< 20.0	< 20.0	< 20.0	42.8	< 20.0	< 20.0	< 20.0	< 20.0	43.9
Mercury	μg/L	2*	2*		<0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Total Cyanide	μg/L	310	2,000		<10	23	26	37	33	26	20	48	37	40
Notes:														

Notes:

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Standard Units

μS/cm - microsiemens per centimeter

μg/L - micrograms per liter

mg/L - milligrams per liter

mV - millivolts

NTU - nephelometric turbidity units

N/A - RRS are not applicable to this parameter

- Not Analyzed

- Not Analyzed

HF - Holding time of 15 minutes was exceeded

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

ERM 4th Semiannual Progress Report May 2017

Type 2 RRS  N/A N/A N/A N/A N/A N/A N/A N/A N/A N/	Type RR N// N// N// N// N// N// N// N// N//	11/10/10  12.24  1.327  22.4  0.71  -128.6  6.24	1,922 25.55 0.76 -54.2 0.65	MW-12DR	12.69 18.510 23.04 1.24 -108.6 5.52	12.13   2.398   12.87   12.87   1.87   1.05.0   0.62   -105.0   0.62   -105.0   -105.0   -205.0   -2	08/14/09  7.24 376 27.19 5.73 -85.0 3.32  <0.050 28 <1.0 0.24 2.8 0.15 40 5.13	06/07/06	38	7.41 664 21.77 0.31 -55.9 2.8 	12/21/05 6.99 798 19.92 0.19 -72.2 0.00 10 <5.0 7.2	6.99 798 19.92 0.19 -72.2 0.00	09/29/05   6.62   760   23.76   0.16   -76.5   1.29	6.55 1.242 21.93 1.16 -18.4 4.34  5.84 -<.0.500 302 -<.1.0 1.87 1.90 0.9 6.45 120 44 5.0 44	12/16/04  6.45 1642 23.15 3.67 12.7 4.51  9.49 0.0529 352 <1.0 2.16 2.29 <0.1 150 360 16 4.3  240 45 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10	6.45 1642 23.15 3.67 12.7 4.51  10.3 0.162 486 <1.0 2.15 2.39 <0.1 6.29 150 350 14 3.3  250 41 <10 <10 <10 <10 <10 <10 <10 <10 <10 <1		-12D 06/09/04  6.90 406 22.52 0.55 -111.6 3.14	03/04/04 6.97 440 22.06 0.35 -164.0 5.63  0.56 <0.250 2.70 <1.0 0.584 0.673 3.2 3.83 <0.6 120 24 2.7  2.900 620 24 170 79 23 <10	12/17/03 6.53 672 21.84 0.30 -191 0.47 <0.0500 3.73 1.3 0.669 1.5 2.78 51 2.900 20 1.1 1.1 4,200 910 68 1,320 100 27 <10	6.53 672 21.84 0.30 -191	7.01 288 24.26 0.19 -177 11.0  0.60 <0.0500 8.82 <1.0 0.474 0.504 1.9 2.41 14 150 14 0.66  11 <5.0 <5.0 <5.0 <10 13 <10	06/10/03 7.07 295 23.57 2.0.07 -156 5.1  0.546 < 0.500 3.50 6 < 1.0 0.497 0.543 1.9 2.666 21 2,000 17 0.63 30 30 30 < 10 < 10 < 10 < 10	6.73 400 22.36 0.04 -118.3 0.9  0.754 < 0.0500 5.81 < 1.0 0.514 0.532 1.69 1.72 40 3,300 1.8 18 0.66  2,400 830 14 740 < 100 < 100 < 100	12/10/02 6.58 393 22.27 0.18 -99.6 4.3 0.505 <0.050 5.10 <1.0 0.525 0.614 4.8 40 17 4.9 2,200 830 19 200	09/18/02  6.82 400 24.14 0.03 -178.4 10  0.724 < 0.050 4.08 < 1.0 0.522 0.483 1.55 1.75 1.75 1.750 510 20 500  49 17 < 10
N/A	N// N// N// N// N// N// N// N// N// N//	1,327 22.4 22.7 22.8 6.24	1,922 25.55 0.76 -54.2 0.65	1,851 23.04 1.24 -108.6 5.52	18.510 23.04 1.24 -108.6 5.52	2,398 12.87 1.08 10.80 10.50 0.62	376 27.19 5.73 -85.0 3.32	831 24.64 0.13	664 21.77 0.31 -55.9 2.8	664 21.77 0.31 -55.9 2.8	798 19.92 0.19 -72.2 0.00	798 19.92 0.19 -72.2 0.09 -72.2	760 23.76 0.16 -76.5 1.29	1,242 21,93 1,16 -18.4 4,34  5.84 -(0.500) 302 -(1.0 1.87 1.90 0.9 6.45 120 360 15 1.3  200 44 5.0 48 -(10 -(10 -(10 -(10 -(10 -(10 -(10 -(10	1642   23.15   3.67   12.7   4.51     9.49   0.0529   352   < 1.0   2.16   2.29   < 0.1   6.01   150   360   16   4.3     41   < 5.0   45     45     < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10	1642 23.15 3.67 12.7 4.51  10.3 0.162 486 <1.0 2.15 2.39 <0.1 6.29 150 350 14 3.3  250 47 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10	1,569 24,44 2.3 3.25 -2.4 2.3 13.0 0.241 187 2.8 1.77 < 0.1 2.58 130 470 14 12 20 48 48 48 48	406 22.52 0.55 -111.6 3.14  0.42 < 0.5 2.19 < 1.0 0.548 0.556 2.4 2.600 16 0.46  4,300 1,1100 < 250 830  78 23 < 10	440 22.06 0.35 -164.0 5.63 0.56 < 0.250 < 2.70 < 1.0 0.584 0.673 3.2 3.83 < 0.6 120 24 2.7	672 21.84 0.30 -191 0.47 0.0500 3.73 1.3 0.669 1.5 2.78 51 2.900 1.1 4,200 910 68 1,320 100 27	672 21.84 0.30 -191 0.47 0.450 4.16 1.6 0.664 0.664 0.668 8.6 2.77 49 3,000 1.1  740 72 1,070 100 26	288 24.26 0.19 -177 11.0 0.60 <0.0500 8.82 <1.0 0.504 1.9 2.41 14 150 14 0.66	295 23.57 0.07 -156 5.1 0.546 < 1.0 0.543 1.9 0.543 1.9 0.63 21 2,000 0.63  920 390 6.0 30 30 < 10	400 22.36 0.04 -118.3 0.9  0.754 <0.0500 5.81 <1.0 0.514 0.532 1.69 1.72 40 3,300 18 0.66  2,400 830 14 740 <100 <100	393 22,27 0.18 -99.6 4.3 0.505 <0.050 <1.0 0.525 0.614 2.78 4.18 40 2.600 17 4.9 2,200 830 19 200	400 24.14 0.03 -178.4 10 0.724 < 0.050 4.08 < 1.0 0.522 0.483 1.55 1.75 33 3,000 20 7.1
N/A	N// N// N// N// N// N// N// N// N// N//	1,327 22.4 22.7 22.8 6.24	1,922 25.55 0.76 -54.2 0.65	1,851 23.04 1.24 -108.6 5.52	18.510 23.04 1.24 -108.6 5.52	2,398 12.87 1.08 10.80 10.50 0.62	376 27.19 5.73 -85.0 3.32	831 24.64 0.13	664 21.77 0.31 -55.9 2.8	664 21.77 0.31 -55.9 2.8	798 19.92 0.19 -72.2 0.00	798 19.92 0.19 -72.2 0.09 -72.2	760 23.76 0.16 -76.5 1.29	1,242 21,93 1,16 -18.4 4,34  5.84 -(0.500) 302 -(1.0 1.87 1.90 0.9 6.45 120 360 15 1.3  200 44 5.0 48 -(10 -(10 -(10 -(10 -(10 -(10 -(10 -(10	1642   23.15   3.67   12.7   4.51     9.49   0.0529   352   < 1.0   2.16   2.29   < 0.1   6.01   150   360   16   4.3     41   < 5.0   45     45     < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10	1642 23.15 3.67 12.7 4.51  10.3 0.162 486 <1.0 2.15 2.39 <0.1 6.29 150 350 14 3.3  250 47 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10	1,569 24,44 2.3 3.25 -2.4 2.3 13.0 0.241 187 2.8 1.77 < 0.1 2.58 130 470 14 12 20 48 48 48 48	406 22.52 0.55 -111.6 3.14  0.42 < 0.5 2.19 < 1.0 0.548 0.556 2.4 2.600 16 0.46  4,300 1,1100 < 250 830  78 23 < 10	440 22.06 0.35 -164.0 5.63 0.56 < 0.250 < 2.70 < 1.0 0.584 0.673 3.2 3.83 < 0.6 120 24 2.7	672 21.84 0.30 -191 0.47 0.0500 3.73 1.3 0.669 1.5 2.78 51 2.900 1.1 4,200 910 68 1,320 100 27	672 21.84 0.30 -191 0.47 0.450 4.16 1.6 0.664 0.664 0.668 8.6 2.77 49 3,000 1.1  740 72 1,070 100 26	288 24.26 0.19 -177 11.0 0.60 <0.0500 8.82 <1.0 0.504 1.9 2.41 14 150 14 0.66	295 23.57 0.07 -156 5.1 0.546 < 1.0 0.543 1.9 0.543 1.9 0.63 21 2,000 0.63  920 390 6.0 30 30 < 10	400 22.36 0.04 -118.3 0.9  0.754 <0.0500 5.81 <1.0 0.514 0.532 1.69 1.72 40 3,300 18 0.66  2,400 830 14 740 <100 <100	393 22,27 0.18 -99.6 4.3 0.505 <0.050 <1.0 0.525 0.614 2.78 4.18 40 2.600 17 4.9 2,200 830 19 200	400 24.14 0.03 -178.4 10 0.724 < 0.050 4.08 < 1.0 0.522 0.483 1.55 1.75 33 3,000 20 7.1
N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N// N// N// N// N// N// N// N// N// N//	22.4 0.71 -128.6 6.24	25.55 0.76 0.76	23.04 1.24 1.08.6 5.52	23.04 1.24 1.24 1.08.6 5.52	12.87 1.08 1.08 1.05.0 0.62	27.19 5.73 -85.0 3.32 <0.050 26 <1.0 0.24 2.8 0.15 40 5 1.8 5.4 <5.0 <5.0	24.64 0.13 -145.5 4.60	21.77 0.31 -55.9 2.8	21.77 0.31 -55.9 2.8	19.92 0.19 -72.2 0.00 <sup>g</sup> 10 <5.0 7.2	19.92 0.19 -72.2 0.00	23.76 0.16 -76.5 1.29	21.93 1.16 -18.4 4.34 5.84 < 0.500 302 < 1.0 1.87 1.90 0.9 6.45 120 	23.15 3.67 12.7 4.51  9.49 0.0529 352 <1.0 2.16 2.29 <0.1 6.01 150 360 16 4.3  240 41 <5.0 45	23.15 3.67 12.7 4.51 10.3 0.162 486 <1.0 2.15 2.39 <0.1 6.29 150 350 14 3.3 250 41 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.	24,44 3,25 -2,4 2,3 13,0 0,241 187 2,8 1,74 1,77 -(0,1) 2,58 130 41 12 20 48 48 48 48 -(10 -(10 -(10)	22.52 0.55 -111.6 3.14 0.42 < 0.5 2.19 0.548 0.556 2.4 2.13 41 2,600 16 0.46 4,300 -1,100 < 250 830 78 23 < 10	22.06 0.35 -164.0 5.63  0.56 <0.250 2.70 <1.0 0.584 0.673 3.2 3.83 <0.06 120 24 2.7  2,900 620 24 170	21.84 0.30 -191 -0.0500 3.73 1.3 0.663 0.669 1.5 2.78 51 2.990 20 1.1 4,200 	21.84 0.30 -191 	24.26 0.19 -177 11.0  0.60 <0.0500 8.82 <1.0 0.474 0.504 1.9 2.41 14 0.66  11 <5.0 <5.0 <5.0  56 13	23.57 0.07 -156 5.1 0.546 < 0.500 3.06 < 1.0 0.497 0.543 1.9 2.66 21 2,000 17 0.63 920  390 6.0 300 < 100  390  300  390  300 	22.36 0.04 -118.3 0.9 0.754 < 0.0500 5.81 < 1.0 0.514 0.532 1.72 40 3.300 18 0.66	22.27 0.18 -99.6 4.3  0.505 <0.050 5.10 0.525 0.614 2.78 4.18 40 2.600 17 4.9  2,200 830 19 200 63 17 <10	24.14 0.03 -178.4 10 0.724 < 0.050 4.08 < 1.0 0.522 0.483 1.55 1.75 33 3,000 20 7.1 1,500 
N/A N/A N/A ameters N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N// N// N// N// N// N// N// N// N// N//	0.71 -128.6 -128	0.76 -54.2 0.65	1.24 -108.6 5.52	1.24 -108.6 5.52		5.73 -85.0 3.32	0.13 -145.5 -4.60	0.31 -55.9 2.8 	0.31 -55.9 2.8 	0.19 -72.2 0.00	0.19 -72.2 0.00°	0.16 -76.5 1.29 1.29 	1.16 -18.4 -4.34 -4.34 -4.34 -4.0.500 -302 -(1.07 -1.90 -0.9 -6.45 -120 -360 -15 -1.3	3.67 12.7 4.51 9.49 0.0529 352 <0.1 6.01 150 360 16 4.3 240 	3.67 12.7 4.51 10.3 0.162 486 < 1.0 2.15 2.39 < 0.1 6.29 150 350 14 3.3 250 	3.25 -2.4 -2.3 -2.3 -2.4 -2.8 -2.8 -2.8 -2.8 -2.9 -2.9 -2.9 -2.9 -2.9 -2.9 -2.9 -2.9	0.55 -111.6 3.1.4 0.42 < 0.5 2.19 < 1.0 0.548 0.556 2.4 12,600 16 0.46  4,300 -1,100 < 250 830 78 23 < 10	0.35 -164.0 5.63 -164.0 5.63 -164.0 5.63 -164.0 5.64 -165.0 -165.0 -165.0 -165.0 -170 -170 -170 -170 -170 -170 -170 -17	0.30 -191	0.30 -191 0.47 < 0.0500 4.16 1.6 0.664 0.668 2.77 49 3.000 21 1.1  3.400 740 72 1,070 100 26	0.19 -177 -11.0  0.60 < 0.0500 8.82 < 1.0 0.474 0.504 1.9 2.41 14 0.66  11 < 5.0 < 5.0 < 5.0  56 13	0.07 -156 5.1 0.546 < 0.500 3.06 < 1.0 0.497 0.543 1.9 2.66 21 2.002 2.000 17 0.63	0.04 -118.3 0.9 0.754 < 0.0500 5.81 < 1.0 0.514 0.532 1.69 1.72 40 3,300 18 0.66	0.18 -99.6 4.3 0.505 <-0.050 5.10 <-1.0 0.525 0.614 2.78 4.18 40 2.600 17 4.9  2,200 830 19 200 63 17 <-10	0.03 -178.4 10 0.724 < 0.050 4.08 < 1.0 0.522 0.483 1.55 1.75 33 3,000 20 7.1 1,500  510 20 500
N/A	N// N// N// N// N// N// N// N// N// N//	-128.6 6.24	-54.2 0.65	-108.6 5.52	-108.6 5.52	-105.0 0.62	-85.0 3.32	-145.5 4.60	-55.9 2.8 	-55.9 2.8	-72.2 0.00°	-72.2 0.00°	-76.5 1.29	-18.4 4.34 5.84 < 0.500 3.50 -1.0 1.87 1.90 0.9 6.45 120 360 15 1.3 	12.7 4.51  9.49 0.0529 352 <1.0 2.16 2.29 <0.1 6.01 150 360 16 4.3  240 41 <5.0 45	12.7 4.51  10.3 0.162 486 <1.0 2.15 2.39 <0.1 6.29 150 350 14 3.3  250 41 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.0 <1.	2.4 2.3 13.0 0.241 187 2.8 1.77 < 0.1 2.58 1.77 < 0.1 2.51 30 470 470 14 12 20 48 48 48 48	-111.6 3.14 0.42 < 0.5 2.19 < < 1.0 0.556 2.4 2.13 41 2,600 16 0.46 4,300 -1100 < 250 830	-164.0 5.63 0.56 < 0.250 2.70 < 1.0 0.584 0.673 3.2 3.83 < 0.6 120 24 2.7 2.900 	-191	-191 0.47 < 0.0500 4.16 1.6 0.664 0.668 2.77 49 3,000 21 1.1	-177 11.0  0.60 <0.0500 <0.0500  0.474 0.504 1.9 2.41 14 150 14 0.66  11 <5.0 <5.0 <5.0  56 13	-156 5.1  0.546 < 0.500 3.06 < 1.0 0.497 0.543 1.9 2.66 21 2,000 17 0.63  920 390 6.0 300  30	-118.3 0.9 0.754 < 0.0500 5.81 < 1.0 0.514 0.532 1.69 1.72 40 3,300 18 0.66 2,400  830 14 740 < 100 < 100 < 100 < 100	-99.6 4.3  0.505 <0.050 5.10 <1.0 0.525 0.614 2.78 4.18 40 2,600 17 4.9  2,200 19 200	-178.4 10  0.724 < 0.050 4.08 < 1.0 0.522 0.483 1.55 1.75 33 3,000 20 7.1  1,500 510 20 500
N/A ameters N/A	N// N/// N/// N/// N/// N/// N/// N///	6.24	190	5.52	5.52	0.62	3.32	4.60	2.8	2.8	0.00 <sup>g</sup>	0.00 <sup>#</sup>	1.29	4.34  5.84  < 0.500  302 < 1.0  1.87  1.90  0.9  6.45  120  360  15  1.3  200   44  5.0  48  < 10  < 10	4.51   9.49   0.0529   352   < 1.0   2.16   2.29   < 0.1   6.01   150   360   16   4.3     41   < 5.0   45     < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   < 10   <	4.51  10.3  0.162  486  <1.0  2.15  2.39  <0.1  6.29  150  350  14  3.3  250   41  <1.0  <1.0  <1.0  <1.0    41  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  <1.0  1.0	2.3  13.0 0.241 187 2.8 1.74 1.77 <-0.1 2.58 130 470 14 12  20 48 48 48 41 <-10 <-10 <-10	3.14  0.42  < 0.5  2.19  < 1.0  0.548  0.556  2.4  2.13  41  2,600  16  0.46  4,300   1,100  < 250  830  78  23  < 10	5.63  0.56 <0.250 2.70 <1.0 0.584 0.673 3.2 3.83 <0.6 120 24 2.7  2.900 620 24 170			11.0  0.60  < 0.0500  8.82  < 1.0  0.474  0.504  1.9  2.41  14  0.66  11   < 5.0  < 5.0  < 5.0  13	5.1  0.546 <0.500 3.06 <1.0 0.497 0.543 1.9 2.66 21 17 0.63  920 390 6.0 300 <10	0.9  0.754  < 0.0500  5.81  < 1.0  0.514  0.532  1.69  1.72  40  3,300  18  0.66   2,400   830  14  740  < 100  < 100  < 100	4.3  0.505  <0.050  5.10  0.525  0.614  2.78  4.18  40  2,600  17  4.9  2,200   830  19  20  63  17  <10	10  0.724  < 0.050 4.08 < 1.0 0.522 0.483 1.55 1.75 33 3,000 20 7.1  1,500 510 20 500
N/A   N/A	N// N// N// N// N// N// N// N// N// N//	250 3	190	170	190				38 38 26 < 5.0	38 			300 	5.84 < 0.500 302 < 1.0 1.87 1.90 0.9 6.45 120 360 15 1.3 200  44 5.0 48 < 10 < 10 < 10 	9.49 0.0529 352 <1.0 2.16 2.29 <0.1 150 360 16 4.3  240 41 <5.0 45	10.3 0.162 486 <1.0 2.15 2.39 <0.01 6.29 150 350 14 3.3  250 41 <5.0 47	13.0 0.241 187 2.8 1.77 <.0.1 1.77 <.0.1 1.2.58 130 470 14 12  320	0.42 < 0.5 2.19 < 1.0 0.548 0.556 2.4 2.13 41 2.600 16 0.46 4,300 < 250 830 78 83 < 10	0.56 < 0.250 2.70 < 1.0 0.584 0.673 3.2 3.83 < 0.6 2.7 2.70  2.900 620 24 170 79 23	0.47 < 0.0500 3.73 1.3 0.663 0.669 1.5 51 2,900 1.1 4,200 910 68 1,320 100 27	0.47 < 0.0500 4.16 1.6 0.664 0.668 8.6 2.77 49 3.000 21 1.1 740 72 1,070 100 26	0.60 < 0.0500 8.82 < 1.0 0.474 0.504 1.9 2.41 14 0.66 11  < 5.0 < 5.0 < 5.0	0.546 < 0.500 3.06 < 1.0 0.497 0.543 1.9 2.66 21 20 17 0.63 920  390 6.0 300 < 10	0.754 < 0.0500 5.81 < 1.0 0.514 0.532 1.69 1.72 40 3.300 18 0.66	0.505 <0.050 5.10 <1.0 0.525 0.614 2.78 4.18 40 2,600 17 4.9 2,200 	0.724 < 0.050 4.08 < 1.0 0.522 0.483 1.55 1.75 33 3,000 20 7.1  1,500 510 20 500
N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N//N N//N N//N N//N N//N N//N N//N N//	250	190	170	190	290 <1.0	<pre>&lt; 0.050 26 &lt; 1.0</pre>	     9.3 < 5.0 < 5.0	38 	38 			300 	<ul> <li>&lt; 0.500</li> <li>302</li> <li>&lt; 1.0</li> <li>1.87</li> <li>1.90</li> <li>0.9</li> <li>6.45</li> <li>120</li> <li>360</li> <li>15</li> <li>1.3</li> <li>200</li> <li>44</li> <li>40</li> <li>&lt; 10</li> <li>&lt; 10</li> <li>&lt; 10</li> </ul>	0.0529 352 <1.0 2.16 2.29 <0.1 6.01 150 360 16 4.3  240 41 <5.0 45	0.162 486 < 1.0 2.15 2.39 < 0.1 6.29 150 350 14 3.3 250  41 < 5.0 47	0.241 187 2.8 1.74 1.77 4.77 4.01 2.58 130 470 14 12 20 48 48 48 41 41 41 41 41 41 41 41 41 41 41 41 41	<.0.5 2.19 <.1.0 0.548 0.556 2.4 2.13 41 2.600 16 0.46  4,300 1,100 <.250 830 78 23 <.10	<.0.250 2.70 <.1.0 0.584 0.673 3.2 3.83 <.0.6 120 24 2.7  2.900 620 24 170 79	<.0.0500 3.73 1.3 0.663 0.663 1.5 2.78 51 2.990 20 1.1 4,200 910 68 1,320 100 27	<ul> <li>&lt; 0.0500</li> <li>4.16</li> <li>1.6</li> <li>0.664</li> <li>0.668</li> <li>8.6</li> <li>2.77</li> <li>21</li> <li>1.1</li> <li>3,000</li> <li>21</li> <li>1.1</li> <li>740</li> <li>740</li> <li>740</li> <li>1,070</li> <li>100</li> <li>26</li> </ul>	<0.0500  8.82 <1.0 0.474 0.504 1.9 2.41 14 0.66  11 <5.0 <5.0 <5.0  56 13	<0.500 3.06 <1.0 0.497 0.543 1.9 2.66 21 2,000 17 0.63 920 390 6.0 300 <10	<ul> <li>&lt; 0.0500</li> <li>5.81</li> <li>&lt; 1.0</li> <li>0.514</li> <li>0.532</li> <li>1.69</li> <li>1.72</li> <li>40</li> <li>3,300</li> <li>18</li> <li>0.66</li> </ul> 2,400 <ul> <li></li> <li>830</li> <li>14</li> <li>740</li> <li>&lt; 100</li> <li>&lt; 100</li> <li>&lt; 100</li> </ul>	<ul> <li>&lt; 0.050</li> <li>5.10</li> <li>&lt; 1.0</li> <li>0.525</li> <li>0.614</li> <li>2.78</li> <li>4.18</li> <li>40</li> <li>2,600</li> <li>17</li> <li>4.9</li> <li>2,200</li> <li>330</li> <li>19</li> <li>200</li> <li>63</li> <li>17</li> <li>&lt; 10</li> </ul>	<.0.050 4.08 <.1.0 0.522 0.483 1.55 1.75 33 3,000 20 7.1  1,500 510 20 49 17
N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N//N N//N N//N N//N N//N N//N N//N N//	250	190	170	190	290 <1.0	<pre>&lt; 0.050 26 &lt; 1.0</pre>	     9.3 < 5.0 < 5.0	38 	38 			300 	<ul> <li>&lt; 0.500</li> <li>302</li> <li>&lt; 1.0</li> <li>1.87</li> <li>1.90</li> <li>0.9</li> <li>6.45</li> <li>120</li> <li>360</li> <li>15</li> <li>1.3</li> <li>200</li> <li>44</li> <li>40</li> <li>&lt; 10</li> <li>&lt; 10</li> <li>&lt; 10</li> </ul>	0.0529 352 <1.0 2.16 2.29 <0.1 6.01 150 360 16 4.3  240 41 <5.0 45	0.162 486 < 1.0 2.15 2.39 < 0.1 6.29 150 350 14 3.3 250  41 < 5.0 47	0.241 187 2.8 1.74 1.77 4.77 4.01 2.58 130 470 14 12 20 48 48 48 41 41 41 41 41 41 41 41 41 41 41 41 41	<.0.5 2.19 <.1.0 0.548 0.556 2.4 2.13 41 2.600 16 0.46  4,300 1,100 <.250 830 78 23 <.10	<.0.250 2.70 <.1.0 0.584 0.673 3.2 3.83 <.0.6 120 24 2.7  2.900 620 24 170 79	<.0.0500 3.73 1.3 0.663 0.663 1.5 2.78 51 2.990 20 1.1 4,200 910 68 1,320 100 27	<ul> <li>&lt; 0.0500</li> <li>4.16</li> <li>1.6</li> <li>0.664</li> <li>0.668</li> <li>8.6</li> <li>2.77</li> <li>21</li> <li>1.1</li> <li>3,000</li> <li>21</li> <li>1.1</li> <li>740</li> <li>740</li> <li>740</li> <li>1,070</li> <li>100</li> <li>26</li> </ul>	<0.0500  8.82 <1.0 0.474 0.504 1.9 2.41 14 0.66  11 <5.0 <5.0 <5.0  56 13	<0.500 3.06 <1.0 0.497 0.543 1.9 2.66 21 2,000 17 0.63 920 390 6.0 300 <10	<ul> <li>&lt; 0.0500</li> <li>5.81</li> <li>&lt; 1.0</li> <li>0.514</li> <li>0.532</li> <li>1.69</li> <li>1.72</li> <li>40</li> <li>3,300</li> <li>18</li> <li>0.66</li> </ul> 2,400 <ul> <li></li> <li>830</li> <li>14</li> <li>740</li> <li>&lt; 100</li> <li>&lt; 100</li> <li>&lt; 100</li> </ul>	<ul> <li>&lt; 0.050</li> <li>5.10</li> <li>&lt; 1.0</li> <li>0.525</li> <li>0.614</li> <li>2.78</li> <li>4.18</li> <li>40</li> <li>2,600</li> <li>17</li> <li>4.9</li> <li>2,200</li> <li>330</li> <li>19</li> <li>200</li> <li>63</li> <li>17</li> <li>&lt; 10</li> </ul>	<.0.050 4.08 <.1.0 0.522 0.483 1.55 1.75 33 3,000 20 7.1  1,500 510 20 49 17
N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N/// N/// N/// N/// N/// N/// N/// N//	250	190	170	190	290 <1.0	26 <1.0	     9.3 < 5.0 < 5.0	38 	38 	47 		300 	302 <1.0 1.87 1.90 0.9 6.45 120 360 15 1.3 200  44 5.0 48 <10 <10 <10 <10 <10 <10 <10 <10	352 <1.0 2.16 2.29 <0.1 6.01 150 360 16 4.3  240 41 <5.0 45	486 <1.0 2.15 2.39 <0.1 6.29 150 350 14 3.3  250 41 <5.0 47	187 2.8 1.74 1.77 <.0.1 1.77 <.0.1 2.58 130 470 14 12  320 20 48 48 48 -<.10 <.10 <.10 <.10	2.19 <1.0 0.548 0.556 2.4 2.13 41 2.600 16 0.46  4,300 -1,100 <250 830  78 23 <10	2.70 < 1.0 0.584 0.673 3.2 3.83 < 0.6 120 24 2.7 2.900 	3.73 1.3 0.663 0.669 1.5 2.78 51 2.900 20 1.1 4,200 910 68 1,320 100 27	4.16 1.6 0.664 0.668 8.6 2.77 49 3,000 21 1.1	8.82 < 1.0 0.474 0.504 1.9 2.41 14 150 14 0.66 11  < 5.0 < 5.0 < 5.0	3.06 <1.0 0.497 0.543 1.9 2.666 21 2,000 17 0.63	5.81 < 1.0 0.514 0.532 1.69 1.72 40 3,300 18 0.66 2,400  830 14 740 < 100 < 100 < 100	5.10 <1.0 0.525 0.614 2.78 4.0 2.600 17 4.9 2.200 	4.08 <1.0 0.522 0.483 1.55 1.75 33 3,000 20 7.1  1,500 510 20 500
N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N// N// N// N// N// N// N// N// N// 9.0 1,77 2,33 1,11 200,0 3,10 31,0 31,0 31,0 31,0 31,0 31,0	250	190	170	190	<1.0	<1.0 0.24 2.8 0.15 40 5 1.8  5.4 <5.0 <5.0	     9.3 < 5.0 < 5.0	38 	38 		84 20 12	300 	<1.0 1.87 1.90 0.9 6.45 120 360 15 13 15 14 44 5.0 48 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <10 <p< td=""><td><pre>&lt;1.0 2.16 2.12 &lt; 0.1 6.01 150 360 16 4.3  240 41 &lt; 5.0 45 </pre></td><td>&lt;1.0 2.15 2.39 &lt; 0.1 6.29 150 350 14 3.3  250 41 &lt; 5.0 47  &lt; 10 &lt; 10</td><td>2.8 1.74 1.77 &lt; 0.1 2.58 130 470 14 12 320 </td><td>&lt;.1.0 0.548 0.556 2.4 2.13 41 2.600 16 0.46  4,300 - 1,1100 &lt;.250 830 78 23 &lt;.10</td><td>&lt;1.0 0.584 0.673 3.2 3.83 &lt; 0.6 120 24 2.7  2.900 620 24 170  79</td><td>1.3 0.669 1.5 2.78 51 2,900 20 1.1 4,200  910 68 1,320 100 27</td><td>1.6 0.664 0.668 8.6 2.77 49 3,000 21 1.1 3,400  740 72 1,070</td><td>&lt;1.0 0.474 0.504 1.9 2.41 14 150 14 0.66 11  &lt;5.0 &lt;5.0 &lt;5.0</td><td>&lt;1.0 0.497 0.543 1.9 2.66 21 2,000 17 0.63  920 390 6.0 300  30 &lt;10</td><td>&lt;1.0 0.514 0.532 1.69 1.72 40 3,300 18 0.66  2,400 830 14 740 &lt;100 &lt;100 &lt;100</td><td>&lt; 1.0 0.525 0.614 2.78 4.18 40 2,600 17 4.9 2,200</td><td>&lt;1.0 0.522 0.483 1.55 1.75 33 3,000 20 7.1 1,500 510 20 500</td></p<>	<pre>&lt;1.0 2.16 2.12 &lt; 0.1 6.01 150 360 16 4.3  240 41 &lt; 5.0 45 </pre>	<1.0 2.15 2.39 < 0.1 6.29 150 350 14 3.3  250 41 < 5.0 47  < 10 < 10	2.8 1.74 1.77 < 0.1 2.58 130 470 14 12 320 	<.1.0 0.548 0.556 2.4 2.13 41 2.600 16 0.46  4,300 - 1,1100 <.250 830 78 23 <.10	<1.0 0.584 0.673 3.2 3.83 < 0.6 120 24 2.7  2.900 620 24 170  79	1.3 0.669 1.5 2.78 51 2,900 20 1.1 4,200  910 68 1,320 100 27	1.6 0.664 0.668 8.6 2.77 49 3,000 21 1.1 3,400  740 72 1,070	<1.0 0.474 0.504 1.9 2.41 14 150 14 0.66 11  <5.0 <5.0 <5.0	<1.0 0.497 0.543 1.9 2.66 21 2,000 17 0.63  920 390 6.0 300  30 <10	<1.0 0.514 0.532 1.69 1.72 40 3,300 18 0.66  2,400 830 14 740 <100 <100 <100	< 1.0 0.525 0.614 2.78 4.18 40 2,600 17 4.9 2,200	<1.0 0.522 0.483 1.55 1.75 33 3,000 20 7.1 1,500 510 20 500
N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	N// N// N// N// N// N// N// N// N// N//	250 	190	170	190			     9.3 < 5.0 < 5.0	38 	38 		84 	300 	1.87 1.90 0.9 6.45 120 360 15 1.3 200 44 5.0 48 <	2.16 2.29 < 0.1 6.01 150 16 4.3  240 41 < < 5.0 45  < 10 < 10	2.15 2.39 < 0.1 6.29 150 350 14 3.3 250 41 < 5.0 47 < 10 < 10	1.74 1.77 1.77 1.77 1.70 1.71 1.72 1.72 1.73 1.74 1.72 1.73 1.74 1.74 1.74 1.74 1.74 1.74 1.74 1.74	0.548 0.556 2.4 2.13 41 2,600 16 0.46 4,300  1,100 < 250 830 78 23 < 10	0.584 0.673 3.2 3.83 < 0.6 120 24 2.7 2,900  620 24 170 79 23	0.663 0.669 1.5 2.78 51 2.900 20 1.1 4,200  910 68 1,320 100 27	0.664 0.668 8.6 2.77 49 3,000 21 1.1 3,400  740 72 1,070	0.474 0.504 1.9 2.41 14 150 14 0.66 11  < 5.0 < 5.0 < 5.0	0.497 0.543 1.9 2.66 21 2,000 17 0.63 920  390 6.0 300	0.514 0.532 1.69 1.72 40 3,300 18 0.66 2,400  830 14 740 < 100 < 100 < 100	0.525 0.614 2.78 4.18 40 2,600 17 4.9 2,200  830 19 200 63 17 <10	0.522 0.483 1.55 1.75 33 3,000 20 7.1 1,500  510 20 500
N/A N/A N/A N/A N/A N/A N/A N/A N/A 1,000* 3299 700* 1,000* 31,000 470 0.2* 1.17 1.17 1.17 1.17	N// N// N// N// N// N// N// 9.0 1,70 2,33 1,110 200,0 31,0 31,0 31,0 33,9 10 33,9 39,9 39,9 39,9 39,9 39,9	250	190	170	190			     9.3 < 5.0 < 5.0	38 	38 	47 	84 	300 	1.90 0.9 6.45 120 360 15 1.3 200 44 5.0 48 < < < < < < < <	2.29 < 0.1 6.01 150 360 16 4.3 240  41 < 5.0 45 < 10 < 10 < 10 	2.39 < 0.1 6.29 150 350 14 3.3  250 41 < 5.0 47	1.77 < 0.1 2.58 130 470 14 12 320  20 48 48 48	0.556 2.4 2.13 41 2.600 16 0.46  4,300 -1,100 < 250 830  78 23 < 10	0.673 3.2 3.83 < 0.6 120 24 2.7  2,900 620 24 170	0.669 1.5 2.78 51 2.900 20 1.1 4,200 910 68 1,320	0.668 8.6 2.77 49 3,000 21 1.1 3,400 	0.504 1.9 2.41 14 150 14 0.66	0.543 1.9 2.66 21 2,000 17 0.63 920 	0.532 1.69 1.72 40 3,300 18 0.66	0.614 2.78 4.18 40 2.600 17 4.9  2,200 830 19 200 63 17 <10	0.483 1.55 1.75 33 3,000 20 7.1 1,500  510 20 500
N/A N/A N/A N/A N/A N/A N/A N/A N/A N/A	9.0 1,77 2,03 1,11 31,0 3,11 31,0 3,19 1,11 31,0 3,11 31,0 3,1 3,1 3,1 3,1 3,1 3,1 3,1 3,1 3,1 3,1	250	190	170	190	<ul> <li>&lt; 0.010</li> <li>0.14</li> <li>&lt; 0.050</li> <li>47</li> <li>4</li> <li>1.5</li> </ul> 200 <ul> <li></li> <li>33</li> <li>130</li> <li>250</li> </ul> <ul> <li></li> </ul> <ul> <li> <ul> <li></li> </ul> <ul> <li></li> </ul> <ul> <li></li> </ul> <ul> <li></li> </ul> <ul> <li> <ul> <li></li> </ul> <ul> <li></li> <li></li> </ul> <ul> <li></li> <li></li> </ul> <ul> <li></li> </ul> <ul> <li></li> </ul> <ul> <li></li> </ul></li></ul></li></ul>	2.8 0.15 40 5 1.8 13 	     9.3 < 5.0 < 5.0	38 	38 		84 	300 	0.9 6.45 120 360 15 1.3  200 44 5.0 48  <10 <10	<0.1 6.01 150 360 16 4.3 240  41 <5.0 45 <10 <10	<pre>&lt; 0.1 6.29 150 350 14 3.3 250 41 &lt; 5.0 47 &lt; 10 &lt; 10</pre>	<0.1 2.58 130 470 14 12 320 20 48 48 <<10 <10 <10 <10	2.4 2.13 41 2,600 16 0.46 4,300  1,100 < 250 830 78 23 < 10	3.2 3.83 < 0.6 120 24 2.7 2,900 	1.5 2.78 51 2,900 20 1.1 4,200  910 68 1,320	8.6 2.77 49 3,000 21 1.1 3,400  740 72 1,070	1.9 2.41 14 150 14 0.66	1.9 2.66 21 2,000 17 0.63 920  390 6.0 300	1.69 1.72 40 3,300 18 0.66 2,400  830 14 740 < 100 < 100 < 100	2.78 4.18 40 2,600 17 4.9  2,200 830 19 200 63 17 <-10	1.55 1.75 33 3,000 20 7.1 1,500 
N/A N/A N/A N/A N/A N/A N/A N/A N/A 329 700* 1,000* 31,000 470 4,700 1.117 10.21*	9.0 1,77 2,30 1,11 200,6 6,11 3,10 31, 0 3.9 10 39.3 39.3	250 	190	170	190	0.14 < 0.050 47 4 1.5 200 	2.8 0.15 40 5 1.8 13 	     9.3 < 5.0 < 5.0	38 	38 	47	84 	300 	6.45 120 360 15 1.3 200  44 5.0 48 <10 <10 <10 	6.01 150 360 16 4.3 240  41 < 5.0 45 < 10 < 10	6.29 150 350 14 3.3 250  41 < 5.0 47 < 10 < 10	2.58 130 470 14 12 320  20 48 48 48	2.13 41 2,600 16 0.46 4,300  1,100 < 250 830 78 23 < 10	3.83 < 0.6 120 24 2.7 2,900  620 24 170 79 23	2.78 51 2,900 20 1.1 4,200  910 68 1,320 100 27	2.77 49 3,000 21 1.1 3,400  740 72 1,070	2.41 14 150 14 0.66 11  < 5.0 < 5.0 < 5.0	2.66 21 2,000 17 0.63 920  390 6.0 300	1.72 40 3,300 18 0.66	4.18 40 2,600 17 4.9 2,200  830 19 200 63 17 < 10	1.75 33 3,000 20 7.1 1,500  510 20 500
N/A N/A N/A N/A N/A N/A 1,000 31,000 470 4,700 1.17 0.2* 1.17 10	9.0 9.0 1,77 2,30 1,11 200,0 6,10 3,1,1 31,0 3.9 0.3 3.9 10 3.9 3.9 3.9 3.9	250	190	170	190	<0.050 47 4 1.5  200 33 130 250	0.15 40 5 1.8 13  5.4 < 5.0 < 5.0	     9.3 < 5.0 < 5.0	38  26 < 5.0 6.4	38  25 < 5.0 6.3	47 		300  59 6.8 60	120 360 15 1.3 200  44 5.0 48 < 10 < 10  	150 360 16 4.3 240  41 < 5.0 45 < 10 < 10 < 10 	150 350 14 3.3 250  41 < 5.0 47 < 10 < 10  10	130 470 14 12 320  20 48 48 48	41 2,600 16 0.46 4,300  1,100 < 250 830 78 23 < 10	<0.6 120 24 2.7  2,900 620 24 170  79 23	51 2,900 20 1.1 4,200  910 68 1,320 100 27	3,400  740 72 1,070	14 150 14 0.66	21 2,000 17 0.63 920  390 6.0 300	40 3,300 18 0.66 2,400  830 14 740 <100 <100 <100	2,200  830 200  830 200  831 200	33 3,000 20 7.1 1,500  510 20 500
N/A N/A N/A 329 700° 1,000° 31,000 470 4,700 1.17 10 11.7 11.7	9.0 1,70 2,33 1,11 200,0 6,11 3,1,0 3,9 0.3 3,9 10 39,9	250	190 	170	190	200	5 1.8 13  5.4 < 5.0 < 5.0  	   9.3 < 5.0 < 5.0	38  26 < 5.0 6.4	38  25 < 5.0 6.3	47 		300  59 6.8 60	200  44 5.0 48             	240  41 < 5.0 45 < 10 < 10	250 	320 	16 0.46 4,300  1,100 < 250 830 78 23 < 10	24 2.7 2,900  620 24 170 79 23	20 1.1 4,200  910 68 1,320 100 27	3,400  740 72 1,070	14 0.66 11  < 5.0 < 5.0 < 5.0   56   13	920  390 6.0 300	2,400 	2,200  830 19 200 63 17 < 10	1,500 
N/A  5.0° 329 700° 1,000° 31,000  2,000° 470 1.17 0.2° 1.17 10 11.7	9.0 1,77 2,33 1,11 200,0 6,11 31,0 3,1 31,0 0,3 3,9 3,9 39,9	250 0			190	1.5  200 33 130 250	1.8  13 5.4 < 5.0 < 5.0	18  9.3 < 5.0 < 5.0	38  26 < 5.0 6.4	25 < 5.0 6.3	  10 < 5.0 7.2	84 	300  59 6.8 60	200 44 5.0 48 < <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <- 10 <-	240 	250 	320  20 48 48 <-10 <-10 <-10	0.46  4,300 1,100 < 250 830  78 23 < 10	2,900  620 24 170 79 23	1.1 4,200  910 68 1,320 100 27	1.1 3,400  740 72 1,070	0.66  11 < 5.0 < 5.0 < 5.0 < 5.1  56 13	920  390 6.0 300	2,400  830 14 740 < 100 < 100 < 100	2,200  830 19 200 63 17 < 10	7.1  1,500 510 20 500  49 17
5.0° 329 700° 1,000° 31,000 470 4,700 1.17 0.2° 1.17 10	9.0 1,70 2,33 1,11 200,0 6,10 3,11 31, 0 3.9 0.3 3.9 10 39,9	250	190 	170 	190	200   250  	13 	18  9.3 < 5.0 < 5.0	38  26 < 5.0 6.4	38  25 < 5.0 6.3	47  10 < 5.0 7.2	84 	300  59 6.8 60	200 44 44 5.0 48 < < < < < < < <	240  41 < 5.0 45  	250  41 < 5.0 47 < 10 < 10 < 10	320  20 48 48 -< 10 -< 10 -< 10	4,300  1,100 < 250 830 78 23 < 10	2,900  620 24 170 79 23	4,200  910 68 1,320 100 27	3,400  740 72 1,070	11  < 5.0 < 5.0 < 5.0	920  390 6.0 300	2,400  830 14 740  100  100  100  100	2,200  830 19 200 63 17 < 10	1,500  510 20 500 49 17
329 700* 1,000* 31,000 2,000* 470 4,700 1.17 0.2* 10 11.7 117	1,70 2,30 1,110 200,6 6,10 31, 0 31, 0 3.9 0.3 3.9 10 39.	0 0 0 0 0 0 0 0 -				33 130 250	 5.4 < 5.0 < 5.0	9.3 < 5.0 < 5.0	 26 < 5.0 6.4	 25 < 5.0 6.3	 10 < 5.0 7.2	20 < 5.0 12	 59 6.8 60	 44 5.0 48 <10 <10 <10 	 41 <5.0 45 45 <10 <10 	 41 < 5.0 47 < 10 < 10 < 10	 20 48 48  48  - - - - - - - - - - - -	 1,100 < 250 830 78 23 < 10	620 24 170 79 23	910 68 1,320 100 27	740 72 1,070	 < 5.0 < 5.0 < 5.0	390 6.0 300 300	 830 14 740 < 100 < 100 < 100	 830 19 200 63 17 < 10	510 20 500 49 17
329 700* 1,000* 31,000 2,000* 470 4,700 1.17 0.2* 10 11.7 117	1,70 2,30 1,110 200,6 6,10 31, 0 31, 0 3.9 0.3 3.9 10 39.	0 0 0 0 0 0 0 0 -				33 130 250	 5.4 < 5.0 < 5.0	9.3 < 5.0 < 5.0	 26 < 5.0 6.4	 25 < 5.0 6.3	 10 < 5.0 7.2	20 < 5.0 12	 59 6.8 60	 44 5.0 48 <10 <10 <10 	 41 <5.0 45 45 <10 <10 	 41 < 5.0 47 < 10 < 10 < 10	 20 48 48  48  - - - - - - - - - - - -	 1,100 < 250 830 78 23 < 10	620 24 170 79 23	910 68 1,320 100 27	740 72 1,070	 < 5.0 < 5.0 < 5.0	390 6.0 300 300	 830 14 740 < 100 < 100 < 100	 830 19 200 63 17 < 10	510 20 500 49 17
329 700* 1,000* 31,000 2,000* 470 4,700 1.17 0.2* 10 11.7 117	1,70 2,30 1,110 200,6 6,10 31, 0 31, 0 3.9 0.3 3.9 10 39.	0 0 0 0 0 0 0 0 -				33 130 250	 5.4 < 5.0 < 5.0	9.3 < 5.0 < 5.0	 26 < 5.0 6.4	 25 < 5.0 6.3	 10 < 5.0 7.2	20 < 5.0 12	 59 6.8 60	 44 5.0 48 <10 <10 <10 	 41 <5.0 45 45 <10 <10 	 41 < 5.0 47 < 10 < 10 < 10	 20 48 48  48  - - - - - - - - - - - -	 1,100 < 250 830 78 23 < 10	620 24 170 79 23	910 68 1,320 100 27	740 72 1,070	 < 5.0 < 5.0 < 5.0	390 6.0 300 300	 830 14 740 < 100 < 100 < 100	 830 19 200 63 17 < 10	510 20 500 49 17
700* 1,000* 31,000  2,000* 470 4,700 1.17 0.2* 1.17 10 11.7	2,30 1,10 200,0 6,10 3,10 31, 0 3.9 0.3 3.9 10 39.	000				33 130 250   	5.4 < 5.0 < 5.0    	9.3 < 5.0 < 5.0	26 < 5.0 6.4	25 < 5.0 6.3	10 < 5.0 7.2	20 < 5.0 12    	59 6.8 60	44 5.0 48 < 10 < 10 < 10 	41 < 5.0 45 < 10 < 10 < 10 	41 < 5.0 47 < 10 < 10 < 10	20 48 48 < 10 < 10 < 10	1,100 < 250 830 78 23 < 10	620 24 170 79 23	910 68 1,320 100 27	740 72 1,070	< 5.0 < 5.0 < 5.0 < 5.0	390 6.0 300 300 < 10	830 14 740 < 100 < 100 < 100	830 19 200 63 17 < 10	510 20 500 49 17
1,000* 31,000 470 4,700 1.17 0.2* 1.17 10 11.7	1,10 200,0 6,10 3,10 31, 0 3.9 0.3 3.9 10 39.					130 250	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 6.4	< 5.0 6.3	< 5.0 7.2	< 5.0 12    	6.8 60	5.0 48 < 10 < 10 < 10 	< 5.0 <b>45</b> < 10 < 10 < 10 	< 5.0 47 < 10 < 10 < 10 	48 48 < 10 < 10 < 10	< 250 830 78 23 < 10	24 170 79 23	68 1,320 100 27	72 1,070 100 26	< 5.0 < 5.0 56 13	6.0 300 30 < 10	14 740 < 100 < 100 < 100	19 200 63 17 < 10	20 500 49 17
31,000 2,000* 470 4,700 1.17 0.2* 1.17 10 11.7 117	200,0 6,10 3,10 31, 0 3.9 0.3 3.9 10 39.	000				250     	< 5.0	< 5.0	6.4  	6.3   	7.2	   	   	< 10 < 10 < 10  	< 10 < 10 < 10 < 10	<10 <10 <10 <10	< 10 < 10 < 10	78 23 < 10	170 79 23	1,320 100 27	1,070 100 26	< 5.0 56 13	<b>300 30</b> < 10	<pre>740 &lt; 100 &lt; 100 &lt; 100 &lt; 100</pre>	200 63 17 < 10	500 49 17
2,000* 470 4,700 1.17 0.2* 1.17 10 11.7	6,10 3,10 31, 0 3.9 0.3 3.9 10 39.	0 0 0 0 0 0 0 0 -												< 10 < 10 < 10 	< 10 < 10 < 10	< 10 < 10 < 10	< 10 < 10 < 10	78 23 < 10	79 23	100 27	100	56 13	<b>30</b> < 10	< 100 < 100 < 100	63 17 < 10	49 17
470 4,700 1.17 0.2* 1.17 10 11.7 117	3,10 31, 0 3.9 0.3 3.9 10 39.							   						< 10 < 10 	< 10 < 10 	< 10 < 10	< 10 < 10	<b>23</b> < 10	23	27	26	13	< 10	< 100 < 100	<b>17</b> < 10	17
470 4,700 1.17 0.2* 1.17 10 11.7 117	3,10 31, 0 3.9 0.3 3.9 10 39.							  						< 10 < 10 	< 10 < 10 	< 10 < 10	< 10 < 10	<b>23</b> < 10	23	27	26	13	< 10	< 100 < 100	<b>17</b> < 10	17
4,700 1.17 0.2* 1.17 10 11.7	31, 0 3.9 0.3 3.9 10 39.	00 ! ! ! !												< 10 	< 10 	< 10	< 10	< 10						< 100	< 10	
1.17 0.2* 1.17 10 11.7 117	3.9 0.3 3.9 10 39.																		' 10							
0.2* 1.17 10 11.7 117	0.3 3.9 10 39.													+												
1.17 10 11.7 117	3.9 10 39.																									
11.7 117	39. 39.																									
117	39																		-							
																				-			-			
	0.3																		-							
0.3*																										
700*	700													< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 100	< 10	< 10
1,000*	4,10													< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 100	< 10	< 10
1,000*	4,10 3.9													< 10	< 10	< 10	< 10	59 	63	78 	79	43	24	< 100	48	39
780	5,10										-			< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 100	< 10	< 10
78	51				-		-					-		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 100	< 10	< 10
20*	20		790	330	200	890	28	20	220	300	200	240	< 10	240	400	340	< 10	8,400	5,900	9,400	8,900	5,600	3,000	4,400	6,700	5,200
470	3,10													< 10	< 10	< 10	< 10	62	70	80	83	33	21	< 100	50	40
9,390	61,0													< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 100		
1,000*	3,10	)												< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 100	< 10	< 10
6.3	40													< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40
50*	50													< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
2,000						400	280	269	243	259	276	257	197	61.2	42.4	43.7	23.8	2,730	2,510	2,490	2,520	851	967	2,850	2,840	2,200
31																										
7.8						4.500																				
																										< 10
																										< 10
					<del> </del>																					< 10
					_			158	125		1															< 20 < 20
					<del>-</del>	+						+	<del></del>													< 0.5
						130		25	24	46		20	45													113
310	2,00					130	. 10				10		70		, J1	- 50		, ,,	- 50	31	. 04	- 10		- 55		
				hemical																						
RS	2,000 31 7.8 100 630 15* 100 4,700 2* 310 n limit (RRS a	2,000 7,200 31 200 31 200 31 100 310 630 4,100 15* 15* 100 2,000 4,700 31,00 2* 2* 2* 310 2,000 In limit (RRS applicable to the content of th	2,000 7,200 31 200 7.8 51 100 310 630 4,100 15' 15' 100 2,000 4,700 31,000 2" 2" 310 2,000 n limit (RRS applicable to the well loce	2,000 7,200	2,000 7,200	2,000 7,200	2,000 7,200 400 31 200 400 31 200	2,000     7,200        400     280       31     200              7.8     51 <td>2,000 7,200 400 280 269 31 200</td> <td>2,000 7,200 400 280 269 243 31 200</td> <td>2,000 7,200 400 280 269 243 259 31 200</td> <td>2,000 7,200 400 280 269 243 259 276 31 200</td> <td>2,000 7,200 400 280 269 243 259 276 257 31 200</td> <td>2,000 7,200 400 280 269 243 259 276 257 197 31 200</td> <td>2,000 7,200 400 280 269 243 259 276 257 197 61.2 31 200</td> <td>2,000 7,200 400 280 269 243 259 276 257 197 61.2 42.4  31 200</td> <td>2,000 7,200 400 280 269 243 259 276 257 197 61.2 42.4 43.7 31 200</td> <td>2,000 7,200 400 280 269 243 259 276 257 197 61.2 42.4 43.7 23.8  31 200</td> <td>2.000 7,200 400 280 269 243 259 276 257 197 61.2 42.4 43.7 23.8 2,730 31 200</td> <td>2,000 7,200 400 280 269 243 259 276 257 197 61.2 42.4 43.7 23.8 2,730 2,510 31 200</td> <td>2,000</td> <td>2,000</td> <td>2000 7,200 400 280 289 243 259 276 257 197 61,2 42.4 43.7 23.8 2,730 2,510 2,490 2,520 851 31 200</td> <td>2000 7.200 400 280 289 243 259 276 257 197 61.2 42.4 43.7 23.8 2.730 2.510 2.490 2.520 851 967.  31 200</td> <td>2,000 7,200</td> <td>2,000 7,200</td>	2,000 7,200 400 280 269 31 200	2,000 7,200 400 280 269 243 31 200	2,000 7,200 400 280 269 243 259 31 200	2,000 7,200 400 280 269 243 259 276 31 200	2,000 7,200 400 280 269 243 259 276 257 31 200	2,000 7,200 400 280 269 243 259 276 257 197 31 200	2,000 7,200 400 280 269 243 259 276 257 197 61.2 31 200	2,000 7,200 400 280 269 243 259 276 257 197 61.2 42.4  31 200	2,000 7,200 400 280 269 243 259 276 257 197 61.2 42.4 43.7 31 200	2,000 7,200 400 280 269 243 259 276 257 197 61.2 42.4 43.7 23.8  31 200	2.000 7,200 400 280 269 243 259 276 257 197 61.2 42.4 43.7 23.8 2,730 31 200	2,000 7,200 400 280 269 243 259 276 257 197 61.2 42.4 43.7 23.8 2,730 2,510 31 200	2,000	2,000	2000 7,200 400 280 289 243 259 276 257 197 61,2 42.4 43.7 23.8 2,730 2,510 2,490 2,520 851 31 200	2000 7.200 400 280 289 243 259 276 257 197 61.2 42.4 43.7 23.8 2.730 2.510 2.490 2.520 851 967.  31 200	2,000 7,200	2,000 7,200

# Appendix F Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017 Atlanta Gas Light Company

ormer	Manufactured	Gas	Plar
	Macon, Geo	rgia	

Units rameter	Type 2 RRS	Type 4									MW-	12DD								
		RRS	02/23/17	04/06/16	02/16/15	08/05/14	02/19/14	08/07/13	02/06/13	11/07/12	08/09/12	05/16/12	02/09/12	11/16/11	08/11/11	05/04/11	05/11 DUP	02/17/11	11/10/10	08/10
SU	S																			
	N/A	N/A	7.63	7.37	7.32	7.78	8.13	6.05	7.32	7.02	6.87	7.58	7.31	7.44	7.29	6.98	6.98	7.62	7.80	6.1
ım/cm	N/A	N/A	225.20	200	209	227	241	225	225	220	231	231	230	239	256	284	284	294	280	50
Celsius			22.45	23.01	18.44			23.72	19.70	21.02	22.89	22.09			23.56	23.02	23.02	23.55	23.00	_
	N/A	N/A				24.35	24.24						18.16	23.11						26
mg/L	N/A	N/A	0.34	0.85	0.81	0.34	0.26	1.08	2.23	0.50	1.12	1.29	0.56	0.43	0.28	0.97	0.97	0.30	1.05	19
mV	N/A	N/A	-117.00	-94.8	-53.0	-161.4	-172.8	-59.4	-19.4	-74.6	0.3	-90.2	-114.4	-103.4	174.0	-402.6	-402.6	-153.4	-4.4	-9
NTU	N/A	N/A	1.74	1.16	0.99	6.00	15.6	2.12	2.69	3.61	17.2	5.90	0.98	2.21	11.8	7.95	7.95	1.34	1.17	2
Attenuat	ion Parame	eters	-		•		•	•	•		•	•	•			•	•	•	•	•
mg/L	N/A	N/A							< 0.050											
mg/L																				1
mg/L																				1
																				1
			+						-									1		+
mg/L																				
mg/L			1																	
mg/L																				
mg/L																				
mg/L	N/A	N/A					< 5.0		< 1.0				100					0.081		
mg/L	N/A	N/A					< 1.0		-					-				-		
mg/L	N/A	N/A					260		160				< 0.58	-				1.6		
mg/L	N/A	N/A	-				14						5000					4.8		
mg/L															-					
,									. 0.0					t the second sec						1
JUISHIL	101112																			
, 1						4	4		450	0.5				0.1						_
μg/L																				<
μg/L																				
μg/L	700*	2,300	<5.0	< 5.0	10	28	19	< 5.0	16	7.9	7.4	7.0	8.4	18	< 5.0	< 5.0	< 5.0	< 5.0		
μg/L	1,000*	1,100	<5.0	< 5.0	< 5.0	6	6	< 5.0	5.2	1.4	1.7	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0		
μα/L	31,000	200,000	<5.0	< 5.0	11	21	13	< 5.0	12	6.0	8.4	8.4	10	22		< 5.0	< 5.0	< 5.0		
ds	,																		•	
µg/L	2 000*	6 100	0.65	0.73	< 10	< 10	< 10	< 10	0.45	< 0.19	< 20	< 0.23								T T
μg/L													1				<u> </u>			
μg/L																		-		
μg/L																				
μg/L																				
μg/L	1.17	3.92	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.19	< 0.19	< 2.0	< 0.23								
μg/L	10	10	< 0.10	< 0.10	< 10	< 10	< 10	< 10	< 0.19	< 0.19	< 2.0	< 0.23								
μg/L	11.7	39.2	< 0.050	< 0.050	< 10	< 10	< 10	< 10	< 0.19	< 0.19	< 2.0	< 0.23		-				-		
μg/L	117	392	< 0.050	< 0.050	< 10	< 10	< 10	< 10	< 0.19	< 0.19	< 2.0	< 0.23								
μg/L																				
μg/L																				
µg/L																				
µg/L	,																			_
	,																			
μg/L																		1		
μg/L																				
μg/L																				
μg/L													46	110	7.6	< 5.0	9.4	< 5.0	< 5.0	<
μg/L	470	3,100	0.16	0.10	< 10	< 10	< 10	< 10	< 0.19	< 0.19	< 2.0	< 0.23								
μg/L	9,390	61,000	<10	< 10	< 10	< 10	< 10	< 10	9.6	< 0.97	< 9.9	< 1.1								
μg/L	1.000*	3,100	< 0.050	< 0.050	< 10	< 10	< 10	< 10	< 0.19	< 0.19	< 2.0	< 0.23								
				•	•	•	•	•			•	•	•			•	•		•	
μg/L	63	40		< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20								
																		1		
μg/L																				-
μg/L																1				
μg/L			1																	
μg/L	7.8	51		< 5.0					< 5.0	< 5.0	< 5.0	< 5.0								
μg/L	100	310		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10		
μg/L	630	4,100		< 10	< 10	< 10	< 10	< 10	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20		
μg/L	15*	15*		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10		
μg/L																				
μg/L			1																	1
μg/L μg/L	2*	2*		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20								
μg/L	310	2,000		< 10	< 10	12	< 10	10	20	28	24	21	24		-			15		
	9/L	Syl.   N/A	g/L N/A N/A N/A N/A N/A Q/L N/A	g/L N/A N/A g/L 329 1,700 <5.0 g/L 329 1,700 <5.0 g/L 1,000* 1,100 <5.0 g/L 1,000* 1,100 <5.0 g/L 1,000* 1,100 <5.0 g/L 1,000* 31,000 <0.050 g/L 1,17 3.92 <0.050 g/L 1,17 3.92 <0.050 g/L 1,17 3.92 <0.050 g/L 1,17 39.2 <0.050 g/L 1,17 39.2 <0.050 g/L 1,17 39.2 <0.050 g/L 1,17 39.2 <0.050 g/L 1,100 * 1,000* 4,100 <0.10 g/L 1,000* 4,100 <0.10 g/L 1,000* 4,100 <0.10 g/L 1,000* 4,100 <0.10 g/L 780 5,100 <10 g/L 780 5,100 <10 g/L 780 5,100 <10 g/L 780 5,100 <10 g/L 1,000* 3,100 0.16 g/L 20* 20* 4.3 g/L 1,000* 3,100 0.16 g/L 78 510 <10 g/L 1,000* 3,100 0.050	g/L         N/A         N/A	g/L         N/A         N/A	g/L         N/A         N/A	Q/L   N/A   N/A             < 0.25     Q/L   N/A   N/A             < 0.25     Q/L   N/A   N/A             6.3     Q/L   N/A   N/A   N/A               Q/L   N/A   N/A   N/A             Q/L   N/A   N/A   N/A             Q/L   N/A   N/A   N/A             Q/L   N/A   N/A   N/A             Q/L   N/A   N/A   N/A             Q/L   N/A   N/A   N/A             Q/L   N/A   N/A   N/A             Q/L   N/A   N/A   N/A             Q/L   N/A   N/A   N/A             Q/L   N/A   N/A   N/A             Q/L   N/A   N/A   N/A             Q/L   N/A   N/A   N/A             Q/L   N/A   N/A   N/A             Q/L   N/A   N/A   N/A             Q/L   N/A   N/A   N/A             Q/L   N/A   N/A   N/A             Q/L   N/A   N/A   N/A             Q/L   N/A   N/A   N/A             Q/L   N/A   N/A             Q/L   N/A   N/A   N/A	QL         N/A         N/A             0.25            QL         N/A         N/A            6.3            QL         N/A         N/A	97L N/A N/A N/A 6.3 1.0 97L N/A N/A N/A 1.6	10			10	10		10	10	10	

Parameter	Units	Type 2	Type 4											12DD (Conti										4440=404
Field Coornalisates Coolity De		RRS	RRS	05/10/10	02/25/10	08/14/09	06/07/06	03/09/06	12/21/05	09/30/05	03/02/05	12/14/04	10/05/04	06/11/04	03/05/04	12/18/03	09/10/03	06/12/03	06/03 DUP	03/13/03	03/03 DUP	12/12/02	09/18/02	11/07/01
Field Groundwater Quality Pa	SU	N/A	N/A	5.86	8.62	11.65	9.79	9.88	9.80	8.95	7.75	8.18	7.90	9.99	8.37	10.32	10.54	12.01	12.01	11.67	11.67	11.89	11.97	12.00
Specific Conductance	μm/cm	N/A	N/A	506	216	173	266	215	209	161	122	102	98	248	154	222	683	1057	1057	1.195	1.195	2.711	4.196	4.630
Temperature	°Celsius	N/A	N/A	23.54	22.12	27.75	25.03	24.40	23.91	23.22	22.99	24.98	26.9	27.48		22.34	23.94	24.58	24.58	22.75	22.75	21.50	26.32	22.80
Dissolved Oxygen	mg/L	N/A	N/A	0.72	0.54	1.15	0.26	0.27	0.23	0.35	1.27	2.76	1.50	1.61	3.81	0.31	0.82	0.76	0.76	0.19	0.19	0.30	0.13	0.24
ORP	mV	N/A	N/A	-45.2	-3.1	158.7	-143.3	-142.5	-150.3	-22.4	-60.1	-111.6	-62.7	-78.8	-60.8	-177.2	-204.1	-150.4	-150.4	-199.9	-199.9	-213.5	-209.3	-194.8
Turbidity	NTU	N/A	N/A	21.8	2.71	9.89	43.1	45	4.36	51.7		35.6	59	22		13.40	14.2	15	15	9.61	9.61	7.70	13.0	9.81
Laboratory Results - Natural	Attenuation	Parameters																						
Nitrogen, Ammonia (as N)	mg/L	N/A	N/A								0.21	< 0.20	< 0.20	0.28	0.27	0.32	0.36	0.303	0.358	0.484	0.414	0.557	0.573	0.691
Nitrogen, Nitrate (as N)	mg/L	N/A	N/A		< 0.050	< 0.050					< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	0.0579	< 0.0500	0.0828	0.0817	0.0749	< 0.0500	< 0.0500	< 0.0500	0.525
Sulfate	mg/L	N/A	N/A		19	< 5.0					1.50	21.2	1.79	2.63	5.18	3.09	4.54	10.8	8.56	6.82	6.39	4.85	4.97	3.08
Sulfide	mg/L	N/A	N/A		< 1.0	< 1.0					2.0	1.4	< 1.0	2.3		< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.74
Dissolved Manganese	mg/L	N/A	N/A								< 0.0050	0.0071	< 0.005	< 0.005	< 0.005	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.005	< 0.005	< 0.005
Total Manganese	mg/L	N/A N/A	N/A N/A		< 0.010	< 0.010					0.0204	0.0166	0.0240	0.0152	0.0111	0.0083	< 0.0050	0.0052	< 0.0050 <b>0.3</b>	< 0.0050 <b>0.137</b>	0.0111 0.154	< 0.005 < 0.200	< 0.005	< 0.005 < 2.00
Ferrous Iron Total Iron	mg/L mg/L	N/A N/A	N/A N/A		< 0.010 <b>0.2</b>	< 0.010 <b>0.23</b>					0.4 1.97	0.1 0.345	0.2 1.12	< 0.1 <b>0.932</b>	< 0.1 <b>0.435</b>	0.8 0.525	< 0.1 < 0.100	0.2 0.212	0.3	0.137	0.154	< 0.200 <b>0.126</b>	< 0.200 < 0.100	< 0.100
Carbon Dioxide	mg/L	N/A	N/A		< 0.050	< 50					< 0.60	< 0.60	< 0.60	< 0.6	180	< 0.60	< 0.100	< 0.60	< 0.60	< 0.60	< 0.60	< 0.60	0.40	< 0.60
Carbon Monoxide	mg/L	N/A	N/A											< 0.0						< 0.60				< 0.60
Methane	mg/L	N/A	N/A		120	150					280	160	120	200	25	94	170	180	190	200	200	220	200	220
Dissolved Nitrogen	mg/L	N/A	N/A		4.1	4.5	-				22	16	16	19	21	23	19	20	20	23	23	19	23	16
Dissolved Oxygen	mg/L	N/A	N/A		1.5	1.5					2.4	1.7	2.0	0.61	1.6	5.4	1.6	1.3	1.4	1.4	1.3	6.7	6.5	2.8
Laboratory Results - Organic		its				<u>.</u>		· ·										<u> </u>						
Volatile Organic Compounds																								
Benzene	μg/L	5*	9	< 5.0	310	68	180	38	40	40	290	430	230	560	190	130	630	390	400	680	740	1,000	1,800	1,800
Carbon Disulfide	μg/L	329	1,700																					
Ethylbenzene	μg/L	700*	2,300		40	< 5.0	14	< 5.0	< 5.0	< 5.0	19	31	21	40	13	14	31	17	16	9.0	42	41	45	38
Toluene	μg/L	1,000*	1,100		10	< 5.0	5.3	< 5.0	< 5.0	< 5.0	8.0	11	6.7	16	5.7	6.2	13	8.6	8.2	6.1	15	14	16	13
Total Xylenes	μg/L	31,000	200,000		46	< 5.0	15	< 5.0	< 5.0	< 5.0	28	35	20	38	5.0	13.8	30	17	17	6.2	46	21	61	23
Semivolatile Organic Compound		2.000*	6.100								40	10	10	10	10	10	40	< 10	40	40	10	40	10	< 10
Acenaphthene Acenaphthylene	μg/L μg/L	470	3,100								< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10
Anthracene	μg/L μg/L	4.700	31.000								< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzo[a]anthracene	μg/L μg/L	1.17	3.92																					
Benzolalpyrene	ug/L	0.2*	0.39																-					
Benzo[b]fluoranthene	μg/L	1.17	3.92														-							
Benzo[g,h,i]perylene	μg/L	10	10																-					
Benzo[k]fluoranthene	μg/L	11.7	39.2															-						
Chrysene	μg/L	117	392																					
Dibenz(a,h)anthracene	μg/L	0.3*	0.39															-						
2,4-Dimethylphenol	μg/L	700*	700*								< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Fluoranthene	μg/L	1,000*	4,100								< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Fluorene	μg/L	1,000*	4,100 3.92								< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Indeno[1,2,3-cd]pyrene 2-Methylphenol	μg/L μg/L	1.17 780	5,100								< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	 < 10	< 10	< 10	< 10	< 10
3 & 4 Methylphenol	μg/L μg/L	780	5,100								16	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Naphthalene	μg/L μg/L	20*	20*	< 5.0	< 9.7	< 9.7	55	< 10	18	< 10	39	71	< 10	< 10	< 10	< 10	89	17	16	150	180	160	220	150
Phenanthrene	μg/L	470	3,100								< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Phenol	μg/L	9,390	61,000								18	< 10	< 10	< 10	< 10	< 10	< 10	< 10	19	< 10	< 10	< 10	< 10	< 10
Pyrene	μg/L	1,000*	3,100								< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Inorganic Constituents																								
Antimony	μg/L	6.3	40								< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40
Arsenic	μg/L	50*	50*								< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Barium	μg/L	2,000	7,200		31	390	130	109	109	102	76.0	110	164	208	136	161	287	287	281	382	404	932	1,490	1,860
Beryllium	μg/L	31	200																		-			
Cadmium	μg/L	7.8	51																					
Chromium	μg/L	100	310		< 10	< 10	< 10	< 10	< 10.0	< 10	21.5	< 10	32.1	116	10.4	< 10	< 10	< 10	< 10	< 10	< 10	10	< 10	< 10
Copper	µg/L	630	4,100		< 20	< 20	< 10	< 10	< 10.0	< 10	< 10	< 10	< 10	16.1	< 10	< 10	< 10	10.1	10.4	< 10	< 10	< 10	< 10	< 10
Lead Nickel	μg/L μα/L	15* 100	15* 2.000		< 10 < 40	< 10 < 40	< 10 < 20	< 10 < 20	<b>15.1</b> < 20.0	<b>12.3</b> < 20	< 10 < 20	< 10 < 20	< 10 < 20	< 10 <b>97.7</b>	< 10 < 20	< 10 < 20	< 10 < 20	23.4 < 20	21.9 < 20	< 10 < 20	12 < 20	< 10 < 20	< 10 < 20	< 10 < 20
Zinc	μg/L μg/L	4,700	31,000		< 40	< 40	< 20	< 20	< ∠U.U	< 20	< 20 <b>44.0</b>	< 20	< 20 <b>25.3</b>	< 20	< 20 <b>27.9</b>	< 20	< 20	< 20 <b>21.7</b>	< 20 <b>21.2</b>	< 20 <b>22</b>	< 20 <b>30</b>	< 20	< 20	< 20
Mercury	μg/L μg/L	2*	2*								< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Total Cyanide	μg/L	310	2,000		12	88	23	19	27	28	18	10	< 10	< 10	36	< 10	< 10	< 10	< 10	16	15	< 10	< 10	< 10
Notes:				•																				

Notes:

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Standard Units

SU - Standard Units
μS/cm - microsiemens per centimeter
μg/L - micrograms per liter
mg/L - milligrams per liter
mV - millivolts
NTU - nephelometric turbidity units

N/A - RRS are not applicable to this parameter -- Not Analyzed

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

### Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017 Atlanta Gas Light Company Former Manufactured Gas Plant Site

Macon, Georgia

Parameter         Units           Field Groundwater Quality Parameters         pH           SU         Specific Conductance         μm/cm           Temperature         °Celsius           Dissolved Oxygen         mg/L           ORP         mV           Turbidity         NTU           Laboratory Results - Natural Attenuation Participation         Nitrogen, Ammonia (as N)           Nitrogen, Nitrate (as N)         mg/L           Sulfate         mg/L           Sulfide         mg/L           Dissolved Manganese         mg/L           Total Manganese         mg/L           Ferrous Iron         mg/L           Total Iron         mg/L           Carbon Dioxide         mg/L           Methane         mg/L	N/A	N/A	02/21/17 6.91 418.20 21.21 0.26 -97.30 0.66	08/23/16 6.74 372.2 27.00 0.73 -81.5 8.3	9.07 300 22.98 3.83 106.5	7.69 327 26.29 0.31 -169.1	6.83 475 19.41 0.50	6.66 423 19.85	<b>02/22/17</b> 6.04	<b>08/23/16</b> 6.04		08/11/15	02/16/15	MW-23D 08/04/14	02.18/14	08/05/13	02/28/05	10/06/04	06/10/03
SU   Specific Conductance	N/A	N/A N/A N/A N/A N/A N/A	418.20 21.21 0.26 -97.30 0.66	372.2 27.00 0.73 -81.5	300 22.98 3.83 106.5	327 26.29 0.31	475 19.41	423		6.04									
Specific Conductance	N/A	N/A N/A N/A N/A N/A N/A	418.20 21.21 0.26 -97.30 0.66	372.2 27.00 0.73 -81.5	300 22.98 3.83 106.5	327 26.29 0.31	475 19.41	423		6.04									
Temperature °Celsius Dissolved Oxygen mg/L ORP mV Turbidity NTU Laboratory Results - Natural Attenuation Pa Nitrogen, Ammonia (as N) mg/L Nitrogen, Nitrate (as N) mg/L Sulfate mg/L Sulfate mg/L Dissolved Manganese mg/L Total Manganese mg/L Total Iron mg/L Carbon Dioxide mg/L Carbon Dioxide mg/L	N/A N/A N/A N/A N/A Parameters N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A N/A	21.21 0.26 -97.30 0.66	27.00 0.73 -81.5	22.98 3.83 106.5	26.29 0.31	19.41		005.46		6.17	5.93	5.87	6.38	6.15	5.55	6.07	5.91	6.17
Dissolved Oxygen         mg/L           ORP         mV           Turbidity         NTU           Laboratory Results - Natural Attenuation Pa           Nitrogen, Ammonia (as N)         mg/L           Nitrogen, Nitrate (as N)         mg/L           Sulfate         mg/L           Sulfide         mg/L           Dissolved Manganese         mg/L           Total Manganese         mg/L           Ferrous Iron         mg/L           Total Iron         mg/L           Carbon Dioxide         mg/L	N/A N/A N/A Parameters N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A	0.26 -97.30 0.66	0.73 -81.5	3.83 106.5	0.31		40.05	385.10	381.1	400	304	369	374	372	363	378	388	399
Dissolved Oxygen         mg/L           ORP         mV           Turbidity         NTU           Laboratory Results - Natural Attenuation Pa           Nitrogen, Ammonia (as N)         mg/L           Nitrogen, Nitrate (as N)         mg/L           Sulfate         mg/L           Sulfide         mg/L           Dissolved Manganese         mg/L           Total Manganese         mg/L           Total Iron         mg/L           Carbon Dioxide         mg/L	N/A N/A N/A Parameters N/A N/A N/A N/A N/A N/A	N/A N/A N/A N/A	-97.30 0.66	0.73 -81.5	106.5	0.31	0.50	19.85	22.56	29.10	23.34	27.58	17.45	26.22	20.60	26.06	22.07	24.18	23.37
ORP         mV           Turbidity         NTU           Laboratory Results - Natural Attenuation Pa           Nitrogen, Ammonia (as N)         mg/L           Nitrogen, Nitrate (as N)         mg/L           Sulfiate         mg/L           Sulfide         mg/L           Dissolved Manganese         mg/L           Total Manganese         mg/L           Ferrous Iron         mg/L           Total Iron         mg/L           Carbon Dioxide         mg/L	N/A Parameters N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A	0.66			160.1	0.50	1.03	0.22	0.70	0.26	0.26	0.82	0.36	0.58	1.09	2.78	0.11	0.14
Turbidity NTU  Laboratory Results - Natural Attenuation Pa Nitrogen, Ammonia (as N) mg/L  Nitrogen, Nitrate (as N) mg/L  Sulfate mg/L  Sulfide mg/L  Dissolved Manganese mg/L  Total Manganese mg/L  Total Iron mg/L  Carbon Dioxide mg/L	N/A Parameters N/A N/A N/A N/A N/A N/A N/A	N/A N/A N/A			1.78		-74.0	-87.4	43.20	-7.1	121.5	149.7	200.9	72.9	163.0	-105.6	148.6	85.0	113.8
Nitrogen, Ammonia (as N) mg/L  Nitrogen, Nitrate (as N) mg/L  Sulfate mg/L  Sulfide mg/L  Dissolved Manganese mg/L  Total Manganese mg/L  Ferrous Iron mg/L  Carbon Dioxide mg/L	N/A N/A N/A N/A N/A	N/A				9.73	1.90	2.76	7.84	7.0	1.42	9.92	2.01	1.27	0.36	9.12	12.5	5.19	3.3
Nitrogen, Ammonia (as N) mg/L  Nitrogen, Nitrate (as N) mg/L  Sulfate mg/L  Sulfide mg/L  Dissolved Manganese mg/L  Total Manganese mg/L  Ferrous Iron mg/L  Carbon Dioxide mg/L	N/A N/A N/A N/A N/A	N/A			•		•												
Nitrogen, Nitrate (as N) mg/L Sulfate mg/L Sulfide mg/L Dissolved Manganese mg/L Total Manganese mg/L Ferrous Iron mg/L Total Iron mg/L Carbon Dioxide mg/L	N/A N/A N/A N/A	N/A						< 0.20									< 0.20	< 0.20	< 0.200
Sulfate         mg/L           Sulfide         mg/L           Dissolved Manganese         mg/L           Total Manganese         mg/L           Ferrous Iron         mg/L           Total Iron         mg/L           Carbon Dioxide         mg/L	N/A N/A	N/A		-		-		< 0.500		-		-		-	< 0.25		< 0.0500	< 0.0500	< 0.0500
Sulfide         mg/L           Dissolved Manganese         mg/L           Total Manganese         mg/L           Ferrous Iron         mg/L           Total Iron         mg/L           Carbon Dioxide         mg/L	N/A N/A					-	-	2.67		-		-		-	49.0		28.0	55.2	39.7
Dissolved Manganese         mg/L           Total Manganese         mg/L           Ferrous Iron         mg/L           Total Iron         mg/L           Carbon Dioxide         mg/L		N/A		-		-		< 1.0		-		-		-	< 1.0		< 1.0	< 1.0	< 1.0
Total Manganese         mg/L           Ferrous Iron         mg/L           Total Iron         mg/L           Carbon Dioxide         mg/L		N/A						1.45				-		-	< 0.100		0.596	0.510	0.637
Ferrous Iron         mg/L           Total Iron         mg/L           Carbon Dioxide         mg/L		N/A						1.43							< 0.100		0.622	0.529	0.651
Total Iron mg/L Carbon Dioxide mg/L	N/A	N/A						6.7							78		< 0.1	< 0.1	0.7
Carbon Dioxide mg/L	N/A	N/A						6.43							< 1.0		0.375	< 0.1	1.35
	N/A	N/A		-	-			31		-		-		-	17		140	150	170
	N/A	N/A				_		24						_	16		31	22	23
Dissolved Nitrogen mg/L	N/A	N/A		-	-	-		21				-		-	5.3		16	15	14
Dissolved Oxygen mg/L	N/A	N/A		-	-	-		1.5				-					1.1	1.5	1.0
Laboratory Results - Organic Constituents		,, .				l		1.0			l							1.0	
Volatile Organic Compounds																			
Benzene µg/L	5.0*	9.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
1	329	1,700	<5.0	<5.0	< 5.0	< 5.0	< 5.0		<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0			
	700*	2,300	<5.0 <5.0	<5.0 <5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0 <5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	1,000*	1,100	<5.0 <5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	31,000	200,000	<5.0 <5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Naphthalene µg/L Semivolatile Organic Compounds	31,000	200,000	<3.0	₹5.0	< 5.0	< 5.0	< 5.0	< 5.0	₹5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
	2.000*	6.100	<0.50	<0.50	< 0.50	< 10	< 0.50	< 10	<0.50	<0.50	< 0.50	< 10	< 0.50	< 10	< 10	< 10	< 10	< 10	< 10
Acenaphthene µg/L Acenaphthylene µg/L	470	3,100	<1.0	<1.0	< 1.0	< 10	< 1.0	< 10	<1.0	<1.0	< 1.0	< 10	< 1.0	< 10	< 10	< 10	< 10	< 10	< 10
	4.700	31, 000	<0.050	<0.050	< 0.050	< 10	< 0.050	< 10	<0.050	<0.050	< 0.050	< 10	< 0.050	< 10	< 10	< 10	< 10	< 10	
13	1.17	3.92	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 10	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20	< 10	< 10	< 10
	0.2*	0.39	<0.050	<0.050	< 0.050	< 0.050	< 0.050		<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20			
Benzo[a]pyrene µg/L		3.92			< 0.030		< 0.030						< 0.030	< 0.000	< 0.030				
Benzo[b]fluoranthene µg/L	1.17		<0.10 <0.10	<0.10 <0.10	< 0.10	< 0.10	< 0.10		<0.10 <0.10	<0.10 <0.10	< 0.10 < 0.10	< 0.10 < 10	< 0.10			< 0.20			+
Benzo[g,h,i]perylene μg/L		10				< 10		-						< 10	< 10	< 10			
Benzo[k]fluoranthene µg/L	11.7	39.2	<0.050	<0.050	< 0.050	< 10	< 0.050		<0.050	<0.050	< 0.050	< 10	< 0.050	< 10	< 10	< 10			-
Chrysene µg/L	117	392	<0.050	<0.050	< 0.050	< 10	< 0.050		<0.050	<0.050	< 0.050	< 10	< 0.050	< 10	< 10	< 10			
Dibenz(a,h)anthracene µg/L	0.3*	0.39	<0.10	<0.10	< 0.10	< 0.10	< 0.10		<0.10	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20			
2,4-Dimehylphenol µg/L	700*	700*	<10	<10	< 10	< 10	< 10	< 10	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	1,000*	4,100	<0.10	<0.10	< 0.10	< 10	< 0.10	< 10	<0.10	<0.10	< 0.10	< 10	< 0.10	< 10	< 10	< 10	< 10	< 10	< 10
13	1,000*	4,100	<0.10	<0.10	< 0.10	< 10	< 0.10	< 10	<0.10	<0.10	< 0.10	< 10	< 0.10	< 10	< 10	< 10	< 10	< 10	< 10
Indeno[1,2,3-cd]pyrene µg/L	1.17	3.92	0.056	<0.050	< 0.050	< 0.050	< 0.050		<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20			
2-Methylphenol µg/L	780	5,100	<10	<10	< 10	< 10	< 10	< 10	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3 & 4 Methylphenol µg/L	78	510	<10	<10	< 10	< 10	< 10	< 10	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Naphthalene μg/L	20*	20*	<0.50	<0.50	< 0.50	< 10	< 0.50	< 10	<0.50	<0.50	< 0.50	< 10	< 0.50	< 10	< 10	< 10	< 10	< 10	< 10
Phenanthrene μg/L	470	3,100	<0.50	0.063	< 0.050	< 10	< 0.050	< 10	<0.050	<0.050	< 0.050	< 10	< 0.050	< 10	< 10	< 10	< 10	< 10	< 10
13	9,390	61,000	<10	<10	< 10	< 10	< 10	< 10	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	1,000*	3,100	< 0.050	< 0.050	< 0.050	< 10	< 0.050	< 10	< 0.050	<0.050	< 0.050	< 10	< 0.050	< 10	< 10	< 10	< 10	< 10	< 10
Laboratory Results - Inorganic Constituents					1	1	1											1	
Antimony μg/L	6.3	40		< 20	< 20	< 20	< 20	< 40		< 20	< 20	< 20	< 20	< 20	< 20	< 20.0	< 40	< 40	< 40
Arsenic µg/L	50*	50*		< 50	< 50	< 50	< 50	< 50		< 50	< 50	< 50	< 50	< 50	< 50	< 50.0	< 50	< 50	< 50
13	2,000	7,200		1120	469	907	1,440	1,290		65.5	57.5	64.4	66.1	56.6	52.2	54.3	52.2	48.2	50
Beryllium μg/L	31	200		< 10	< 10	< 10	< 10			< 10	< 10	< 10	< 10	< 10	< 10	< 10.0			
Cadmium µg/L	7.8	51		< 5.0	< 5.0	< 5.0	< 5.0			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0			
Chromium µg/L	100	310		< 10	< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10	< 10	< 10	< 10.0	< 10	< 10	< 10
Copper µg/L	630	4,100		< 10	< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10	< 10	< 10	< 10.0	< 10	< 10	< 10
Lead μg/L	15*	15*		< 10	< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10	< 10	< 10	< 10.0	< 10	< 10	< 10
Nickel µg/L	100	2,000		45.4	< 20.0	< 20.0	< 20.0	< 20		< 20	< 20	< 20	< 20	< 20	< 20	< 20.0	< 20	< 20	< 20
Zinc μg/L	4,700	31,000		< 20	< 20	< 20	< 20	< 20		< 20	< 20	< 20	< 20	< 20	< 20	< 20.0	< 20	< 20	< 20
Mercury µg/L	2*	2*		< 0.20	< 0.20	< 0.20	< 0.20	< 0.5		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.5	< 0.5	< 0.5
Total Cyanide µg/L	310	2,000		< 10	< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Total Cyanide µg/L			_													~ 10	~ 10		

Notes:

Analyte was detected above laboratory detection limit

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level
RRS - Risk Reduction Standard
SU - Standard Units

µS/cm - microsiemens per centimeter

µg/L - micrograms per liter

mg/L - milligrams per liter

mV - millivolts

NTU - nephelometric turbidity units

N/A - RRS are not applicable to this parameter

- Not Analyzed

- Not Analyzed

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

Parameter	Units	Type 2	Type 4															-	MW-24D														
		RRS	RRS	02/28/17	08/22/16	07/26/16	07/08/16	06/24/16	04/05/16	08/13/15	02/17/15	08/06/14	02/18/14	02/04/13	02/06/12	02/15/11	02/22/10	08/14/09	06/06/06	03/09/06	12/20/05	09/30/05	03/01/05	12/14/04	09/30/04	06/08/04	03/03/04	12/16/03	09/09/03	06/10/03	03/11/03	12/11/02	09/18/02 11/
Groundwater Quality P		N/A	N/A	E 70	6.43	6 10	6.44	6.47	6.33	6.08	6.03	6.16	6.56	5.84	5.9	5.77	6.05	6.14	E 60	5.74	E 02	5.88	E 02	9.78	5.91	5.71	E 01	6.16	4.79	6.13	E 02	E 0.1	6.03 5
ic Conductance	SU um/cm	N/A	N/A	5.70 49.20		62.8	123.5	135.8	46	484	64	325	45	195	247	198	6.05 69	324	5.68 368	350	5.83 379	450	5.83 348	461	536	478	5.91 436	6.16 381	468	466	5.92 404	5.84 486	6.03 5 568 5
erature	°Celsius	N/A	N/A	17.36		23.95	23.84	22.58	17.78	21.66	15.75	22.39	16.26	15.89	16.64	18.33	14.62	23.77	19.70	18.80	18.48	21.33	19.27	19.28	21.05	21.91	18.16	17.34	21.04	20.5	18.52	20.06	21.98 2
ved Oxygen	mg/L	N/A	N/A	0.38	0.20	0.51	0.53	0.29	4.46	0.21	1.45	0.58	6.58	0.74	0.31	1.49	4.73	5.12	0.71	1.26	0.40	0.80	1.57	0.5	0.27	0.23	0.61	2.46		0.11	0.37	0.17	0.04
ity	mV NTU	N/A N/A	N/A N/A	90.3	-109.6	-72.4	-66.3	-112.8	78.4	-80.8	100.1	-58.6	162.0	55.4	57.5 27.7	79.1	135.4 9.51	214.6 0.95	4.3 35.7	35.3	-8.7 23.4	-16.8	103.4 56.6	-110.3 24.5	-35.1	-27.6	47.7	146.8		-9.5	22.0	0.2 60.0	-32.5 29.0 2
tory Results - Natural			IN/A	1.39	1.5	3.58	3.89	1.65	22.6	34	9.47	1.68	8.72	7.53	21.1	7.31	9.51	0.95	35.7	33.8	23.4	48.3	56.6	24.5	6.1	60	75.6		22.7	100	35	60.0	29.0
en, Ammonia (as N)	mg/L	N/A	N/A																				< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	0.26	0.287	0.253	< 0.200	< 0.200 <b>0</b>
gen, Nitrate (as N)	mg/L	N/A	N/A										< 0.25	0.073	0.057	< 0.050	0.46	< 0.050							< 0.0500	< 0.5	< 0.250	0.258		< 0.0500	< 0.0500		0.056 < 0
te	mg/L	N/A	N/A										< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0					1.32	1.26	2.43	1.92	2.32	3.36	< 2.00	< 1.00	2.05	1.88	1.82 <
de blyed Manganese	mg/L mg/L	N/A N/A	N/A N/A										< 1.0	< 1.0	1.8	< 1.0	< 1.0	< 1.0					< 1.0 <b>1.71</b>	< 1.0 <b>2.15</b>	< 1.0 2.32	< 1.0 2.33	< 1.0 <b>2.12</b>	< 1.0 1.63	< 1.0 2.32	< 1.0 2.24	< 1.0 1.68	< 1.00 <b>2.45</b>	< 1.00 < 2.55 2
Manganese	mg/L	N/A	N/A										< 0.100										1.67	2.14	2.35	2.39	2.34	1.67	2.33	2.2	1.74	2.36	2.26 2
us Iron	mg/L	N/A	N/A									-	0.791	18 HF	16	12	< 0.010	4.9					13.7	38.6	38.3	38.1	25.1	0.2	11.6	14.6	15.7	49.5	36.0
Iron	mg/L	N/A	N/A										5.2	18	2.7	15	0.73	5.8					15.4	37.4		33.5	29.3	6.07	39.7	37.5	18.0	40.3 230	38.3
on Dioxide ane	mg/L mg/L	N/A N/A	N/A N/A										< 1.0 < 4	140 140	3.5 120	1.8 72	0.23 0.29	0.94 56	-				140 120	200 410	180 420	200 290	190 250	79 3.5	200 500	200 300	200 210	300	190 390
olved Nitrogen	mg/L	N/A	N/A										17	18	3.9	4.3	4.1	4.5					18	20	16	20	22	17	21	19	20	16	19
olved Oxygen	mg/L	N/A	N/A										9.0	4.7	0.99	1.4	1.5	1.6					3.0	2.3	0.98	0.51	0.83	5.1	0.64	0.62	0.58	4.6	6.0
ratory Results - Organic	ic Constituents	3																															
ile Organic Compounds ene	ug/l	5.0*	9.0	<5.0	11	120	9.0	< 5.0	100	39	< 5.0	15	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	7.5	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<b>~50</b>	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
on Disulfide	μg/L μg/L	329	1700.0	<5.0 <5.0		< 5.0	< 5.0	< 5.0 < 5.0	<b>100</b> < 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 <
enzene	μg/L	700*	2,300	<5.0	5.2	140	6.0	< 5.0	44	31	< 5.0	7.2	< 5.0	1.9	< 5.0	< 5.0	< 5.0	< 5.0	5.6	< 5.0	< 5.0		< 5.0	11	< 5.0	57	84	< 5.0	12	16	5.2	110	24
ene	μg/L	1,000*	1,100	<5.0	<5.0	8	< 5.0	< 5.0	8.6	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0 <
s olatile Organic Compou	µg/L	31,000	200,000	<5.0	<5.0	18	< 5.0	< 5.0	8.3	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
aphthene	μg/L	2,000*	6,100	<0.50	1.7	14	1.3	0.78	< 0.50	15	< 10	< 10	< 10	2.3					-				< 10	< 10	< 10	< 10	13	< 10	13	< 10	< 10	15	< 10 <
aphthylene	μg/L	470	3,100	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 10	< 10	< 10	0.32									< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
acene	μg/L	4,700	31, 000	0.17	0.19	0.35	0.32	0.25	0.27	0.41	< 10	< 10	< 10	< 0.19									< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 <
o[a]anthracene	μg/L	1.17 0.2*	3.92 0.39	0.56 0.98	<0.050 <0.050	< 0.050 < 0.050	0.087 0.11	< 0.050 < 0.050	< 0.050 <b>0.053</b>	< 0.050 < 0.050	< 0.050 < 0.050	< 0.050 < 0.050		< 0.19 < 0.19																			
o[a]pyrene o[b]fluoranthene	μg/L μg/L	1.17	3.92	1.1	<0.030	< 0.000	0.11		0.033	< 0.030	< 0.030	< 0.10		< 0.19																			
[g,h,i]perylene	μg/L	10	10	1.1	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 10	< 10	< 10	< 0.19																			
[k]fluoranthene	μg/L	11.7	39.2	1.0	< 0.050	< 0.050	0.10	< 0.050	0.074	< 0.050	< 10	< 10	< 10	< 0.19																			
ene z(a,h)anthracene	μg/L μg/L	117 0.3*	392 0.39	0.53 1.0	<0.050 <0.10	< 0.050 < 0.10	<b>0.15</b> < 0.10	< 0.050 < 0.10	<b>0.077</b> < 0.10	< 0.050 < 0.10	< 10 < 0.10	< 10 < 0.10	< 10 < 0.10	< 0.19 < 0.19																			
Dimethylphenol	μg/L μg/L	700*	700*	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1.9									< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 <
anthene	μg/L	1,000*	4,100	<0.10		0.11	0.12	< 0.10	< 0.10	< 0.10	< 10	< 10	< 10	< 0.19									< 10	< 10	< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10 <
ene	μg/L	1,000*	4,100	<0.10	0.27	3.3	0.16	< 0.10	< 0.10	1.5	< 10	< 10	< 10	0.48									< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 <
no[1,2,3-cd]pyrene ethylphenol	μg/L μg/L	1.17 780	3.92 5,100	<b>1.0</b> <10	<0.050 <10	< 0.050 < 10	<b>0.077</b> < 10	< 0.050 < 10	<b>0.064</b> < 10	< 0.050 < 10	< 0.050 < 10	< 0.050 < 10	< 0.050 < 10	< 0.19 < 1.9									 < 10	 < 10	< 10	< 10	< 10	 < 10	 < 10	 < 10	 < 10	 < 10	< 10 <
4 Methylphenol	μg/L	78	510	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1.9		-			-				< 10	< 10	< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10
hthalene	μg/L	20*	20*	<0.50	14	290	13.0	8.7	< 0.50	220	< 10	37	< 10	3.5	< 5.0	< 5.0	< 9.4	< 10	13	< 10	< 10	< 10	< 10	17	11	36	66	< 10	35	35	< 10	98	23
nanthrene	μg/L	470	3,100	<0.50	0.21	2	0.077	< 0.050	< 0.050	2.4	< 10	< 10	< 10	< 0.19									< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 <
nol ene	μg/L μg/L	9,390 1.000*	61,000 3,100	<10 <b>0.055</b>	<10 <0.050	< 10 <b>0.12</b>	< 10 <b>0.18</b>	< 10 < 0.050	< 10 <b>0.075</b>	< 10 <b>0.11</b>	< 10 < 10	< 10 < 10	< 10 < 10	< 0.97 < 0.19				<del></del>					< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10	< 10 < 10	< 10 < 10	< 10 <
oratory Results - Inorgan			0,100	0.000	V0.000	0.12	0.10	₹ 0.000	0.010	, v	_ \ 10	V 10	\ 10	V 0.10	L	· ·			II.	Į.	L	l .	\ 10	\ 10	\ 10	V 10	V 10	V 10	\ 10	\ 10	_ \ 10	\ 10	V 10
nony	μg/L	6.3	40		< 20				< 20	< 20	< 20	< 20	< 20	< 20									< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40
nic	μg/L	50*	50*		< 20				< 20	< 20	< 20	< 20	< 20	< 20									< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
m lium	μg/L μg/l	2,000	7,200 200		1100 < 10				<b>1,250</b> < 10.0	<b>4,370</b> < 10.0	<b>422</b> < 10.0	<b>2,270</b> < 10.0		< 4.0	2,600	2,200	470	2,800	3,510	3,040	3,910	4,170 	2,870	3,850	4,120	3,940	4,060	3,080	4,210	2,600	3,550	3,940	4,130 4
nium	μg/L μg/L	7.8	51		< 5.0				< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0																			
nium	μg/L	100	310		< 10				< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10.0		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 <
er	μg/L	630	4,100		< 10				< 10	< 10	< 10	< 10	< 10	< 20	< 20	< 20	< 20	< 20	< 10	< 10	< 10.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 <
ury	μg/L μg/L	15* 2*	15* 2*		< 10 <0.02				< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 20	< 10 < 40	< 10	< 10	< 10	< 10	< 10	< 10	< 10.0	< 10	< 10 < 0.5	< 10 < 0.5	< 10 < 0.5	< 10 < 0.5	< 10 < 0.5	< 10 < 0.5	< 10 < 0.5	< 10 < 0.5	< 10 < 0.5	< 10 < 0.5	< 10 <
ll y	μg/L μg/L	100	2,000		< 20				58.4	197	39.8	< 20	27.2	20	< 40	< 40	< 40	< 40	< 20.0	< 20.0	< 20.0	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20 <
	μg/L	4,700	31,000		< 0.20				< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20									25.4	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20 <
Cyanide	μg/L	310	2,000		< 10				< 10	< 10	< 10	< 10	< 10	< 10	< 10	15	< 10	< 10	< 10	< 10	< 10	< 10	17	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10 <

### Appendix F Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017

### Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

Parameter	Units	Type 2	Type 4	20/40/45	00/40/45	00/04/44	00/40/44	00/05/40	00/04/40	44/00/40	00/07/40		-25D	44/40/44	00/00/44	05/00/44	00/40/44	44/00/40	00/00/40	05/40/40	00/00/40
Field Groundwater Qua	lity Baramatar	RRS	RRS	08/12/15	02/16/15	08/04/14	02/18/14	08/05/13	02/04/13	11/06/12	08/07/12	05/14/12	02/07/12	11/18/11	08/08/11	05/02/11	02/16/11	11/09/10	08/09/10	05/10/10	02/23/10
nH	SU	N/A	N/A	5.40	5.60	5.69	5.69	4.65	5.53	5.62	5.09	5.41	5.22	5.46	5.49	5.06	5.40	5.49	7.14	5.43	5.59
Specific Conductance	μm/cm	N/A	N/A	446	371	461	461	4.03	408	416	484	464	426	403	489	485	418	471	502	470	493
Temperature	°Celsius	N/A	N/A	26.25	17.09	23.64	23.64	23.67	16.81	19.04	22.92	24.02	19.76	17.02	27.36	19.96	22.49	22.74	24.74	20.35	15.21
Dissolved Oxygen	mg/L	N/A	N/A	0.59	2.67	0.76	0.76	3.01	1.83	1.75	2.72	2.01	0.57	0.75	0.64	0.84	2.63	1.67	0.87	0.97	4.26
ORP	mV	N/A	N/A	4.2	129.2	116.1	116.1	-2.3	258.2	195.5	109.9	138.7	78.1	243.7	226.5	-15.6	282.5	241.2	-145.3	203.8	161.5
Turbidity	NTU	N/A	N/A	0.52	2.43	8.36	8.36	0.75	0.78	1.17	2.56	0.93	1.29	1.46	5.75	2.54	2.31	0.10	6.08	1.18	2.33
Laboratory Results - Na																1					
Nitrogen, Ammonia (as N	mg/L	N/A	N/A																		
Nitrogen, Nitrate (as N)	mg/L	N/A	N/A				3.9		3.4				4.2				4.2				3.7
Sulfate	mg/L	N/A	N/A				< 1.0		< 5.0				< 5.0				< 5.0				< 5.0
Sulfide	mg/L	N/A	N/A				< 1.0		< 1.0		-		< 1.0				< 1.0				< 1.0
Dissolved Manganese	mg/L	N/A	N/A				< 0.100														
Total Manganese	mg/L	N/A	N/A								-										
Ferrous Iron	mg/L	N/A	N/A				< 0.100		< 0.10 HF				< 0.10 HF				< 0.010				< 0.010
Total Iron	mg/L	N/A	N/A			-	91		< 0.10		-		< 0.10	-			< 0.010		-	-	< 0.010
Carbon Dioxide	mg/L	N/A	N/A				< 1.0		76				1.6				2.1				0.93
Methane	mg/L	N/A	N/A				< 4		< 0.58				< 0.58				<0.58				<0.19
Dissolved Nitrogen	mg/L	N/A	N/A				20		18				5.6				4.4				3.8
Dissolved Oxygen	mg/L	N/A	N/A				6.6		6.2				1.8				1.4				1.3
Laboratory Results - O		ients																			
Volatile Organic Compou																					
Benzene	μg/L	5*	9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Disulfide	μg/L	329	1,700	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 5.0							-		
Ethylbenzene	μg/L	700*	2,300	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0				< 5.0
Toluene	μg/L	1,000* 31,000	1,100 200,000	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0	< 5.0	< 5.0 < 5.0	< 1.0	< 1.0 < 2.0	< 1.0 < 2.0	< 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0	< 5.0 < 5.0	< 5.0 < 5.0				< 5.0
Total Xylenes Semivolatile Organic Cor	µg/L	31,000	200,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0				< 5.0
Acenaphthene	µg/L	2,000*	6.100	< 0.50	< 10	< 10	< 10	< 10	< 0.19	< 0.20	< 0.20	< 0.21									
Acenaphthylene	μg/L	470	3,100	< 1.0	< 10	< 10	< 10	< 10	< 0.19	< 0.20	< 0.20	< 0.21									
Anthracene	μg/L μg/L	4,700	31,000	< 0.050	< 10	< 10	< 10	< 10	< 0.19	< 0.20	< 0.20	< 0.21									
Benzo[a]anthracene	μg/L	1.17	3.92	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20	< 0.19	< 0.20	< 0.20	< 0.21									
Benzo[a]pyrene	μg/L	0.2*	0.39	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20	< 0.19	< 0.20	< 0.20	< 0.21									
Benzo[b]fluoranthene	μg/L	1.17	3.92	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.19	< 0.20	< 0.20	< 0.21									
Benzo[q,h,i]perylene	µg/L	10	10	< 0.10	< 10	< 10	< 10	< 10	< 0.19	< 0.20	< 0.20	< 0.21									
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 0.050	< 10	< 10	< 10	< 10	< 0.19	< 0.20	< 0.20	< 0.21									
Chrysene	μg/L	117	392	< 0.050	< 10	< 10	< 10	< 10	< 0.19	< 0.20	< 0.20	< 0.21									
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.19	< 0.20	< 0.20	< 0.21									
2,4-Dimethylphenol	μg/L	700*	700*	< 10	< 10	< 10	< 10	< 10	< 1.9	< 2.0	< 2.0	< 2.1									
Fluoranthene	μg/L	1,000*	4,100	< 0.10	< 10	< 10	< 10	< 10	< 0.19	< 0.20	< 0.20	< 0.21									
Fluorene	μg/L	1,000*	4,100	< 0.10	< 10	< 10	< 10	< 10	< 0.19	< 0.20	< 0.20	< 0.21									
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20	< 0.19	< 0.20	< 0.20	< 0.21									
2-Methylphenol	μg/L	780	5,100	< 10	< 10	< 10	< 10	< 10	< 1.9	< 2.0	< 2.0	< 2.1									
3 & 4 Methylphenol	μg/L	78	510	< 10	< 10	< 10	< 10	< 10	< 1.9	< 2.0	< 2.0	< 2.1									
Naphthalene	μg/L	20*	20*	< 0.50	< 10	< 10	< 10	< 10	< 0.19	< 0.20	< 0.20	< 0.21	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<9.4
Phenanthrene	μg/L	470	3,100	< 0.050	< 10	< 10	< 10	< 10	< 0.19	< 0.20	< 0.20	< 0.21									
Phenol	μg/L	9,390	61,000	< 10	< 10	< 10	< 10	< 10	< 0.97	< 0.99	< 1.0	< 1.1									<del> </del>
Pyrene	μg/L	1,000*	3,100	< 0.050	< 10	< 10	< 10	< 10	< 0.19	< 0.20	< 0.20	< 0.21									
Inorganic Constituents				1	1			1	1			1						1			
Antimony	μg/L	6.3	40	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20									<del></del>
Arsenic	μg/L	50*	50*	< 50	< 50	< 50	< 50	< 50	< 20	< 20	< 20	< 20	4 000	4 000	0.700	4.000					
Barium	μg/L	2,000	7,200	3,790	3,500	3,960	3,700	3,150	3,800	3,700	4,100	3,600	4,200	4,000	3,700	4,000	3,500		-		3,900
Beryllium	μg/L	31	200	< 10	< 10	< 10	< 10	< 10	< 4.0	5.7	< 4.0	5.3					-		-		
Characitica	μg/L	7.8	51	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0									
Chromium	μg/L	100	310	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10				< 10
Copper	μg/L	630 15*	4,100 15*	< 10 < 10	< 10	< 10 < 10	< 10	< 10 < 10	< 20 < 10	< 20	< 20 < 10	< 20	< 20 < 10	< 20 < 10	< 20 < 10	< 20	< 20				< 20
Lead Nickel	μg/L μg/L	100	2,000	< 10	< 10 < 20	< 10	< 10 < 20	< 10	< 10	< 10 < 40	< 40	< 10 < 40	< 10	< 10	< 40	< 10 < 40	< 10 < 40				< 10 < 40
Nickei Zinc	μg/L μg/L	4,700	31,000	< 20	< 20 <b>29.2</b>	< 20.0	< 20 <b>29.3</b>	< 20.0	< 40	< 40 <b>25</b>	< 40	< 40	< 40		< 40	< 40	< 40				< 40
Mercury	μg/L μg/L	2*	2*	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20			-						
Total Cyanide	μg/L μg/L	310	2.000	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10				< 10			<del></del>	< 10
Notes:	L μθ/∟	510	2,300	\ 10	\ 10	\ 10	\ 10	× 10	\ 10	\ 10	\ 10	\ 10	\ 10				\ 10				_ \ 10
NUICS.																					

Notes:

Analyte was detected above laboratory detection limit

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Standard Units

SU - Standard Units

µS/cm - microsiemens per centimeter

µg/L - micrograms per liter

mg/L - milligrams per liter

mV - millivolts

NTU - nephelometric turbidity units

N/A - RRS are not applicable to this parameter

ERM

- Not Analyzed

HF - Holding time of 15 minutes was exceeded

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

### Appendix F Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017 Atlanta Gas Light Company

Former Manufactured Gas Plant Site Macon, Georgia

	-																1011 A-B								
Parameter	Units	Type 2 RRS	Type 4 RRS	00/00/47	00/00/40	MW-26D	02/04/05	02/05/04	00/04/47	08/23/16	04/05/40	08/11/15	04/20/45	02/04/05	40/45/04	40/04/04	MW-27D	02/04/04	12/17/03	00/00/02	06/12/03	02/42/02	40/44/00	00/40/02	44/00/04
Field Commitmeter Com	l'in Demonstra		KKS	02/22/17	08/23/16	04/11/16	03/01/05	03/05/04	02/21/17	08/23/16	04/05/16	08/11/15	04/30/15	03/01/05	12/15/04	10/04/04	06/10/04	03/04/04	12/17/03	09/09/03	06/12/03	03/12/03	12/11/02	09/19/02	11/09/01
Field Groundwater Qual			NI/A	40.00	14.70	44.00	40.05	44.04	C 4C	0.00	0.50	0.00	7.40	0.00	7.40	0.00	0.00	0.24	0.40	F 20	C 25	0.00	0.00	0.07	0.04
PH Canadia Condustance	SU	N/A N/A	N/A	10.22	11.70	11.89	12.05	11.81	6.46	6.26	6.52	6.80	7.16	6.32	7.18	6.06	6.28	6.34	6.12	5.29	6.35	6.32	6.09	6.27	9.24
Specific Conductance	μm/cm		N/A	234.20	1903.9	2,170	2,066	2,362	215.9	209.8	200	254	266	182	206	213	242	209	335	212	202	222	190	219	230
Temperature	°Celsius	N/A	N/A	21.46	25.40	16.6	17.67	18.69	19.5	22.00	19.73	25.40	18.9	18.96	20.18	21.34	24.06	21.77	20.85	23.16	21	20.12	20.44	21.07	19.98
Dissolved Oxygen	mg/L	N/A	N/A	0.26	0.40	2.22	1.38	1.22	0.11	1.00	0.42	1.29	3.7	1.29	0.21	0.05	1.78	0.45	0.48	0.32	0.38	0.12	0.18	0.13	0.29
ORP	mV	N/A	N/A	35.90	-70.6	13.3	-444.4	8.6	-13.1	38.6	-3.0	-14.5	-14.8	-13.1	-130.6	-19.6	-36.8	44.0	-101.4	-74.3	-59	-29.6	2.3	-31.9	-14.5
Turbidity	NTU	N/A	N/A	8.01	1.6	4.36	2.95	1.41	5.26	4.2	8.77	1.03	2.97	0.72	0.53	0.92	1.80	2.72	1.81	3.27	0.0	1.2	0.0	0.0	2.06
Laboratory Results - Na					ı	r		ı		1	r	1	1												
Nitrogen, Ammonia (as N	mg/L	N/A	N/A				0.25						-	< 0.20	0.23	0.26	0.29	< 0.20	< 0.20	0.39	0.327	0.336	0.260	< 0.200	< 0.200
Nitrogen, Nitrate (as N)	mg/L	N/A	N/A				< 0.0500					-	-	< 0.500	< 0.0500	< 0.0500	< 0.5	< 0.250	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.050	0.561	0.091
Sulfate	mg/L	N/A	N/A				5.88					-		3.25	3.49	5.24	3.13	4.05	4.21	3.62	3.06	3.43	3.18	3.78	4.12
Sulfide	mg/L	N/A	N/A				1.5							< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Dissolved Manganese	mg/L	N/A	N/A	-			< 0.0050		-			-		1.40	1.41	1.48	1.5	1.48	1.52	1.51	1.49	1.51	1.47	1.4	1.35
Total Manganese	mg/L	N/A	N/A				0.0351	0.0067				-		1.44	1.44	1.48	1.5	1.5	1.48	1.53	1.49	1.52	1.55	1.32	1.26
Ferrous Iron	mg/L	N/A	N/A				< 0.1							3.0	3.1	3.0	5.4	3.5	1.4	< 2.5	2.4	2.6	1.88	2.21	1.66
Total Iron	mg/L	N/A	N/A				0.126	< 0.1				-		3.04	2.95	2.73	2.67	2.87	2.37	2.86	2.31	2.5	2.92	2.07	1.97
Carbon Dioxide	mg/L	N/A	N/A				< 0.60					-		62	67	61	68	72	65	59	72	75	67	68	42
Methane	mg/L	N/A	N/A				140					-		220	270	300	120	3.8	5.6	0.66	220	280	0.75	96	33
Dissolved Nitrogen	mg/L	N/A	N/A				22						-	26	31	24	20	31	26	20	23	25	19	25	18
Dissolved Oxygen	mg/L	N/A	N/A				3.6							1.7	3.0	1.4	1.0	1.6	1.5	2.4	1.8	1.2	6.8	7.7	1.9
Laboratory Results - Or		ents																							
Volatile Organic Compour	nds			•					•																
Benzene	μg/L	5.0*	9	<5.0	<5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Disulfide	μg/L	329	1700	<5.0	<5.0	< 5.0			<5.0	<5.0	< 5.0	< 5.0	< 5.0												
Ethylbenzene	μg/L	700*	2,300	<5.0	<5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	μg/L	1,000*	1,100	<5.0	<5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Naphthalene	μg/L	31,000	200,000	<5.0	<5.0	< 5.0	< 5.0	< 5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Semivolatile Organic Com	npounds							1															1		
Acenaphthene	μg/L	2,000*	6,100	< 0.50	<0.50		< 10	< 10	<0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Acenaphthylene	μg/L	470	3,100	<1.0	<1.0		< 10	< 10	<1.0	<1.0	< 1.0	< 1.0	< 1.0	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Anthracene	μg/L	4,700	31, 000	< 0.050	< 0.050		< 10	< 10	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Benzo[a]anthracene	μg/L	1.17	3.92	<0.050	<0.050				< 0.050	< 0.050	< 0.050	< 0.050	< 0.050												
Benzo[a]pyrene	μg/L	0.2*	0.39	<0.050	< 0.050				< 0.050	< 0.050	< 0.050	< 0.050	< 0.050												
Benzo[b]fluoranthene	μg/L	1.17	3.92	<0.10	<0.10				<0.10	<0.10	< 0.10	< 0.10	< 0.10												
Benzo[g,h,i]perylene	μg/L	10	10	<0.10	<0.10				<0.10	<0.10	< 0.10	< 0.10	< 0.10												
Benzo[k]fluoranthene	μg/L	11.7	39.2	<0.050	<0.050				< 0.050	< 0.050	< 0.050	< 0.050	< 0.050												
Chrysene	μg/L	117	392	< 0.050	< 0.050				< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	-											
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	<0.10				<0.10	<0.10	< 0.10	< 0.10	< 0.10												
2,4-Dimethylphenol	μg/L	700*	700*	<10	<10		< 10	< 10	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Fluoranthene	μg/L	1,000*	4,100	<0.10	<0.10		< 10	< 10	<0.10	<0.10	< 0.10	< 0.10	< 0.10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Fluorene	μg/L	1,000*	4,100	<0.10	<0.10		< 10	< 10	<0.10	<0.10	< 0.10	< 0.10	< 0.10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	<0.050	<0.050				< 0.050	< 0.050	< 0.050	< 0.050	< 0.050												
2-Methylphenol	μg/L	780	5,100	<10	<10		< 10	< 10	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3 & 4 Methylphenol	μg/L	78	510	<10	<10		< 10	< 10	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Naphthalene	μg/L	20*	20*	< 0.50	< 0.50	< 5.0	< 10	< 10	<0.50	<0.50	< 0.50	< 0.50	< 0.50	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Phenanthrene	μg/L	470	3,100	<0.050	<0.050		< 10	< 10	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Phenol	μg/L	9,390	61,000	<10	<10		< 10	< 10	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Pyrene	μg/L	1,000*	3,100	< 0.050	<0.050		< 10	< 10	< 0.050	0.17	< 0.050	< 0.050	< 0.050	< 10	< 10	< 10	< 10	< 10	< 10	12	< 10	< 10	< 10	< 10	< 10
Laboratory Results - Inc	organic Constit	tuents																							
Antimony	μg/L	6.3	40		< 20	< 20	< 40	< 40		< 20	< 20	< 20	< 20	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40
Arsenic	μg/L	50*	50*		< 50	< 50	< 50	< 50		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Barium	μg/L	2,000	7,200	-	1,340	1,740	1,450	1,720	-	934	961	813	813	869	862	878	865	954	904	921	600	910	968	825	859
Beryllium	μg/L	31	200		< 10	< 10				< 10	< 10	< 10	< 10												
Cadmium	μg/L	7.8	51		< 50	< 50				< 50	< 50	< 50	< 50												
Chromium	μg/L	100	310		< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Copper	μg/L	630	4,100		<10	12.9	< 10	< 10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Lead	μg/L	15*	15*		< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Nickel	μg/L	100	2,000		< 20	< 20	< 20	< 20		37.5	23	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Zinc	μg/L	4,700	31,000		< 20	< 20	< 20	< 20		< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	22.7	< 20	< 20	< 20	< 20	22	< 20	< 20
Mercury	μg/L	2*	2*		< 0.20	< 0.20	< 0.5	< 0.5		< 0.20	< 0.20	< 0.20	<0.20	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Total Cyanide	μg/L	310	2,000		< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Notes:				•					•															•	

Notes:

Analyte was detected above laboratory detection limit

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical
ft AMSL - feet Above Mean Sea Level
RRS - Risk Reduction Standard

RRS - Risk Reduction Standard
SU- Standard Units
μS/cm - microsiemens per centimeter
μg/L - micrograms per liter
mg/L - milligrams per liter
m/V - millivolts
NTU - nephelometric turbidity units
N/A - RRS are not applicable to this parameter

ERM

- Not Analyzed
HF - Holding time of 15 minutes was exceeded
Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

### Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017 Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

Field Groundwater Quality Pa bH Specific Conductance		RRS	RRS	04/30/15	03/01/05	12/15/04	10/04/04	06/10/04	03/04/04	MW-27DD 12/17/03	09/10/03	06/12/03	03/13/03	12/12/02	09/19/02	11/9/20
Specific Conductance	arameters		•	•												•
	SU	N/A	N/A	7.24	7.44	7.22	7.48	7.25	9.74	7.06	6.91	9.53	7.22	7.67	10.59	7.62
	μm/cm	N/A	N/A	602	507	515	575	604	481	864	465	525	564	516	663	548
Temperature	°Celsius	N/A	N/A	19.02	19.59	20.32	21.87	21.58	20.20	20.53	21.42	22.68	20.19	19.78	21.36	21.9
Dissolved Oxygen	mg/L	N/A	N/A	0.52	1.39	0.39	0.21	0.12	0.62	0.35	0.83	0.09	0.18	0.22	0.35	1.70
ORP Furbidity	mV NTU	N/A N/A	N/A N/A	-82.7	-144.2 2.83	-220.5	-168.5	-141.5 4.30	-9.1	-207.3 0.00	-190.2	-204.5	-159.1	-215.3	-40.6 8.50	-122
Furbidity			IN/A	16.9	2.83	3.0	5.8	4.30	1.18	0.00	6.81	0.5	49	1.40	8.50	4.6
_aboratory Results - Natural Nitrogen, Ammonia (as N)	7	N/A	N/A		0.22	0.32	0.37	0.48	1.01	0.23	0.47	0.699	0.379	0.345	0.315	0.34
Nitrogen, Nitrate (as N)	mg/L mg/L	N/A	N/A		< 0.500	< 0.0500	< 0.0500	< 0.5	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.0500	< 0.05
Sulfate	mg/L	N/A	N/A		41.1	1.21	38.9	28.5	3.40	37.2	35.3	28.6	38.6	43.0	46.2	37.
Sulfide	mg/L	N/A	N/A		1.5	< 1.0	< 1.0	< 1.0	1.1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.00	< 1.00	< 1.
Dissolved Manganese	mg/L	N/A	N/A		0.862	0.826	0.915	0.882	0.0166	0.932	0.687	0.294	0.901	0.908	0.856	0.80
Total Manganese	mg/L	N/A	N/A		0.853	0.857	0.913	0.905	0.0537	0.950	0.673	0.298	0.971	0.954	0.811	0.79
errous Iron	mg/L	N/A	N/A		3.4	4.1	4.5	6.3	< 0.1	2.9	1.7	0.1	4.56	4.08	2.67	2.0
Total Iron	mg/L	N/A	N/A		3.55	4.63	3.80	3.72	< 0.1	3.73	2.10	0.209	4.96	3.96	3.98	2.2
Carbon Dioxide	mg/L	N/A	N/A		8.9	12	13	11	< 0.6	15	3.9	< 0.60	14	14	0.60	6.0
Methane	mg/L	N/A	N/A		5.3	5.7	4.1	6.6	3.4	5.8	8.8	5.3	5.2	4.6	2.5	2.9
Dissolved Nitrogen	mg/L	N/A	N/A		24	19	18	20	22	20	22	19	23	18	20	17
Dissolved Oxygen	mg/L	N/A	N/A		3.9	1.0	0.91	0.83	2.0	1.2	3.0	1.0	1.1	7.3	7.2	14
aboratory Results - Organic	Constituents															
/olatile Organic Compounds		= 0:														
Benzene Benzene	µg/L	5.0*	9	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5
Carbon Disulfide	µg/L	329	1700	< 5.0												
Ethylbenzene Folueno	µg/L	700* 1,000*	2,300 1,100	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0	< 5.0	< 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0	< 5.0 < 5.0	< 5.0	< 5 < 5
Toluene Naphthalene	μg/L μg/L	31,000	200,000	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5						
Semivolatile Organic Compoun		31,000	200,000	\ 3.0	\ 3.0	\ 3.0	\ 3.0	\ 3.0	\ J.0	∖ 3.0	<b>∖</b> J.0	<b>₹ 3.0</b>	\ 3.0	< 3.0	\ 3.0	< 5
Acenaphthene	μg/L	2,000*	6,100	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1
Acenaphthylene	μg/L	470	3,100	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1
Anthracene	μg/L	4,700	31, 000	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1
Benzo[a]anthracene	μg/L	1.17	3.92	< 0.050												-
Benzo[a]pyrene	µg/L	0.2*	0.39	< 0.050												
Benzo[b]fluoranthene	μg/L	1.17	3.92	< 0.10												-
Benzo[g,h,i]perylene	μg/L	10	10	< 10												
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 10												-
Chrysene	μg/L	117	392	< 10												
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	< 0.10												
2,4-Dimethylphenol	μg/L	700*	700*	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1
luoranthene	μg/L	1,000*	4,100	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1
luorene	μg/L	1,000*	4,100	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1
ndeno[1,2,3-cd]pyrene	µg/L	1.17	3.92	< 0.050												-
2-Methylphenol	µg/L	780 78	5,100 510	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 1						
3 & 4 Methylphenol Naphthalene	μg/L μg/L	20*	20*	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< ′
Phenanthrene	μg/L	470	3,100	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< '
Phenol	μg/L	9,390	61,000	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1
Pyrene	μg/L	1,000*	3,100	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1
aboratory Results - Inorgan			0,100	V 10	V 10	V 10	V 10	V 10	V 10	_ `						
Antimony	µg/L	6.3	40	< 20	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 4
Arsenic	μg/L	50*	50*	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 5
Barium	μg/L	2,000	7,200	544	423	447	424	421	205	429	337	278	424	407	342	27
Beryllium	μg/L	31	200	< 10												
Cadmium	μg/L	7.8	51	< 5.0												_
Chromium	μg/L	100	310	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1
Copper	μg/L	630	4,100	< 10	< 10	< 10	< 10	< 10	26	< 10	< 10	< 10	< 10	< 10	< 10	< '
.ead	μg/L	15*	15*	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1
Nickel	μg/L	100	2,000	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 2
Zinc	μg/L	4,700	31,000	< 20	< 20	< 20	< 20	< 20	39.2	< 20	< 20	< 20	< 20	< 20	< 20	< 2
Mercury	μg/L	2*	2*	< 0.20	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0
Total Cyanide	μg/L	310	2,000	64	25	18	55	< 10	< 10	55	< 10	< 10	39	< 10	39	3

### Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017 Atlanta Gas Light Company Former Manufactured Gas Plant Site

ıcı	manufactured das i
	Macon, Georgia

Parameter	Units	Type 2	Type 4						MW	-108D					
		RRS	RRS	2/22/2017	4/8/2016	2/17/2015	8/5/2014	2/17/2014	02/06/13	02/07/12	02/23/11	02/23/10	08/12/09	03/02/05	12/16/04
Field Groundwater Quality I		•							1	7	7	•	•	•	
pH	SU	N/A	N/A	7.70	7.04	6.96	6.92	7.01	6.73	5.22	6.47	6.51	8.89	8.21	10.15
Specific Conductance	μm/cm	N/A	N/A	151.60	200	140	158	151	151	426	115	111	141	169	246
Temperature	°Celsius	N/A	N/A	22.45	20.92	19.07	24.23	20.99	21.85	19.76	20.30	19.35	25.18	21.11	22.59
Dissolved Oxygen	mg/L	N/A	N/A	0.30	0.54	2.00	1.68	2.16	0.65	0.57	2.19	3.67	5.94	0.87	0.58
ORP	mV	N/A	N/A	-149.30	-66.4	86.3	27.8	76.1	-76.5	78.1	150.10	155.70	32.6	-191.4	-141.1
Turbidity	NTU	N/A	N/A	0.90	13.9	2.11	0.82	0.43	0.31	1.29	3.42	0.62	0	1.64	6.41
Laboratory Results - Natura	al Attenuation Pa	arameters													
Nitrogen, Ammonia (as N)	mg/L	N/A	N/A			-								< 0.20	< 0.20
Nitrogen, Nitrate (as N)	mg/L	N/A	N/A					0.43	< 0.050	4.2	< 0.050	< 0.050	< 0.050	< 0.0500	< 0.0500
Sulfate	mg/L	N/A	N/A					2.6	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	2.73	4.31
Sulfide	mg/L	N/A	N/A					< 1.0	< 1.0	< 1.0	1.60	< 1.0	< 1.0	< 1.0	< 1.0
Dissolved Manganese	mg/L	N/A	N/A						-					0.198	0.0439
Total Manganese	mg/L	N/A	N/A					< 0.100	-					0.193	0.0984
Ferrous Iron	mg/L	N/A	N/A					0.139	< 0.10 HF	< 0.10 HF	< 0.010	< 0.010	< 0.010	0.3	0.1
Total Iron	mg/L	N/A	N/A					< 5.0	0.29	< 0.10	0.22	< 0.010	0.330	0.360	0.446
Carbon Dioxide	mg/L	N/A	N/A					< 1.0	7.2	1.6	0.18	0.16	< 0.050	0.71	< 0.60
Methane	mg/L	N/A	N/A					< 4	70	< 0.58	<0.58	<0.19	4.1	69	240
Dissolved Nitrogen	mg/L	N/A	N/A					22		5.6	4.7	4.0	4.8	18	17
Dissolved Oxygen	mg/L	N/A	N/A					12	7.0	1.8	1.6	1.4	1.7	1.2	1.5
Laboratory Results - Organ		IN/A	IN//A					12	7.0	1.0	1.0	1.4	1.7	1.2	1.5
	ic constituents														
Volatile Organic Compounds			_						4.0						
Benzene	μg/L	5*	9	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Carbon Disulfide	μg/L	329	1,700	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0						
Ethylbenzene	μg/L	700*	2,300	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	μg/L	1,000*	1,100	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Xylenes	μg/L	31,000	200,000	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Semivolatile Organic Compou	unds														
Acenaphthene	μg/L	2,000*	6,100	< 0.50	< 0.50	< 10	< 10	< 10	< 0.25					< 10	< 10
Acenaphthylene	μg/L	470	3,100	<1.0	< 1.0	< 10	< 10	< 10	< 0.25					< 10	< 10
Anthracene	μg/L	4,700	31,000	< 0.050	< 0.050	< 10	< 10	< 10	< 0.25					< 10	< 10
Benzo[a]anthracene	μg/L	1.17	3.92	0.085	< 0.050	< 0.050	< 0.050	< 0.050	< 0.25						
Benzo[a]pyrene	μg/L	0.2*	0.39	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.25						
Benzo[b]fluoranthene	μg/L	1.17	3.92	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.25						
Benzo[g,h,i]perylene	μg/L	10	10	< 0.10	< 0.10	< 10	< 10	< 10	< 0.25						
Benzo[k]fluoranthene	μg/L	11.7	39.2	0.052	< 0.050	< 10	< 10	< 10	< 0.25						
Chrysene	µg/L	117	392	0.081	< 0.050	< 10	< 10	< 10	< 0.25						
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.25						
2,4-Dimehylphenol	µg/L	700*	700*	<10	< 10	< 10	< 10	< 10	< 2.5					< 10	< 10
Fluoranthene	µg/L	1.000*	4.100	<0.10	< 0.10	< 10	< 10	< 10	< 0.25					< 10	< 10
Fluorene	µg/L	1,000*	4,100	<0.10	< 0.10	< 10	< 10	< 10	< 0.25					< 10	< 10
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.25						
2-Methylphenol	μg/L	780	5.100	<10	< 10	< 10	< 10	< 10	< 2.5					< 10	< 10
3 & 4 Methylphenol	μg/L	78	510	<10	< 10	< 10	< 10	< 10	< 2.5					< 10	< 10
Naphthalene	μg/L	20*	20*	<0.50	< 0.50	< 10	< 10	< 10	< 0.25	< 5.0	< 5.0	<9.9	<9.4	< 10	< 10
Phenanthrene	μg/L	470	3,100	<0.050	< 0.050	< 10	< 10	< 10	< 0.25					< 10	< 10
Phenol	μg/L	9.390	61,000	<10	< 10	< 10	< 10	< 10	< 1.2					< 10	< 10
Pyrene	μg/L	1,000*	3,100	<0.050	< 0.050	< 10	< 10	< 10	< 0.25					< 10	< 10
Inorganic Constituents	ra/-	.,500	5,100	<b>~0.000</b>	₹ 0.000	\ 10	× 10	\ 10	~ U.ZU					, 10	_ 10
Antimony	μg/L	6.3	40	ı	< 20	< 20	< 20	< 20	< 20	I	ı			< 40	< 40
Arsenic	μg/L μg/L	50*	50*		< 50	< 20 < 50	< 20 < 50	< 50	< 20					< 40 < 50	< 40 < 50
Barium		2,000	7,200												
	µg/L	31	200		783	631	632	465	600	4,200	540 	470	620	513	416
Beryllium	µg/L	7.8			< 10	< 10 <b>6.6</b>	< 10 13.1	< 10	< 4.0						
Cadmium	μg/L		51		< 5			9.3	< 5.0						
Chromium	µg/L	100	310		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Copper	μg/L	630	4,100		< 10	< 10	< 10	< 10	< 20	< 20	< 20	< 20	< 20	< 10	< 10
Lead	μg/L	15*	15*		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Nickel	μg/L	100	2,000		44	< 20	< 20	< 20	< 40	< 40	< 40	< 40	< 40	< 20	< 20
	/1	4.700	31,000		< 20	43.3	50.1	113	< 20					< 20	< 20
Zinc	μg/L														
Zinc Mercury Total Cyanide	μg/L μg/L μg/L	2* 310	2* 2,000		< 0.20 < 10	< 0.20 < 10	< 0.20	< 0.20 < 10	< 0.20 < 10	 < 10	 < 10	 < 10	 < 10	< 0.5 < 10	< 0.5

Analyte was detected above laboratory detection limit

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level
RRS - Risk Reduction Standard
SU - Standard Units

SU - Standard Units
μS/cm - microsiemens per centimeter
μg/L - micrograms per liter
mg/L - milligrams per liter
mV - millivolts
NTU - nephelometric turbidity units
NTU - nephelometric turbidity units
N/A - RRS are not applicable to this parameter
-- Not Analyzed
HF - Holding time of 15 minutes was exceeded
Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

# Appendix F Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017 Atlanta Gas Light Company

ormer	Manufactured Gas	s Plan
	Macon, Georgia	à

Parameter Field Groundwater Quality F	Units	Type 2	Type 4							•		MW-110D								
		RRS	RRS	02/23/17	DUP-4	08/24/16	8/16 DUP	04/07/16	4/16 DUP	08/13/15	08/15 DUP	02/16/15	08/06/14	02/20/14	08/07/13	08/13 DUP	02/08/13	02/13 DUP	11/07/12	11/12 DU
)H		I NI/A	I NI/A	6	30		.22		43	6	14	C 40	0.04	6.28		5.07		27	6.	20
Specific Conductance	SU μm/cm	N/A N/A	N/A N/A		8.6		00	50.			65	6.18 495	6.21 533	495		192		03	5.	
Temperature	°Celsius	N/A	N/A		.35		5.20		.39	26		17.20	27.75	19.80		5.46		.28	23	
Dissolved Oxygen	mg/L	N/A	N/A		19		.44		19		38	1.68	0.52	0.67		).71		38	0	
ORP	mV	N/A	N/A		3.50		9.1	-60		-14		-145.9	-52.6	-34.6		42.9		0.4	-11	
Turbidity	NTU	N/A	N/A	5.	95	9	9.4	8.	30	2.	42	9.26	2.51	0.66	0	).28	9	.8	0.	95
Laboratory Results - Natura		1																		
Nitrogen, Ammonia (as N)	mg/L	N/A	N/A							-										
Nitrogen, Nitrate (as N) Sulfate	mg/L	N/A N/A	N/A N/A									< 0.25 1.1		< 0.25 < 1.0			0.34 * 7.0	< 0.050 < 5.0		
Sulfide	mg/L mg/L	N/A	N/A			-				-		< 1.00		< 1.0			< 1.0	< 1.0		
Dissolved Manganese	mg/L	N/A	N/A			-				-										
Total Manganese	mg/L	N/A	N/A											5.00						
Ferrous Iron	mg/L	N/A	N/A							-		5.60		5.89			4.6 HF	4.8 HF		
Total Iron	mg/L	N/A	N/A									6.61		140			6.8	4.4		
Carbon Dioxide	mg/L	N/A	N/A							-		150		< 1.0			120	66		
Methane	mg/L	N/A N/A	N/A N/A			-				-		960 21		770 17			620	520		
Dissolved Nitrogen Dissolved Oxygen	mg/L mg/L	N/A	N/A									3.9		3.0			2.8	5.7		
Laboratory Results - Organi			IN/A							-		3.3		3.0			2.0	3.1		
Volatile Organic Compounds																				
Benzene	μg/L	5*	9	70	63	86	88	96	94	120	120	340	480	480	580	620	150	150	430	280
Carbon Disulfide	μg/L	329	1,700	<5.0	<5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 40	< 40	< 40	< 40
Ethylbenzene	μg/L	700*	2,300	150	160	280	240	290	280	420	450	560	620	540	390	460	310	320	550	440
Toluene	μg/L	1,000*	1,100	<5.0	<5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.3	5.1	5.2	5.7	< 20	< 20	< 20	< 20
Total Xylenes Semivolatile Organic Compou	µg/L	31,000	200,000	5.7	6.0	5.2	<5.0	7.0	6.8	11	11	47	60	48	64	45	< 40	< 40	< 40	< 40
Acenaphthene	unas µg/L	2,000*	6,100	46	55	80	80	76	60	77	70	97	120	81	100	96	81	17	89	99
Acenaphthylene	μg/L μg/L	470	3,100	1.9	1.8	2.7	3.0	2.8	< 1.0	3.0	2.4	< 10	< 10	< 10	< 10	< 10	3.9	1.9	4.5	4.4
Anthracene	μg/L	4,700	31,000	6.2	5.5	8.3	8.9	7.1	6.3	8.1	5.9	< 10	< 10	< 10	< 10	< 10	6.4	0.34	6.8	6.7
Benzo[a]anthracene	μg/L	1.17	3.92	0.20	0.17	0.30	0.31	0.20	0.15	0.32	0.23	0.20	0.40	0.18	0.27	0.3	< 1.9	< 1.9	< 2.0	< 0.20
Benzo[a]pyrene	μg/L	0.2*	0.39	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20	< 0.20	< 1.9	< 1.9	< 2.0	< 0.20
Benzo[b]fluoranthene	μg/L	1.17	3.92	<0.10	<0.10	<0.10	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.20	< 1.9	< 1.9	< 2.0	< 0.20
Benzo[g,h,i]perylene	μg/L	10	10	<0.10	<0.10	<0.10	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 10	< 10	< 10	< 10	< 10	< 1.9	< 1.9	< 2.0	< 0.20
Benzo[k]fluoranthene	μg/L	11.7	39.2	<0.050	<0.050	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 10	< 10	< 10	< 10	< 10	< 1.9	< 1.9	< 2.0	< 0.20
Chrysene Dibenz(a,h)anthracene	μg/L μg/L	117 0.3*	392 0.39	<b>0.16</b> <0.10	<b>0.14</b> <0.10	<b>0.25</b> <0.10	<b>0.27</b> <0.10	<b>0.18</b> < 0.10	<b>0.13</b> < 0.10	<b>0.23</b> < 0.10	<b>0.17</b> < 0.10	< 10 < 0.10	< 10 < 0.10	< 10 < 0.10	< 10 < 0.20	< 10 < 0.20	< 1.9 < 1.9	< 1.9 < 1.9	< 2.0 < 2.0	< 0.20
2,4-Dimehylphenol	μg/L	700*	700*	<10	<10	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 19	< 19	< 20	< 2.0
Fluoranthene	μg/L	1,000*	4,100	4.5	4.1	6.3	6.6	4.4	4.0	6.5	4.8	< 10	< 10	< 10	< 10	< 10	5.3	2.1	5.2	5.5
Fluorene	μg/L	1,000*	4,100	15	19	28	26	21	19	19	16	33	40	25	32	31	25	14	28	29
ndeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20	< 0.20	< 1.9	< 1.9	< 2.0	< 0.20
2-Methylphenol	µg/L	780	5,100	<10	<10	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 19	< 19	< 20	< 2.0
3 & 4 Methylphenol Naphthalene	μg/L	78 20*	510 20*	<10 <b>760</b>	<10 1.100	<10 <b>3,100</b>	<10 <b>3,100</b>	< 10 1,600	< 10 1300 E	< 10 <b>2,200</b>	< 10 <b>1,500</b>	< 10 <b>3,400</b>	< 10 4,400	< 10 1.100	< 10 <b>4.400</b>	< 10 <b>4,200</b>	< 19 <b>2,300</b>	< 19 <b>15</b>	< 20 <b>5,000</b>	< 2.0 1.400
Phenanthrene	μg/L μg/L	470	3,100	26	32	50	48	40	33	43	37	53	69	40	59	60	42	42	49	58
Phenol	μg/L	9,390	61,000	<10	<10	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 9.7	< 9.7	< 10	2.4
Pyrene	μg/L	1,000*	3,100	5.6	5.1	7.9	8.2	5.9	5.2	8.3	6.1	< 10	< 10	< 10	< 10	< 10	8.1	2.2	6.4	6.1
norganic Constituents															•					
Antimony	μg/L	6.3	40			< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Arsenic	μg/L	50*	50*			< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 20	< 20	< 20	< 20
Barium	μg/L	2,000	7,200			3510	2900	2510	2490	2800	3780	4007	4850	4770	5100	5210	3200	800	5000	4800
Beryllium Padmium	μg/L ug/l	31 7.8	200 51			< 10 < 5.0	< 10 < 5.0	< 10 < 5.0	< 10 < 5.0	< 10 < 5.0	< 10 < 5.0	< 10 < 5.0	< 10 < 5.0	< 10 < 5.0	< 10 < 5.0	< 10 < 5.0	< 4.0 < 5.0	< 4.0 < 5.0	< 4.0 < 5.0	< 4.0 < 5.0
Cadmium Chromium	μg/L μg/L	100	310			< 5.0 < 10	< 5.0	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10	< 5.0 < 10
Copper	μg/L	630	4,100			< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 20	< 20	< 20	< 20
_ead	μg/L	15*	15*			< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
lial-al	μg/L	100	2,000			122	120	177	181	104	103	107	110	125	138	140	160	< 40	160	160
Nickel	μg/L	4,700	31,000			< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Zinc	μg/L	2* 310	2*			< 0.20 14	< 0.20	< 0.20	< 0.20 <b>0.020</b>	< 0.20 <b>0.015</b>	< 0.20 <b>0.012</b>	< 0.20 < 0.010	< 0.20 <b>0.024</b>	< 0.20 <b>0.021</b>	< 0.20 18	< 0.20	< 0.20	< 0.20	< 0.20 <b>24</b>	< 0.20 <b>25</b>
	μg/L		2,000					< 10.0								18	20	32		

HF - Holding time of 15 minutes was exceeded

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

Parameter Field Groundwater Quality F pH Specific Conductance	Units	Type 2	Type 4																						
pH			RRS	00/00/46	05/47/40	00/45/40	00/40 5115	44/47/44	00/40/44	05/05/44	00/04/44	44/40/40	00/40/40	MW-110D	· /	00/40 51/5	00/40/00	00/07/00	02/02/22	40/00/05	00/00/05	00/00/05	00/05 5115	40/40/07	00/00/0:
pH	Parameters	RRS	KKS	08/09/12	05/17/12	02/15/12	02/12 DUP	11/17/11	08/10/11	05/05/11	02/21/11	11/10/10	08/10/10	05/11/10	02/24/10	U2/10 DUP	08/12/09	06/07/06	03/09/06	12/22/05	09/30/05	03/02/05	03/05 DUP	12/16/04	09/30/04
Specific Conductance	SU	N/A	N/A	5.62	6.57	6.	2 I	6.32	6.31	6.17	6.23	6.07	6.12	5.86	6	.13	6.05	6.13	6.16	6.38	6.17	6	24	5.62	6.10
Opcomo Otriductarios	μm/cm	N/A	N/A	548	527	48		547	577	467	489	504	508	506		32	507	521	475	449	524		23	509	472
Temperature	°Celsius	N/A	N/A	26.84	24.06	20.		21.39	30.14	19.43	21.38	24.66	26.84	23.54		6.26	26.32	24.43	21.19	20.93	25.21		1.1	22.39	24.79
Dissolved Oxygen	mg/L	N/A	N/A	0.17	0.83	2.1		0.48	0.25	0.86	0.53	0.11	19.74	0.72		.67	3.46	0.24	0.28	0.61	0.34		42	0.16	0.04
ORP	mV	N/A	N/A	-47.8	-61.2	-65		-59	-81.8	-69.0	-74.4	-108.6	-91.1	-45.2		02.3	-131.6	-96.1	-87.0	-55.6	-99.3		2.8	-150.9	-234.3
Turbidity	NTU	N/A	N/A	7.21	4.63	3.9	93	4.6	29.0	8.59	7.58	0.24	2.42	21.8	0.	.61	3.19	1.02	0.90	4.29	2.10	1.	62	5.32	2.98
Laboratory Results - Natura																									
Nitrogen, Ammonia (as N)	mg/L	N/A	N/A																			< 0.20	< 0.20	< 0.20	< 0.20
Nitrogen, Nitrate (as N)	mg/L	N/A N/A	N/A N/A			< 0.050	< 0.050				< 0.050				< 0.050	< 0.050	0.19					< 0.500 <b>2.38</b>	< 0.500 < 1.00	< 0.0500 1.97	< 0.0500 <b>4.95</b>
Sulfate Sulfide	mg/L mg/L	N/A	N/A			< 5.0 1.0	< 5.0 < 1.0				< 5.0 < 1.0				< 5.0 < 1.0	< 5.0 < 1.0	< 5.0 < 1.0					1.3	< 1.00	< 1.0	< 1.0
Dissolved Manganese	mg/L	N/A	N/A	<del></del>		1.0	< 1.0				< 1.0 					< 1.0	< 1.0 					0.760	0.762	0.584	1.36
Total Manganese	mg/L	N/A	N/A																			0.754	0.748	0.635	1.36
Ferrous Iron	mg/L	N/A	N/A			5.3 HF	4.9 HF				1.0				3	2.8	1.7					3.8	3.7	3.8	5.3
Total Iron	mg/L	N/A	N/A			7.3	7.5				6.7	1		1	4.1	4.3	3.6	1				4.09	4.07	3.98	5.51
Carbon Dioxide	mg/L	N/A	N/A	-		2.3	2.3				1.6			-	1.8	1.8	1.5					140	150	170	160
Methane	mg/L	N/A	N/A			480	480				720			-	720	780	230					1,500	1,700	2700	1,500
Dissolved Nitrogen	mg/L	N/A	N/A			4.8	5.5				4.1			-	4	4.1	4.1					17	18	16	16
Dissolved Oxygen	mg/L	N/A	N/A			1.5	1.6				1.4				1.2	1.3	1.4					3.4	2.8	0.88	0.86
Laboratory Results - Organi	ic Constituents																								
Volatile Organic Compounds Benzene	110/1	5*	9	380	400	< 250	< 250	<250	370	290	310	430	450	610	620	580	< 25	790	1.100	1.200	1.900	1.900	1.900	1.600	950
Carbon Disulfide	μg/L μg/L	329	1,700	< 40	< 40	< 250	< 250	<250	370	290	310	430	450	610	620	380	< 25	790	1,100	1,200	1,900	1,900	1,900	1,000	950
Ethylbenzene	μg/L	700*	2.300	480	480	340	340	<250	<250	<250	350				490	460	440	710	770	350	950	900	950	900	820
Toluene	μg/L	1.000*	1,100	< 20	< 20	<250	<250	<250	<250	<250	<250				< 50	< 50	<25	18	31	79	100	220	230	170	71
Total Xylenes	µg/L	31,000	200,000	< 40	< 40	<250	<250	<250	<250	<250	<250				91	82	29	330	370	370	490	480	520	570	410
Semivolatile Organic Compou																									
Acenaphthene	μg/L	2,000*	6,100	100	110		-	-						-				-				110	100	120	83
Acenaphthylene	μg/L	470	3,100	5.3	6.7									-	-			-				43	42	30	49
Anthracene	µg/L	4,700	31,000	9.5	12										-							11	11	10	< 10
Benzo[a]anthracene	µg/L	1.17	3.92	< 1.9	< 2.0										-							<del></del>			<del></del>
Benzo[a]pyrene Benzo[b]fluoranthene	μg/L μg/L	0.2* 1.17	0.39 3.92	< 1.9 < 1.9	< 2.0 < 2.0																				
Benzo[g,h,i]perylene	μg/L μg/L	1.17	10	< 1.9	< 2.0									-										-	
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 1.9	< 2.0		-								-			-							-
Chrysene	μg/L	117	392	< 1.9	< 2.0									-											
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	< 1.9	< 2.0		-							-				-						-	
2,4-Dimehylphenol	μg/L	700*	700*	< 19	< 20																	< 10	< 10	< 10	< 10
Fluoranthene	μg/L	1,000*	4,100	7.7	8.9		-											-				< 10	< 10	< 10	< 10
Fluorene	µg/L	1,000*	4,100	35	38										-							44	42	47	49
Indeno[1,2,3-cd]pyrene	µg/L	1.17	3.92	< 1.9	< 2.0																				
2-Methylphenol 3 & 4 Methylphenol	μg/L	780 78	5,100 510	< 19 < 19	< 20 < 20																	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10
3 & 4 Methylphenol Naphthalene	μg/L μg/L	78 20*	20*	< 19 1,900	<b>4,100</b>	4,500	4,600	2,700	2,600	2,700	5,500	6,400	6,800	4,900	3,600	4,100	4,000	4,400	4,600	3,000	6,300	<b>6,000</b>	5,500	< 10 <b>7,200</b>	4,400
Phenanthrene	μg/L	470	3.100	69	71	4,500								4,300			4,000			3,000		73	70	7,200	64
Phenol	μg/L	9,390	61,000	< 9.6	< 9.9		-	-						-	-			-				< 10	< 10	< 10	13
Pyrene	µg/L	1,000*	3,100	9.9	8.7																	< 10	< 10	< 10	< 10
Inorganic Constituents																									
Antimony	μg/L	6.3	40	< 20	< 20									-				-				< 40	< 40	< 40	< 40
Arsenic	μg/L	50*	50*	< 20	< 20																	< 50	< 50	< 50	< 50
Barium	μg/L	2,000	7,200	5,000	4,600	4,100	4,200	4,200	5,500	4,300	5,000				5,300	5,400	6,500	6,740	6,600	6,740	7,270	6,120	6,050	7,090	4,060
Beryllium	μg/L	31	200	< 4.0	< 4.0									-											
Cadmium	µg/L	7.8	51	< 5.0	< 5.0																				
Chromium	µg/L	100	310	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10			-	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Copper	µg/L	630 15*	4,100	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20				< 20	< 20	< 20	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Lead Nickel	μg/L μg/L	15° 100	15* 2,000	< 10 <b>160</b>	< 10 <b>170</b>	< 10 <b>170</b>	< 10 <b>180</b>	< 10 170	< 10 <b>190</b>	< 10 <b>200</b>	< 10 <b>200</b>				< 10 <b>230</b>	< 10 <b>230</b>	< 10 <b>280</b>	< 10 <b>121</b>	< 10 <b>130</b>	< 10 <b>106</b>	< 10 <b>97</b>	< 10 <b>24.6</b>	< 10 <b>24.7</b>	< 10 < <b>20</b>	< 10 < 20
Zinc	μg/L μg/L	4.700	31.000	< 20	< 20		180		190	200	200					230	280	121	130	106		< 20	< 20	< 20	< 20
Mercury	μg/L μg/L	4,700 2*	2*	< 0.20	< 0.20					<del>-</del> -				-								< 0.5	< 0.5	< 0.5	< 0.5
Total Cyanide	μg/L	310	2,000	19	23	15	22				24			-	25	24	12	42	55	15	41	48	50	115	27
	r <i>y</i> =		,,,,,,				- 1																		

Notes:

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Standard Units

μS/cm - microsiemens per centimeter

μg/L - micrograms per liter

mg/L - milligrams per liter

mV - millivolts

NTU - nephelometric turbidity units

N/A - RRS are not applicable to this parameter

- Not Analyzed

HF - Holding time of 15 minutes was exceeded

HF - Holding time of 15 minutes was exceeded
Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

## Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017 Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

		Type 2	Type 4								MW-1	111D							
Parameter	Units	RRS	RRS	8/13/2015	8/7/2014	11/08/12	11/18/11	08/13/09	08/09 DUP	06/07/06			03/06 DUP	12/22/05	09/30/05	09/05 DUP	03/02/05	12/16/04	09/30/04
Field Groundwater Quality	Parameters																		
рН	SU	N/A	N/A	6.21	6.48	6.62	6.48	6.	47	6.4	42		58	6.60		.41	6.67	6.51	6.51
Specific Conductance	μm/cm	N/A	N/A	542	559	547	540		98	69			72	618		83	673	739	719
Temperature	°Celsius	N/A	N/A	26.85	27.81	21.46	22.4	24	.99	22.	.58	20	.87	22.81	25	.35	20.05	19.5	24.06
Dissolved Oxygen	mg/L	N/A	N/A	0.23	0.23	0.20	0.24		97	0.4			36	0.37		.22	1.45	1.62	0.39
ORP	mV	N/A	N/A	-204.5	-134.3	-151.6	-124.3		34.8	-10			3.1	-85.0		14.2	-84.4	-102.1	-127.5
Turbidity	NTU	N/A	N/A	5.59	5.64	0.73	2.40	2.	52	1.0	05	2.	86	2.37	0.	.00	1.24	6.02	2.8
Laboratory Results - Natur	al Attenuation P	arameters																	
Nitrogen, Ammonia (as N)	mg/L	N/A	N/A														0.51	0.61	< 0.20
Nitrogen, Nitrate (as N)	mg/L	N/A	N/A					< 0.050	< 0.050			-					< 0.500	< 0.0500	< 0.0500
Sulfate	mg/L	N/A	N/A					< 5.0	< 5.0								1.85	1.44	1.67
Sulfide	mg/L	N/A	N/A					2.3	2.3								1.1	< 1.0	< 1.0
Dissolved Manganese	mg/L	N/A	N/A														1.02	0.941	0.941
Total Manganese	mg/L	N/A	N/A														1.02	0.989	0.987
Ferrous Iron	mg/L	N/A	N/A					< 0.010	< 0.010								4.6	5.4	4.7
Total Iron	mg/L	N/A	N/A					1.8	1.9								4.54	4.97	4.72
Carbon Dioxide	mg/L	N/A	N/A					0.76	0.88								110	130	140
Methane	mg/L	N/A	N/A					28	29		-	-					3,100	2100	2,600
Dissolved Nitrogen	mg/L	N/A	N/A					5.3	4.5								18	18	18
Dissolved Oxygen	mg/L	N/A	N/A					1.9	1.6								0.78	3.6	0.97
Laboratory Results - Organ	nic Constituents						·			-			<u> </u>					-	
Volatile Organic Compounds	3																		
Benzene	μg/L	5*	9	1,700	2,700	570	1,700	3,900	3,800	4,600	4,700	6,100	6,000	2,600	6,500	6,400	6,900	5,700	7,300
Carbon Disulfide	μg/L	329	1,700	< 5.0	< 5.0	< 20					-	1					1		
Ethylbenzene	μg/L	700*	2,300	820	930	240	920	1,300	1,200	1,200	1,100	1,600	1,600	300	1,200	1,800	1,500	1,200	1,400
Toluene	μg/L	1,000*	1,100	380	1200	320	1,400	1,800	1,700	38	39	60	59	28	40	53	170	120	190
Xylene	μg/L	31,000	200,000	330	670	220	940	900	850	1,200	1,100	1,400	1,400	570	1,100	1,600	980	780	830
Semivolatile Organic Compo	unds																		
Acenaphthene	μg/L	2,000*	6,100	53	59	84					-	-					140	150	150
Acenaphthylene	μg/L	470	3,100	44	70	14					-				-		12	< 10	< 10
Anthracene	μg/L	4,700	31,000	9.6	14	13					-	-					< 10	< 10	< 10
Benzo[a]anthracene	μg/L	1.17	3.92	0.73	2.0	< 2.1					-	-					1		
Benzo[a]pyrene	μg/L	0.2*	0.39	0.15	1.4	< 2.1					-	-					-		
Benzo[b]fluoranthene	μg/L	1.17	3.92	0.20	1.2	< 2.1													
Benzo[g,h,i]perylene	μg/L	10	10	< 0.10	< 10	< 2.1											-		
Benzo[k]fluoranthene	μg/L	11.7	39.2	0.057	< 10	< 2.1					-	-					-		
Chrysene	μg/L	117	392	0.53	< 10	< 2.1					-	1					1		
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	< 0.10	0.13	< 2.1											-		
2,4-Dimethylphenol	μg/L	700*	700*	< 10	< 10	< 21						-					< 10	< 10	< 10
Fluoranthene	μg/L	1,000*	4,100	8.2	16	11											< 10	< 10	< 10
Fluorene	μg/L	1,000*	4,100	35	64	68						-					34	31	42
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.050	0.62	< 2.1													
2-Methylphenol	μg/L	780	5,100	< 10	< 10	< 21					-	-					< 10	< 10	< 10
4-Methylphenol	μg/L	78	510	< 10	< 10	< 21											< 10	< 10	< 10
Naphthalene	μg/L	20*	20*	3.8	3,000	1,800	9,300	5,100	5,300	4,400	4,300	3,600	3,600	< 10	5,800	6,600	5,400	4,800	5,800
Phenanthrene	μg/L	470	3,100	58	92	100											39	37	46
Phenol	μg/L	9,390	61,000	15	11	< 10					-	-					19	< 10	42
Pyrene	μg/L	1,000*	3,100	12	20	13											< 10	< 10	< 10
Laboratory Results - Inorg	anic Constituent	s																	
Antimony	μg/L	6.3	400	< 20	< 20	< 20								-			< 40	< 40	< 40
Arsenic	μg/L	50*	50*	< 50	< 50	< 20								-			< 50	< 50	< 50
Barium	μg/L	2,000	7,200	1,009	910	550	500	160	170	3,470	3,510	3,410	3,480	3,430	3,430	2,720	2,720	2,730	2,660
Beryllium	μg/L	31	200	< 10	< 10.0	< 4.0								-					
Cadmium	μg/L	7.8	51	< 5.0	< 5.0	< 5.0													
Chromium	μg/L	100	310	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10.0	< 10	< 10	< 10	< 10	< 10
Copper	μg/L	630	4,100	< 10	< 10	< 20	< 20	< 20	< 20	< 10	< 10	< 10	< 10	10.1	< 10	< 10	< 10	< 10	< 10
Lead	μg/L	15*	15*	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10.0	< 10	< 10	< 10	< 10	< 10
Nickel	μg/L	100	2,000	< 20	< 20	40	49	< 40	< 40	< 10	< 10	< 10	< 10	< 20.0	< 10	< 10	< 20	< 20	< 20
Zinc	µg/L	4,700	31,000	< 20	< 20	< 20											< 20	< 20	< 20
Mercury	µg/L	2*	2*	< 0.20	< 0.20	< 0.20											< 0.5	< 0.5	< 0.5
		310	2.000	13															
Total Cyanide	μq/L	310	2.000	13	10	19		< 10	10	< 10	< 10	< 10	< 10	< 10	11	< 10	< 10	25	< 10

# Analyte was detected above laboratory detection limit Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location) \*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical

\*Highest RRS equals Type 1 RRS; therefore, the ft AMSL - feet Above Mean Sea Level RRS - Risk Reduction Standard SU - Standard Units μS/cm - microsiemens per centimeter μg/L - micrograms per liter mg/L - milligrams per liter mV - millivolts NTU - nephelometric turbidity units N/A - RRS are not applicable to this parameter LNCL Applicable.

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

Parameter  roundwater Quality Para  H  pecific Conductance emperature	Units meters SU	Type 2 RRS	Type 4 RRS	2/22/2017	4/5/2016	2/16/2015	8/5/2014	2/17/2014	08/06/13	02/05/13	11/06/12	08/07/12	05/14/12	02/15/12		/W-112D 08/08/11	05/05/11	02/24/11	11/10/10	08/09/10	05/10/10	02/23/10	08/11/00	06/07/06	03/09/06	12/20/05	09/29/05	00/01/0
H pecific Conductance	_																											03/01/0
	SU																00/00/11		,	00/00/10	00/10/10	02/20/10	00/11/00	00/01/00	00/03/00	12/20/00	00/20/00	00/01/0
		N/A	N/A	9.22	9.70	9.77	9.12	8.95	10.26	10.93	10.75	9.91	10.59	10.40	10.72	10.08	10.67	10.98	10.43	8.86	10.83	11.03	11.43	11.01	11.09	11.01	10.60	6.89
emperature	μm/cm	N/A	N/A	287.40	301	306	304	288	296	390	366	382	389	318	372	391	426	355	327	435	427	407	536	558	585	422	464	489
ionalyad Owyann	°Celsius	N/A N/A	N/A N/A	22.10	21.24	16.81	22.55	19.28 0.43	22.84 0.15	15.87 4.60	16.66	24.41	24.2 4.40	19.10 6.64	21.27 0.47	23.99 1.74	20.66	16.40 4.23	20.17	24.52	19.69	16.70 4.10	29.32	20.50 0.68	20.07	19.36	22.09 0.16	20.2
issolved Oxygen	mg/L mV	N/A N/A	N/A	5.23 71.10	5.41 34.9	4.70 146.3	0.89 -4.2	40.1	-70.3	101.7	0.75 55.7	7.4	15.3	-70.2	-100.9	9.3	4.39 -103.2	-32.4	-40.3	1.20 61.2	3.29 29.3	5.4	4.99 22.6	-102.1	2.10 -99.0	0.56 -92.4	-20.3	0.82 -423.
urbidity	NTU	N/A	N/A	1.43	6.21	7.99	1.45	1.22	1.01	1.43	1.27	7.20	2.08	3.29	4.00	5.06	9.17	6.89	3.15	2.37	1.24	4.92	0.75	2.98	2.14	3.16	16.04	8.78
aboratory Results - Natu	ral Attenua	ation Parame	ters	•				<u>.</u>																				
litrogen, Ammonia (as N)	mg/L	N/A	N/A					-																		-		< 0.2
litrogen, Nitrate (as N)	mg/L	N/A	N/A			1.0		< 0.25		0.29				0.29				0.27				0.32	0.21					< 0.05
ulfate ulfide	mg/L mg/L	N/A N/A	N/A N/A			<b>4.1</b> < 1.00		<b>3.1</b> < 1.0		< 5.0 < 1.0				< 5.0 <b>1.8</b>				5.7 1.2				<b>7.3</b> < 1.0	<b>7.3</b> < 1.0					10.6 1.1
issolved Manganese	mg/L	N/A	N/A																									0.287
otal Manganese	mg/L	N/A	N/A					< 0.100																		-		0.302
errous Iron	mg/L	N/A	N/A			< 0.100		< 0.100	-	< 0.10 HF				< 0.10 HF				< 0.010				< 0.010	< 0.010					0.5
otal Iron	mg/L	N/A	N/A			0.266		< 5.0		< 0.10				0.10				0.16				0.26	0.27					1.09
arbon Dioxide lethane	mg/L mg/L	N/A N/A	N/A N/A			< 5.0		< 1.0 5		< 5.0 <b>5.4</b>				< 0.050 < 0.58				< 0.050 < 0.58				0.14 4.8	< 0.050 <b>20</b>					35 26
issolved Nitrogen	mg/L	N/A	N/A			20		18		18				5.2				4.2				3.9	4.5					19
issolved Oxygen	mg/L	N/A	N/A			8.0		9.6		9.0				1.9				1.5				1.4	1.6					2.5
aboratory Results - Orga	nic Consti	tuents																			•	•				•		
olatile Organic Compound																							-					
enzene Parhan Digulfida	µg/L	5*	9	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
arbon Disulfide thylbenzene	μg/L μg/L	329 700*	1,700 2,300	<5.0 <5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 2.0 < 1.0	< 2.0 < 1.0	< 2.0 < 1.0	< 5.0 < 5.0	< 5.0	< 5.0			< 5.0				< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	 < 5.0
oluene	μg/L μg/L	1,000*	1,100	<5.0 <5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0			< 5.0				< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
otal Xylenes	μg/L	31,000	200,000	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 5.0	< 5.0	< 5.0			< 5.0				< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
emivolatile Organic Compo			1	•				1																		1		
cenaphthene	μg/L	2,000*	6,100	<0.50	< 0.50	< 10	< 10	< 10	< 10	< 0.21	< 0.22	< 0.19	< 0.23								-							< 10
cenaphthylene nthracene	μg/L μg/L	470 4,700	3,100 31,000	<1.0 <0.050	< 1.0 < 0.050	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 0.21 < 0.21	< 0.22 < 0.22	< 0.19 < 0.19	< 0.23 < 0.23															< 10 < 10
enzo[a]anthracene	μg/L	1.17	3.92	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20	< 0.21	< 0.22	< 0.19	< 0.23			-					-					-		
enzo[a]pyrene	μg/L	0.2*	0.39	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20	< 0.21	< 0.22	< 0.19	< 0.23													-		
enzo[b]fluoranthene	μg/L	1.17	3.92	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.21	< 0.22	< 0.19	< 0.23															
enzo[g,h,i]perylene	μg/L	10 11.7	10	<0.10 <0.050	< 0.10	< 10 < 10	< 10	< 10	< 10 < 10	< 0.21	< 0.22	< 0.19	< 0.23															
enzo[k]fluoranthene hrvsene	μg/L μg/L	11.7	39.2 392	<0.050	< 0.050 < 0.050	< 10	< 10 < 10	< 10 < 10	< 10	< 0.21 < 0.21	< 0.22 < 0.22	< 0.19 < 0.19	< 0.23 < 0.23															
ibenz(a,h)anthracene	µg/L	0.3*	0.39	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.21	< 0.22	< 0.19	< 0.23															
,4-Dimehylphenol	μg/L	700*	700*	<10	< 10	< 10	< 10	< 10	< 10	< 2.1	< 2.2	< 1.9	< 2.3															< 10
luoranthene	μg/L	1,000*	4,100	<0.10	< 0.10	< 10	< 10	< 10	< 10	< 0.21	< 0.22	< 0.19	< 0.23															< 10
luorene ndeno[1,2,3-cd]pyrene	μg/L μg/L	1,000* 1.17	4,100 3.92	<0.10 <0.050	< 0.10 < 0.050	< 10 < 0.050	< 10 < 0.050	< 10 < 0.050	< 10 < 0.20	< 0.21 < 0.21	< 0.22 < 0.22	< 0.19 < 0.19	< 0.23 < 0.23				-											< 10
-Methylphenol	μg/L	780	5,100	<10	< 10	< 10	< 10	< 10	< 10	< 2.1	< 2.2	< 1.9	< 2.3															< 10
& 4 Methylphenol	μg/L	78	510	<10	< 10	< 10	< 10	< 10	< 10	< 2.1	< 2.2	< 1.9	< 2.3					-								-		< 10
aphthalene	μg/L	20*	20*	<0.50	< 0.50	< 10	< 10	< 10	< 10	< 0.21	< 0.22	< 0.19	< 0.23	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	<9.9	<9.8	< 10	< 10	< 10	< 10	< 10
henanthrene	μg/L	470	3,100	<0.050	< 0.050	< 10	< 10	< 10	< 10	< 0.21	< 0.22	< 0.19	< 0.23															< 10
rhenol vrene	μg/L μg/L	9,390 1,000*	61,000 3,100	<10 <0.050	< 10 < 0.050	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 1.1 < 0.21	< 1.1 < 0.22	< 0.95 < 0.19	< 1.1 < 0.23															< 10 < 10
norganic Constituents	μg/L	1,000	3,100	<0.030	< 0.030	V 10	V 10	< 10	V 10	₹ 0.21	₹ 0.22	< 0.13	₹ 0.25															< 10
ntimony	μg/L	6.3	40		< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20															< 40
rsenic	μg/L	50*	50*		< 50	< 50	< 50	< 50	< 50	< 20	< 20	< 20	< 20															< 50
arium	μg/L	2,000	7,200		179	218	152	225	93.4	110	110	130	100	100	130	120	150	130	-			95	111	179	163	185	211	550
eryllium admium	µg/L µa/L	7.8	200 51		< 10 < 5.0	< 10 < 5.0	< 10 < 5.0	< 10 < 5.0	< 10 < 5.0	< 4.0 < 5.0	< 4.0 < 5.0	< 4.0 < 5.0	< 4.0 < 5.0															
hromium	μg/L μg/L	100	310		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10				< 10	< 10	< 10.0	< 10.0	< 10.0	< 10	< 10
opper	μg/L	630	4,100		< 10	< 10	< 10	< 10	< 10	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20				< 20	< 20	< 10.0	< 10.0	< 10.0	< 10	< 10
ead	μg/L	15*	15*		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	-			< 10	< 10	< 10.0	< 10.0	< 10.0	< 10	< 10
lickel	μg/L	100	2,000		< 20	< 20	< 20	< 20	< 20	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40				< 40	< 40	< 20.0	< 20.0	< 20.0	< 10	< 20
inc lercury	μg/L μg/L	4,700 2*	31,000 2*		< 20 < 0.20	< 20 < 0.20	< 20 < 0.20	< 20 < 0.20	< 20 < 0.20	< 20 < 0.20	< 20 < 0.20	< 20 < 0.20	< 20 < 0.20															< 20 < 0.5
otal Cyanide	μg/L	310	2,000		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	12	< 10				< 10				< 10	< 10	< 10	< 10	< 10	< 10	< 10
otes: nalyte was detected abo lighest RRS equals Type AMSL - feet Above Mean RS - Risk Reduction Stand U - Standard Units S/cm - microsiemens per cg/L - milligrams per liter ng/L - milligrams per liter n/V - millivotts	1 RRS; the Sea Level dard	refore, the cle		ecomes the Type	1 RRS for this	s chemical																						

Not Analyzed
 HF - Holding time of 15 minutes was exceeded
 Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

	Units	Type 2	Type 4										MW-1														
Parameter	Offics	RRS	RRS	2/22/2017	2/17/2015	8/5/2014	2/17/2014	08/05/13	02/04/13	11/06/12	08/06/12	05/14/12	02/13/12	11/16/11	08/09/11	05/04/11	02/24/11	11/09/10	08/09/10	05/10/09	02/24/10	08/11/09	06/06/06	03/10/06	12/21/05	09/29/05	03/25/05
undwater Quality Parar																											
-ifi- Odt	SU	N/A	N/A	5.80	5.63	6.09	5.92	6.36	5.76	5.82	5.64	5.79	5.71	5.75	5.81	5.43	5.79	5.76	5.33	5.25	5.73	6.55	5.68	5.73	5.85	6.0	5.87
cific Conductance	μm/cm	N/A	N/A	355.70	354	349	353	357	362	363	366	363	295	351	368	369	321	356	360	352	363	368	373	374	321	370	357
nperature solved Oxygen	°Celsius	N/A N/A	N/A N/A	22.17	15.85 1.14	23.30	21.42	25.35	18.82	19.51	27.04	24.98 0.84	19.98	23.81	25.79	22.04	19.16 1.07	24.04	27.65 0.19	21.26	17.13	25.47	23.37	18.78	17.41	23.61	21.69 0.07
olved Oxygen	mg/L mV	N/A	N/A	0.20 68.60	162.9	0.41 149.3	7.06 143.1	0.14 101.2	0.36 138.3	1.30 78.9	1.56 82.6	-125.7	5.86 11.9	0.70 126.7	0.86 87.5	0.31 -22.0	136.0	0.15 148.7	72.4	0.62 123.5	2.32 114.6	2.89 -171.4	0.33 126.3	0.46 151.4	1.43 157.0	0.20 69.1	184.5
bidity	NTU	N/A	N/A	1.10	0.63	1.32	0.37	0.19	0.64	0.31	1.29	1.15	0.86	1.09	1.94	0.70	6.6	0.21	0.71	0.54	1.03	0.29	0.42	0.35	0.23	0.5	2.46
oratory Results - Natur				1.10	0.00	1.02	0.07	0.10	0.04	0.01	1.20	1.10	0.00	1.00	1.04	0.70	0.0	0.21	0.71	0.04	1.00	0.23	0.42	0.00	0.20	0.0	2.70
ogen, Ammonia (as N)	mg/L	N/A	N/A																								
ogen, Nitrate (as N)	mg/L	N/A	N/A				< 0.25		< 0.050				3.0				< 0.050				1.2	< 0.050					
fate	mg/L	N/A	N/A				46		41				52				53				20	61					
fide	mg/L	N/A	N/A				< 1.0		< 1.0				1.2				< 1.0				< 1.0	< 1.0					
solved Manganese	mg/L	N/A	N/A																								
al Manganese	mg/L	N/A	N/A				< 0.100																				
rous Iron	mg/L	N/A	N/A				< 0.100		0.29 HF				< 0.10 HF				0.18				0.2	0.28					
al Iron	mg/L	N/A	N/A				110		0.40				< 0.10				0.29				0.25	0.38					
bon Dioxide	mg/L	N/A N/A	N/A				< 1.0	-	160 32		-		<b>2.1</b> < 0.58				1.8				1.9	1.4					
hane	mg/L	N/A	N/A N/A				25 19		18				< 0.56 4.4				8.2 4.1			-	25 3.8	37 4.2					
solved Nitrogen solved Oxygen	mg/L mg/L	N/A	N/A				10		7.1				1.5				1.4				1.3	1.4					
oratory Results - Organ			14/71				10		/.1				1.5				1.4				1.5	1.4					
atile Organic Compounds	0011311																										
zene	μg/L	5*	9	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
bon Disulfide	μg/L	329	1,700	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 5.0															
ylbenzene	μg/L	700*	2,300	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0			-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
uene	μg/L	1,000*	1,100	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0				< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
al Xylenes	μg/L	31,000	200,000	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	-			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	
nivolatile Organic Compo	unds																										
enaphthene	μg/L	2,000*	6,100	< 0.50	< 10	< 10	< 10	< 10	< 0.25	< 0.22	< 0.22	< 0.22															
enaphthylene	μg/L	470	3,100	<1.0	< 10	< 10	< 10	< 10	< 0.25	< 0.22	< 0.22	< 0.22														-	
hracene	μg/L	4,700	31,000	0.060	< 10	< 10	< 10	< 10	< 0.25	< 0.22	< 0.22	< 0.22															
zo[a]anthracene	µg/L	1.17	3.92	<0.050	< 0.050	< 0.050	< 0.050	< 0.20	< 0.25	< 0.22	< 0.22	< 0.22															
zo[a]pyrene	μg/L	0.2*	0.39	<0.050	< 0.050	< 0.050	< 0.050	< 0.20	< 0.25	< 0.22	< 0.22	< 0.22												<u> </u>			
zo[b]fluoranthene zo[q,h,i]perylene	μg/L μg/L	1.17 10	3.92 10	<0.10 <0.10	< 0.10 < 10	< 0.10 < 10	< 0.10 < 10	< 0.20 < 10	< 0.25 < 0.25	< 0.22 < 0.22	< 0.22 < 0.22	< 0.22 < 0.22															
nzo[k]fluoranthene	μg/L μg/L	11.7	39.2	<0.050	< 10	< 10	< 10	< 10	< 0.25	< 0.22	< 0.22	< 0.22															
vsene	μg/L	117	392	<0.050	< 10	< 10	< 10	< 10	< 0.25	< 0.22	< 0.22	< 0.22						-									
enz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.25	< 0.22	< 0.22	< 0.22															
-Dimehylphenol	μg/L	700*	700*	<10	< 10	< 10	< 10	< 10	< 2.5	< 2.2	< 2.2	< 2.2															
ioranthene	μg/L	1,000*	4,100	<0.10	< 10	< 10	< 10	< 10	< 0.25	< 0.22	< 0.22	< 0.22															
uorene	μg/L	1,000*	4,100	< 0.10	< 10	< 10	< 10	< 10	< 0.25	< 0.22	< 0.22	< 0.22															
deno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20	< 0.25	< 0.22	< 0.22	< 0.22								-							
Methylphenol	μg/L	780	5,100	<10	< 10	< 10	< 10	< 10	< 2.5	< 2.2	< 2.2	< 2.2															
& 4 Methylphenol	μg/L	78	510	<10	< 10	< 10	< 10	< 10	< 2.5	< 2.2	< 2.2	< 2.2															
phthalene	μg/L	20*	20*	<0.50	< 10	< 10	< 10	< 10	< 0.25	< 0.22	< 0.22	< 0.22	< 5.0	< 5.0	< 5.0	5.0	< 5.0	< 5.0	< 5.0	< 5.0	<9.4	<9.8	< 10	< 10	< 10	< 10	9.1
nenanthrene nenol	μg/L	470 9.390	3,100 61.000	<0.050 <10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 0.25 < 1.3	< 0.22 < 1.1	< 0.22 < 1.1	< 0.22 < 1.1								-							
	µg/L	1,000*	3,100	<0.050	< 10	< 10	< 10	< 10	< 0.25	< 0.22	< 0.22	< 0.22															
rene organic Constituents	μg/L	1,000	3,100	<0.050	< 10	< 10	< 10	< 10	< 0.25	< 0.22	< 0.22	< 0.22															-
ntimony	μg/L	6.3	40		< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20															
senic	μg/L	50*	50*		< 50	< 50	< 50	< 50	< 20	< 20	< 20	< 20															
rium	μg/L	2,000	7,200		75	80.3	72.7	72.3	65	110	67	72	48	72	71	84	65				65	69	63.8	60.9	47	65.0	
eryllium	μg/L	31	200		< 10	< 10	< 10	< 10	< 4.0	< 4.0	< 4.0	< 4.0															
ıdmium	μg/L	7.8	51		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0															
romium	μg/L	100	310		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10			-	< 10	< 10	< 10	< 10	< 10	< 10	
pper	μg/L	630	4,100		< 10	< 10	< 10	< 10	< 20	< 20	< 20	< 20	27	< 20	< 20	< 20	< 20				< 20	< 20	< 10	< 10	< 10	< 10	
ad	μg/L	15*	15*		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10				< 10	< 10.0	< 10	< 10	< 10	< 10	
kel	μg/L	100	2,000		< 20	< 20	< 20	< 20	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40				< 40	< 40	< 20	< 20	< 20	< 10	
ic	μg/L	4,700	31,000		< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20															
rcury	μg/L	2*	2*		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20															
al Cyanide	μg/L	310	2,000		< 10	< 10	< 10	< 10	< 10	10	15	11	< 10				10				< 10	< 10	< 10	< 10	< 10	10	

# Historical Data Summary - Bedrock Groundwater Analytical Data

# November 2001 through February 2017 Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

Parameter	Units	Type 2 RRS	Type 4 RRS				MW-				
		.,,9	.,,	04/29/15	02/25/10	08/13/09	06/07/06	03/09/06	12/22/05	09/29/05	03/01/0
ield Groundwater Quality Paramet		N1/A	N1/A	7.0	0.54	0.00	7.10	7.00	7.00	7 77	7.00
H	SU	N/A	N/A N/A	7.9	9.51	9.99	7.12	7.00	7.26	7.77	7.02
pecific Conductance	μm/cm	N/A		395	291	383	500	432	422	431	462
emperature	°Celsius	N/A	N/A	20.12	19.01	29.57	26.90	20.57	22.10	24.89	20.89
issolved Oxygen	mg/L	N/A N/A	N/A N/A	6.23 -29.8	7.22 23.2	5.85 -169.8	0.37 -154.2	0.45 -157.9	0.31 162.3	0.09 142.6	0.72 -86.9
RP urbidity	mV NTU	N/A N/A	N/A N/A	1.45	0.7	0.98	0.74	2.6	3.11	3.94	23.1
	_		IN/A	1.45	0.7	0.98	0.74	2.0	3.11	3.94	23.1
aboratory Results - Natural Attenu	_		NI/A		1						0.00
litrogen, Ammonia (as N)	mg/L	N/A	N/A			0.00					< 0.20
litrogen, Nitrate (as N)	mg/L	N/A	N/A		< 0.050	0.93		-			< 0.500
ulfate	mg/L	N/A	N/A		20	20		-			4.54
ulfide	mg/L	N/A N/A	N/A N/A		< 1.0	< 1.0					< 1.0 <b>0.809</b>
bissolved Manganese	mg/L	N/A N/A	N/A								0.845
otal Manganese	mg/L	N/A	N/A		< 0.010						
errous Iron	mg/L	N/A N/A	N/A N/A		< 0.010	< 0.010 < 0.010					2.4
otal Iron	mg/L	N/A	N/A		< 0.010	< 0.010					18
arbon Dioxide lethane	mg/L	N/A N/A	N/A N/A		1.2	1.2					99
	mg/L	N/A	N/A			4.6					22
issolved Nitrogen	mg/L	N/A N/A	N/A	-	3.9	1.7					
issolved Oxygen	mg/L	IN/A	IN/A	-	1.5	1.7		-			1.9
aboratory Results - Organic Cons	iiiueiits										
olatile Organic Compounds	1, ~/I	5*	9	2 F O	- F O	∠ F ∩	- F O	- F O	- F O	4 F O	E 0
enzene arbon Disulfide	μg/L	329	1,700	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.2
	μg/L	700*	2,300	< 5.0							
thylbenzene	μg/L	1,000*	1,100	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0	< 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0	< 5.0 < 5.0
oluene otal Vulonos	μg/L		200,000			< 5.0	< 5.0				
otal Xylenes emivolatile Organic Compounds	μg/L	31,000	200,000	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
cenaphthene	μg/L	2,000*	6,100	< 10							< 10
cenaphthylene	μg/L	470	3,100	< 10							< 10
nthracene	μg/L μg/L	4,700	31,000	< 10							< 10
		1.17	31,000	< 0.050							
nzo[a]anthracene nzo[a]pyrene	μg/L μg/L	0.2*	0.39	< 0.050							
enzo[b]fluoranthene	μg/L	1.17	3.92	< 0.10							
	μg/L μg/L	1.17	3.92	< 10							
enzo[g,h,i]perylene enzo[k]fluoranthene	μg/L	11.7	39.2	< 10							
hrysene	µg/L	117	392	< 10							
ibenz(a,h)anthracene	μg/L	0.3*	0.39	< 0.10							
4-Dimehylphenol	μg/L	700*	700*	< 10							< 10
uoranthene	μg/L	1,000*	4,100	< 10							< 10
uorene	μg/L	1,000*	4,100	< 10							< 10
deno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.050							
-Methylphenol	μg/L	780	5,100	< 10				-			< 10
& 4 Methylphenol	µg/L	78	510	< 10							< 10
aphthalene	µg/L	20*	20*	< 10	< 10	<9.4	< 10	< 10	< 10	< 10	88
henanthrene	μg/L	470	3,100	< 10							< 10
henol	μg/L	9,390	61,000	< 10							< 10
yrene	μg/L	1,000*	3,100	< 10			-	-			< 10
organic Constituents	µg/L	1,000	3,100	V 10							< 10
ntimony	μg/L	6.3	40	< 20							< 40
rsenic	μg/L μg/L	50*	50*	< 50							< 50
arium	μg/L μg/L	2,000	7,200	< 50 493	140	140	558	613	636	763	1,260
eryllium	μg/L μg/L	31	200	< 10						763	1,200
admium	μg/L	7.8	51	< 5.0							
admium	μg/L	100	310	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
opper	μg/L	630	4,100	< 10	< 20	< 20	< 10	< 10	< 10	< 10	< 10
ppper ad	μg/L	15*	4,100 15*	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
ckel	,	100	2,000	. 20	< 40	. 40	< 20	. 20	. 20	. 10	< 20
nc	μg/L μg/L	4,700	31,000	< 20		< 40		< 20 	< 20 	< 10	147
ercury	μg/L	2*	2*	< 0.20							< 0.5
tal Cyanide	μg/L	310	2,000	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
	µg/∟	010	_,000	110		110	× 10	× 10	× 10	110	× 10

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

Parameter Field Groundwater Quality Para OH Specific Conductance Femperature Dissolved Oxygen DRP Furbidity	Units  meters SU μm/cm °Celsius	Type 2 RRS	Type 4 RRS	08/05/14	02/20/14	08/06/13	02/07/13	44/00/40		RRS MW-115D (Abandoned)													
DH Specific Conductance Femperature Dissolved Oxygen DRP Furbidity	SU μm/cm	I N/Δ	ı	00/03/14	04/40/14				U8/U6/43	05/14/12	02/13/12	11/16/11	08/11/11	05/05/11	02/24/11	11/09/10	11/10 DUP	08/10/10	05/11/10	02/24/10	2/10 DUP		
DH Specific Conductance Femperature Dissolved Oxygen DRP Furbidity	SU μm/cm	N/A				00/00/10	02/07/13	11/08/12	08/08/12	05/14/12	02/13/12	11/16/11	08/11/11	05/05/11	02/24/11	11/09/10	11/10 DOP	08/10/10	05/11/10	02/24/10	2/10 DUP		
Temperature Dissolved Oxygen DRP Turbidity	μm/cm		N/A	7.22	7.38	6.66	7.37	7.47	7.33	7.53	7.56	7.88	7.98	8.69	8.70	7	.71	6.49	9.09	10	0.45		
Temperature Dissolved Oxygen DRP Turbidity		N/A	N/A	257	344	217	228	258	256	244	198	213	222	225	222		08	200	209		235		
Dissolved Oxygen DRP Furbidity		N/A	N/A	257	22.62	23.70	13.83	22.04	24.15	23.00	198	22.03	25.82	20.28	21.23		5.64	24.65	22.71		7.06		
DRP Furbidity	mg/L	N/A	N/A	0.42	0.40	1.77	2.23	0.66	0.65	1.24	4.39	0.22	0.48	0.34	0.27		.17	0.22	0.86		.58		
Γurbidity	mV	N/A	N/A	34.4	-33.5	-68.6	20.1	-26	-9.5	65.7	-88.1	-169.4	119.4	-91.3	-46.1		54.3	11.1	-57.4		34.4		
	NTU	N/A	N/A	0.00	9.47	1.47	2.06	1.27	2.99	0.93	2.42	4.16	9.89	1.09	5.24		.76	0.62	1.79		34.4 ),50		
			IN/A	0.00	9.47	1.47	2.06	1.27	2.99	0.93	2.42	4.10	9.09	1.09	5.24	0.	.70	0.02	1.79	0.	.50		
_aboratory Results - Natural Att	_	N/A	N/A	1		1	1				1	1	1					1	1		т		
Nitrogen, Ammonia (as N) Nitrogen, Nitrate (as N)	mg/L	N/A	N/A		< 0.25		< 0.050				< 0.050				< 0.050					0.2	< 0.050		
Sulfate	mg/L mg/L	N/A	N/A		19		< 5.0		-		< 5.0				< 5.0	-	<del></del>			< 5.0	< 5.0		
Sulfide	mg/L	N/A	N/A		< 1.0		< 1.0				< 1.0				2.1					< 1.0	< 1.0		
Dissolved Manganese	mg/L	N/A	N/A		< 1.0 																		
Total Manganese	mg/L	N/A	N/A		< 0.100																-		
errous Iron	mg/L	N/A	N/A		0.727		< 0.10 HF				< 0.10 HF				< 0.010					< 0.010	< 0.010		
Total Iron	mg/L	N/A	N/A		6.9		0.27				1.0				1.9					0.16	0.17		
Carbon Dioxide	ma/L	N/A	N/A		< 1.0		7.5				0.052				< 0.050					< 0.050	< 0.050		
Methane	mg/L	N/A	N/A		83		21			-	9.9				<0.58					<0.19	<0.030		
Dissolved Nitrogen	mg/L	N/A	N/A		18						4.7				4.7					3.1	3.5		
Dissolved Oxygen	mg/L	N/A	N/A		3.9		7.6				1.6				1.6					1.2	1.3		
_aboratory Results - Organic Co			19//3		5.5		7.0				1.0				1.0					<u> </u>	1 1.5		
/olatile Organic Compounds	Jijoutuell																						
Benzene	μg/L	5*	q	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	11	8.9	5.6	< 5.0	15	15	< 5.0	< 5.0	< 5.0	< 5.0		
Carbon Disulfide	μg/L	329	1,700	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0		0.9	3.0	V 3.0					V 3.0			
Ethylbenzene	μg/L	700*	2,300	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	9.8	< 5.0	< 5.0	< 5.0					< 5.0	< 5.0		
Toluene	μg/L	1,000*	1,100	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0					< 5.0	< 5.0		
Total Xylenes	μg/L	31,000	200,000	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	9.2	13	7.6	< 5.0					< 5.0	< 5.0		
Semivolatile Organic Compounds	µg/L	31,000	200,000	₹ 3.0	₹ 3.0	₹ 3.0	₹2.0	₹2.0	₹2.0	₹2.0	₹ 3.0	3.2	13	7.0	< 3.0						<u> </u>		
Acenaphthene	μg/L	2,000*	6,100	< 10	< 10	< 10	< 0.24	< 0.21	< 0.19	< 0.22													
Acenaphthylene	µg/L	470	3,100	< 10	< 10	< 10	< 0.24	< 0.21	< 0.19	< 0.22													
Anthracene	µg/L	4,700	31,000	< 10	< 10	< 10	< 0.24	< 0.21	< 0.19	< 0.22													
Benzofalanthracene	ug/L	1.17	3.92	< 0.050	0.24	< 0.20	< 0.24	< 0.21	< 0.19	< 0.22											<del></del>		
Benzo[a]pyrene	µg/L	0.2*	0.39	< 0.050	0.47	< 0.20	< 0.24	< 0.21	< 0.19	< 0.22													
Benzo[b]fluoranthene	μg/L	1.17	3.92	< 0.10	0.33	< 0.20	< 0.24	< 0.21	< 0.19	< 0.22													
Benzo[g,h,i]perylene	µg/L	10	10	< 10	< 10	< 10	< 0.24	< 0.21	< 0.19	< 0.22													
Benzo[k]fluoranthene	µg/L	11.7	39.2	< 10	< 10	< 10	< 0.24	< 0.21	< 0.19	< 0.22													
Chrysene	μg/L	117	392	< 10	< 10	< 10	< 0.24	< 0.21	< 0.19	< 0.22													
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	< 0.10	0.63	< 0.20	< 0.24	< 0.21	< 0.19	< 0.22													
2,4-Dimehylphenol	μg/L	700*	700*	< 10	< 10	< 10	< 2.4	< 2.1	< 1.9	< 2.2													
luoranthene	μg/L	1,000*	4,100	< 10	< 10	< 10	< 0.24	< 0.21	< 0.19	< 0.22													
Fluorene	µg/L	1,000*	4,100	< 10	< 10	< 10	< 0.24	< 0.21	< 0.19	< 0.22													
ndeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.050	0.53	< 0.20	< 0.24	< 0.21	< 0.19	< 0.22													
2-Methylphenol	µg/L	780	5,100	< 10	< 10	< 10	< 2.4	< 2.1	< 1.9	< 2.2													
3 & 4 Methylphenol	μg/L	78	510	< 10	< 10	< 10	< 2.4	< 2.1	< 1.9	< 2.2													
Naphthalene	μg/L	20*	20*	< 10	< 10	< 10	0.24	< 0.21	< 0.19	< 0.22	< 5.0	14	5.2	< 5.0	< 5.0	54	57	7.7	< 5.0	< 9.7	< 9.7		
Phenanthrene	μg/L	470	3,100	< 10	< 10	< 10	< 0.24	< 0.21	< 0.19	< 0.22													
Phenol	μg/L	9,390	61,000	< 10	< 10	< 10	< 1.2	< 1.0	< 0.95	< 1.1					1	1							
Pyrene	μg/L	1,000*	3,100	< 10	< 10	< 10	< 0.24	< 0.21	< 0.19	< 0.22						-							
norganic Constituents																							
Antimony	μg/L	6.3	40	< 20	< 20	< 20	< 20	< 20	< 20	< 20													
Arsenic	μg/L	50*	50*	< 50	< 50	< 50	< 20	< 20	< 20	< 20													
Barium	μg/L	2,000	7,200	2,490	80	1,430	1,400	1,800	1,800	1,400	1,400	1,500	1,300	1,200	1,200	-				930	930		
Beryllium	μg/L	31	200	< 10	< 10	< 10	< 4.0	< 4.0	< 4.0	< 4.0													
Cadmium	μg/L	7.8	51	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0													
Cadmium	μg/L	100	310	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	1				< 10	< 10		
Copper	μg/L	630	4,100	< 10	< 10	< 10	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20					< 20	< 20		
_ead	μg/L	15*	15*	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	-				< 10	< 10		
Nickel	µg/L	100	2,000	< 20	< 20	< 20	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40					< 40	< 40		
Zinc	μg/L	4,700	31,000	36	< 20	< 20	< 20	22	< 20	< 20													
Mercury	µg/L	2*	2*	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20													
Total Cyanide	μg/L	310	2,000	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10				< 10	-				17	< 10		
																					-		

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

"Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical

\*Highest RRS equals Type 1 RRS; there ft AMSL - feet Above Mean Sea Level RRS - Risk Reduction Standard SU - Standard Units μS/cm - microsiemens per centimeter μg/L - micrograms per liter mg/L - milligrams per liter

mV - millivolts
NTU - nephelometric turbidity units
N/A - RRS are not applicable to this parameter

-- Not Analyzed
HF - Holding time of 15 minutes was exceeded

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

# Appendix F Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017 Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

Units	Type 2 RRS	Type 4 RRS												MW-20											
	Type 2 Kilo	Type 4 title	2/24/2017	8/23/2016	4/7/2016	8/12/2015	8/15 DUP	2/17/2015	2/15 DUP	8/7/2014	2/20/2014	08/07/13	02/08/13	11/07/12	08/08/12	05/17/12	02/16/12	11/18/11	08/11/11	05/04/11	04/18/11	11/09/10	08/10/10	05/11/10	02/24
meters SU	N/A	N/A	6.53	6.49	6.77	6.	33	6	68	7.41	6.75	6.23	6.61	6,44	6.36	6.88	6.43	6.61	6.50	6.06	6.26	6.55	6.42	6.33	6.4
μm/cm	N/A	N/A	454.2	536.3	590	52			88	633	569	526	452	510	576	526	535	509	515	512	558	519	506	550	53
°Celsius	N/A	N/A	21.06	26.51	24.09	25.			.44	25.53	22.50	24.75	18.74	22.76	27.09	23.94	23.15	20.28	26.67	23.60	23.78	25.94	28.69	26.09	17.
mg/L	N/A	N/A	0.21	0.24	0.36					0.51	0.36	0.21	1.10	0.06	0.66	0.71	0.28	0.59	1.38	0.05	1.04	0.10	0.24	0.73	3.0
mV	N/A	N/A	-58.8	-114.4	-866.7					-85.9	-99.2	-137.6	2.7	-89	-46.4	-75.6	-45.8	-90.7	-64.5	-113.4	-106.0	-260.1	-108.9	-110.5	-85
		N/A	1.51	1.4	4.38	0.	.7	1.	22	4.19	1.22	0.45	3.5	1.61	2.36	2.97	1.40	3.91	2.00	1.25	3.07	4.01	0.17	2.55	2.3
				1					1				1	1	1	T	1		ı		1	1			1
																					_				< 0.0
						ļ									1										5.6
	N/A	N/A				-		-			< 1.0		< 1.0				1.6				7.5				< 1.
mg/L	N/A	N/A		-		-		-				-													
mg/L	N/A					-		-																	
						ļ									1										1.3
														+											1.1
						_	-	-																	770
	N/A	N/A				_	-	-			21						5.5				4.3				4.1
mg/L	N/A	N/A		-		-		-			2.3		4.4				1.8				1.3				1.3
onstituent	ts																								
	F+		440	65		20	24	.50	.50	40	7.	4.4		1 00		.40			.50	. 5 0			.50		T
																	< 5.0	< 5.0	< 5.0		< 5.0	< 5.0	< 5.0		26
		2,300		<5.0 <b>40</b>						< 5.0 <b>8.1</b>			< 1.0				< 5.0	< 5.0	5.6		< 5.0				< 5.
	1,000*	1,100	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	16	< 5.0	< 5.0	< 1.0	4.7	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0				< 5.
μg/L	31,000	200,000	5.2	8.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	7.2	< 5.0	< 5.0	2.0	13	2.0	< 2.0	< 5.0	< 5.0	< 5.0	6.0	< 5.0				6.8
	0.2*	0.39	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.12	< 0.20	< 1.9	< 0.20	< 0.20	< 0.22									
μg/L	1.17	3.92	<0.10	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.11	< 0.20	< 1.9	< 0.20	< 0.20	< 0.22									
μg/L	10	10	<0.10	<0.10	< 0.10	< 0.10	< 0.10	< 10	< 10	< 10	< 10	< 10	< 1.9	< 0.20	< 0.20	< 0.22			-						
μg/L	1,000*	4,100	3.0	1.3	0.7	2.0	< 0.10	< 10	< 10	< 10	< 10	< 10	5.2	2.9	2.7	1.6									
μg/L	1,000*				1.40		< 0.10	< 10	< 10	10	15	26	25	18		11									
																					-			-	-
																	5.6		48	100		24	27	6.3	25
μg/L	470	3,100	5.4	27	0.055	0.077	< 0.050	< 10	< 10	< 10	< 10	< 10	39	1.2	< 0.20	< 0.22									
μg/L	9,390	61,000	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 9.7	< 0.99	< 0.98	< 1.1									
μg/L	1,000*	3,100	3.1	1.3	0.5	2.3	< 0.050	< 10	< 10	< 10	< 10	< 10	7.6	2.9	3.2	1.9									
/1	6.0	40		. 20	- 20	- 20	. 20	. 20	- 20	. 20	. 20	- 20	. 20	1 . 20	- 20	- 20	1		1				1		
	2,000	7,200		1,270	1,190	1,730	1,710	682	738	938	948	1,230				690	750	810	730	810	670				540
μg/L	31	200		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 4.0	< 4.0	< 4.0	< 4.0						-			
μg/L	7.8	51		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0					-				
μg/L	100			< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	-			< 10
																									< 20
	100	2,000		61.6	37	< 20	< 20	< 20	< 20	< 20	< 20	< 20	160	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	-			< 40
μg/L	4,700	31,000		< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20				-					
μg/L	2*	2*	-	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20				-					
μg/L	310	2,000		< 10.0	16	< 10.0	43	34	34	21	54	43	< 10	61	54	24	42	-			54				42
	mV NTU my/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg	mV N/A NTU N/A NTU N/A NTU N/A NTU N/A NTU N/A mgut N/A mg/L 1.100° µg/L 1.000° µg/L 1.000° µg/L 1.17 µg/L 1.000° µg/L 1.000° µg/L 1.000° µg/L 1.000° µg/L 1.000° µg/L 1.000° µg/L 2.000 µg/L 2.000 µg/L 31 µg/L 50° µg/L 300 µg/L 31 µg/L 300 µg/L 31 µg/L 300 µg/L 31 µg/L 1.000 µg/L 3300 µg/L 1.55° µg/L 1.000 µg/L 3300 µg/L 1.55° µg/L 1.50°	mV N/A N/A N/A N/A NTU N/A N/A NTU N/A N/A N/A N/A N/A Parameters mg/L N/A N/A N/A mg/L N/A N/A N/A N/A mg/L N/A N/A N/A N/A mg/L N/A N/A mg/L N/A N/A N/A mg/L N/A N/A N/A mg/L N/A N/A N/A mg/L N/A N/A ng/L 100 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	mV N/A N/A -58.8 NTU N/A N/A 1.51  NTU N/A N/A N/A 1.51  mgutton Parameters  mg/L N/A N/A  N/A N/A N/A  mg/L N/A N/A N/A N/A  mg/L N/A N/A	mV   N/A   N/A   .58.8   .114.4     NTU   N/A   N/A   1.51   1.4     nmuation Parameters     mg/L   N/A   N/A         mg/L   329   1,700   <5.0   <5.0   <5.0     μg/L   31,000   200,000   5.2   8.0     μg/L   470   31,000   2.2   26     μg/L   470   31,000   2.2   26     μg/L   1.17   3.92   0.065   0.080     μg/L   1.17   3.92   0.065   0.080     μg/L   1.17   3.92   0.050   <0.050     μg/L   11.7   39.2   <0.050   <0.050     μg/L   11.7   39.2   <0.050   <0.050     μg/L   11.7   3.92   <0.050   <0.050     μg/L   1.00°   4,100   3.0   1.3     μg/L   1,000°   5.0°   50°       μg/L   1,000°   5.0°   5.0°       μg/L   1,000°   5.0°   5.0°       μg/L   1,000°   5.0°   5.0°       μg/L   1,000°   5.0°   5.0°       μg/L   1,000°   1,000       μg/L	mV   N/A   N/A   -58.8   -114.4   -866.7	mV   N/A   N/A   N/A   1.51   1.4   4.38   0	mV	mV   N/A   N/A   N/A   -58.8   -114.4   -866.7   -180.4   -9.9	my	my	my   N/A   N/A   S8.8   -114.4   -866.7   -180.4   -14.7   -85.9   -99.2	MY	MY	MY	MY	MY	MY	MA	MY	MY	NA   NA   SA   SA   1114   4897   1994   917   859   922   1715   27   28   468   458   468   467   461   310   1134   1460   310   1134   1460   310   1134   1460   310   1134   1460   310   1134   1460   310   1134   1460   310   1134   1460   310   1134   1460   31	NY   NY   NY   NY   NY   NY   NY   NY	Windows   Wind	Mart   No.   No.   Select   1144   Select   1154   Select   127   Select   128   27   Select   27   Select   28   28   28   28   28   28   28   2

# Historical Data Summary - Bedrock Groundwater Analytical Data

### November 2001 through February 2017 Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

		l									MW-205	iD.			RRS MW-205D										
Parameter	Units	Type 2 RRS	Type 4 RRS	02/24/17	DUP - 5	08/24/16	8/16 DUP	04/07/16	08/12/15	02/16/15	08/06/14		02/14 DUP	08/06/13	08/13 DUP	02/07/13	02/13 DUP	11/07/12	11/12 DUF						
Field Groundwater Quality	Parameters	ı	l e	02/2 !/ 1.	20. 0	00/2 // 10	0,1020.	0 1/01/10	00/12/10	02/10/10	00/00/11	02,10,11	02,1120.	00,00,10	00,1020.	02/01/10	02,1020.	,,							
oH	SU	N/A	N/A	6.5	54	6.	.54	6.71	6.60	6.81	7.38	6	.79	6.	.20	6.	.89	6.	.70						
Specific Conductance	μm/cm	N/A	N/A	673	3.0	72	7.0	580	740	855	869	4	85	7	70	6	25	7	794						
Temperature	°Celsius	N/A	N/A	22.	92	26	5.10	18.30	26.72	18.66	23.60	21	.24	25	.48	17	7.75	18	3.64						
Dissolved Oxygen	mg/L	N/A	N/A	0.1	12	0.	.53	0.42	0.28	2.01	0.35	0	.30	1.	.38	0.	.47	0.	.53						
ORP	mV	N/A	N/A	-55	5.1	-7	5.3	-65.2	-163.5	-90.1	-68.9	-8	2.0	-18	34.4	-9	0.6	-1	17.8						
Turbidity	NTU	N/A	N/A	0.9			0.9	0.88	2.67	3.41	5.79		.16		.87		.72		.78						
Laboratory Results - Natu								0.00					-												
Nitrogen, Nitrate (as N)	mg/L	N/A	N/A							< 2.5		< 2.5	< 2.5			< 0.050	< 0.050								
Sulfate	mg/L	N/A	N/A							< 10		< 10	< 10			< 5.0	< 5.0								
Sulfide	mg/L	N/A	N/A							< 1.00		< 1.0	< 1.0			< 1.0	< 1.0								
Ferrous Iron	mg/L	N/A	N/A							0.844		< 0.100	< 0.100			< 0.10 HF	< 0.10 HF								
Total Iron	mg/L	N/A	N/A							4.37		3.23	3.25			4.8	4.9								
Carbon Dioxide	mg/L	N/A	N/A							77		49	48			93	88								
Methane	mg/L	N/A	N/A							3000		1700	2000			2600	2100								
Dissolved Nitrogen	mg/L	N/A	N/A							20		15	16												
Dissolved Oxygen	mg/L	N/A	N/A							4.7		3.9	3.9			2.0	2.8								
Laboratory Results - Orga	-								·		·			<u> </u>											
Volatile Organic Compound																									
Benzene	μg/L	5*	9	4,300	4,300	5200	5,400	5,100	5,200	4,400	6,700	1,700	1,600	5,700	5,400	3,400	4,000	3,300	3,200						
Carbon Disulfide	μg/L	329	1,700	<5.0	<5.0	<250	<5.0	< 5.0	< 250	< 5.0	< 5.0	< 5.0	< 5.0	< 250	< 250	< 100	< 100	< 100	< 40						
Ethylbenzene	μg/L	700*	2,300	860	950	930	930	990	1.100	990	1.200	330	320	1.400	1.200	820	890	930	890						
Toluene	μg/L	1,000*	1,100	12	14.0	<250	7.6	< 50	< 250	12	< 5.0	< 5.0	< 5.0	< 250	< 250	< 50	< 50	< 50	< 20						
Total Xylenes	μg/L	31,000	200,000	580	420	410	430	620	580	560	720	300	290	960	820	400	460	250	240						
Semivolatile Organic Comp		0.,000						,																	
Acenaphthene	μq/L	2.000*	6,100	120	140	150	130	140	160	130	200	54	57	220	200	89	95	150	170						
Acenaphthylene	μg/L	470	3,100	1.4	<1.0	1.7	1.7	1.7	1.8	< 10	< 10	< 10	< 10	< 10	< 10	< 2.0	< 2.0	< 2.3	< 0.21						
Anthracene	μg/L	4,700	31,000	5.3	4.9	6.1	5.9	4.5	5.6	< 10	< 10	< 10	< 10	< 10	< 10	2.9	3.1	4.4	4.4						
Benzo[a]anthracene	μg/L	1.17	3.92	<0.050	< 0.050	< 0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20	< 0.20	< 2.0	< 2.0	< 2.3	< 0.21						
Benzo[a]pyrene	μg/L	0.2*	0.39	< 0.050	< 0.050	< 0.050	0.092	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20	< 0.20	< 2.0	< 2.0	< 2.3	< 0.21						
Benzo[b]fluoranthene	μg/L	1.17	3.92	<0.10	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.20	< 2.0	< 2.0	< 2.3	< 0.21						
Benzo[g,h,i]perylene	μg/L	10	10	<0.10	<0.10	<0.10	<0.10	< 0.10	< 0.10	< 10	< 10	< 10	< 10	< 10	< 10	< 2.0	< 2.0	< 2.3	< 0.21						
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 10	< 10	< 10	< 10	< 10	< 10	< 2.0	< 2.0	< 2.3	< 0.21						
Chrysene	μg/L	117	392	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 10	< 10	< 10	< 10	< 10	< 10	< 2.0	< 2.0	< 2.3	< 0.21						
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.20	< 2.0	< 2.0	< 2.3	< 0.21						
2,4-Dimehylphenol	μg/L	700*	700*	<10	<10	<10	<10	< 10	< 50	< 10	< 10	< 10	< 10	< 10	< 10	< 20	< 20	< 23	< 2.1						
Fluoranthene	μg/L	1,000*	4,100	1.6	1.6	1.5	1.6	1.0	1.3	< 10	< 10	< 10	< 10	< 10	< 10	< 2.0	< 2.0	< 2.3	1.1						
Fluorene	μg/L	1,000*	4,100	29	34	39	33	29	34	31	47	13	13	43	44	24	26	34	38						
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20	< 0.20	< 2.0	< 2.0	< 2.3	< 0.21						
2-Methylphenol	μg/L	780	5,100	<10	<10	<10	<10	< 10	< 50	< 10	< 10	< 10	< 10	< 10	< 10	< 20	< 20	< 23	< 2.1						
3 & 4 Methylphenol	μg/L	78	510	<10	<10	<10	<10	< 10	< 50	< 10	< 10	< 10	< 10	< 10	< 10	< 20	< 20	< 23	< 2.1						
Naphthalene	μg/L	20*	20*	3,400	3,700	6,400	6,200	4,900	4,600	4,200	6,000	< 10	< 10	8,100	7,500	1,500	1,700	6,400	5,700						
Phenanthrene	μg/L	470	3,100	31	37	39	34	30	35	29	44	11	11	43	43	20	22	34	39						
Phenol	μg/L	9,390	61,000	<10	<10	<10	<10	18	< 50	< 10	18	26	23	< 10	< 10	< 10	< 9.9	11	14						
Pyrene	μg/L	1,000*	3,100	1.7	1.5	1.6	1.7	1.1	1.4	< 10	< 10	< 10	< 10	< 10	< 10	< 2.0	< 2.0	< 2.3	1.1						
Inorganic Constituents																									
Antimony	μg/L	6.3	40			< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20						
Arsenic	μg/L	50*	50*			< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 20	< 20	< 20	< 20						
Barium	μg/L	2,000	7,200			3150	3080	3,080	3,130	3,160	3,020	2,130	2,150	3,790	3,900	3,200	3,300	3,100	3,000						
Beryllium	μg/L	31	200			< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 4.0	< 4.0	< 4.0	< 4.0						
Cadmium	μg/L	7.8	51			< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0						
Chromium	μg/L	100	310			< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10						
Copper	μg/L	630	4,100			< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 20	< 20	< 20	< 20						
Lead	μg/L	15*	15*			< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10						
Nickel	μg/L	100	2,000			73.1	68.4	43.4	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 40	< 40	< 40	< 40						
Zinc	μg/L	4,700	31,000			< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20						
Mercury	μg/L	2*	2*			< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20						
vici cui y																									

Notes:

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 2 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Standard Units

µS/cm - microsiemens per centimeter

µg/L - milligrams per liter

my/L - milligrams per liter

mV - millivolts

NTU - neohelometric turbidity units

NTU - nephelometric turbidity units
N/A - RRS are not applicable to this parameter

HF - Holding time of 15 minutes was exceeded
Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

4th Semiannual Progress Report May 2017 ERM

### Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017 Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

	1									MW-	205D (Contir	ued)						
Parameter	Units	Type 2 RRS	Type 4 RRS	08/09/12	05/17/12	05/12 DUP	02/15/12	02/12 DUP	11/18/11	11/18 DUP	08/11/11	05/05/11	02/22/11	02/11 DUP	11/10/10	08/11/10	05/11/10	02/24/10
Field Groundwater Qualit	ty Parameters		•															
рН	SU	N/A	N/A	6.14	7.	13	6.	.65	5	.9	5.60	6.57	6	.6	6.47	6.56	6.41	6.55
Specific Conductance	μm/cm	N/A	N/A	801	7	66	7	91	3	72	778	615	6	64	679	701	690	733
Temperature	°Celsius	N/A	N/A	25.15	24	4.5	21	.58	20	.37	24.51	19.50	22	.88	23.74	23.66	21.86	11.89
Dissolved Oxygen	mg/L	N/A	N/A	0.31	1.	93	0.	.63	1.	19	1.36	0.88	0.	31	0.17	1.77	0.36	0.55
ORP	mV	N/A	N/A	-58.9	-9	6.2	-9	5.2	-2	22	-9.5	-77.3	-9	1.1	-86.1	-92.4	-71.0	-145.5
Turbidity	NTU	N/A	N/A	6.16	3.	68	1.	.05	8.	86	4.10	2.94	3.	65	0.91	0.1	1.06	0.87
Laboratory Results - Nati	ural Attenuation	on Parameters	1															
Nitrogen, Nitrate (as N)	mg/L	N/A	N/A				< 0.050	< 0.050					< 0.050	< 0.050				< 0.050
Sulfate	mg/L	N/A	N/A				< 5.0	< 5.0					< 5.0	< 5.0				< 5.0
Sulfide	mg/L	N/A	N/A				1.8	1.8					< 1.0	< 1.0				< 1.0
Ferrous Iron	mg/L	N/A	N/A				0.25 HF	0.25 HF					< 0.010	< 0.010				1.1
Total Iron	mg/L	N/A	N/A				3.7	3.7					4.4	4.5				3.6
Carbon Dioxide	mg/L	N/A	N/A				1.4	1.4					1.1	1.2				1.1
Methane	mg/L	N/A	N/A				2600	2500					2100	2200				1700
Dissolved Nitrogen	mg/L	N/A	N/A				4.9	5.4					4.2	4.4				3.9
Dissolved Oxygen	mg/L	N/A	N/A				1.7	1.8					1.2	1.2				1.2
Laboratory Results - Org						•					•	•			•		•	
Volatile Organic Compoun																		
Benzene	μg/L	5*	9	5,800	4,700	4,600	3,200	3,500	< 250	< 250	3,900	3,500	1,900	2,300	3,500	3,700	3,800	4,000
Carbon Disulfide	μg/L	329	1,700	< 100	< 100	< 100												
Ethylbenzene	μg/L	700*	2,300	1,400	1,100	1,000	900	1,000	< 250	< 250	970	840	390	720				1,500
Toluene	μg/L	1,000*	1,100	< 50	< 50	< 50	< 250	< 250	< 250	< 250	<250	<250	<250	<250				280
Total Xylenes	μg/L	31.000	200,000	750	660	630	410	350	< 250	< 250	450	530	<250	360				1300
Semivolatile Organic Com		01,000	200,000	700	000	000	1 710	000	1 200	\ <u>2</u> 00	700	000	1200	000				1000
Acenaphthene	µg/L	2,000*	6,100	140	150	120												
Acenaphthylene	μg/L	470	3,100	< 1.9	< 2.0	< 0.21												
Anthracene	μg/L	4,700	31,000	0.55	4.0	2.3												
		1.17	3.92		< 2.0	< 0.21												
Benzo[a]anthracene	μg/L	0.2*		< 1.9														1
Benzo[a]pyrene	μg/L	1.17	0.39 3.92	< 1.9	< 2.0	< 0.21												
Benzo[b]fluoranthene	μg/L			< 1.9	< 2.0	< 0.21												
Benzo[g,h,i]perylene	μg/L	10 11.7	10 39.2	< 1.9	< 2.0	< 0.21												
Benzo[k]fluoranthene	μg/L			< 1.9	< 2.0	< 0.21												
Chrysene	μg/L	117	392	< 1.9	< 2.0	< 0.21												
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	< 1.9	< 2.0	< 0.21												
2,4-Dimehylphenol	μg/L	700*	700*	< 19	< 20	< 2.1												
Fluoranthene	μg/L	1,000*	4,100	< 1.9	< 2.0	0.35												
Fluorene	μg/L	1,000*	4,100	38	34	26											-	
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 1.9	< 2.0	< 0.21												
2-Methylphenol	μg/L	780	5,100	< 19	< 20	< 2.1												
3 & 4 Methylphenol	μg/L	78	510	< 19	< 20	< 2.1												
Naphthalene	μg/L	20*	20*	3,900 D	2,100	35	5,500	5,300	< 250	690	7,100	6,900	3,500	5,700	10,000	7,900	4,800	5,600
Phenanthrene	μg/L	470	3,100	36	28	21												
Phenol	μg/L	9,390	61,000	< 9.5	< 10	9.8												
Pyrene	μg/L	1,000*	3,100	< 1.9	< 2.0	0.47												
Inorganic Constituents																		_
Antimony	μg/L	6.3	40	< 20	< 20	< 20												
Arsenic	μg/L	50*	50*	< 20	< 20	< 20												
Barium	μg/L	2,000	7,200	3,000	2,800	2,900	2,900	2,900	130	130	3,100	2,900	3,200	3,200				2,900
Beryllium	μg/L	31	200	< 4.0	< 4.0	< 4.0												
Cadmium	μg/L	7.8	51	< 5.0	< 5.0	< 5.0												
Chromium	μg/L	100	310	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	-	-		< 10
Copper	μg/L	630	4,100	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20				< 20
Lead	μg/L	15*	15*	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10				< 10
Nickel	μg/L	100	2,000	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40				< 40
Zinc	μg/L	4,700	31,000	< 20	< 20	< 20												
Mercury	μg/L	2*	2*	< 0.20	< 0.20	< 0.20												
Total Cyanide	µg/L	310	2,000	13	12	13	11	13					< 10	13				12
Notes:		•				·	• • • • • • • • • • • • • • • • • • • •	· · · · ·		•					•	•	•	

Notes:

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 2 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Standard Units

mS/cm - millisiemens per centimeter

mS/cm - millisemens per centimeter
µS/cm - microsiemens per centimeter
mg/L - milligrams per liter
mV - millivolts
NTU - nephelometric turbidity units
N/A - RRS are not applicable to this parameter

-- Not Analyzed

HF - Holding time of 15 minutes was exceeded

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

### Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017

### Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

		1						MW-	205DD				
Parameter	Units	Type 2 RRS	Type 4 RRS	2/24/2017	8/24/2016	4/6/2016	8/11/2015	2/17/2015	2/17 DUP	8/6/2014	08/14 DUP	2/19/2014	8/8/2013
Field Groundwater Quality Par	rameters					•		•					
рН	SU	N/A	N/A	8.50	9.29	9.31	9.17	9.0	65	8.	95	7.64	11.65
Specific Conductance	μm/cm	N/A	N/A	383.60	296.9	300	246	22	29	19	94	141	1,302
Temperature	°Celsius	N/A	N/A	22.85	28.17	20.84	24.87	14.	.74	23	.84	22.08	22.80
Dissolved Oxygen	mg/L	N/A	N/A	0.49	2.83	1.06	1.01	0.9	91	0.	96	3.42	0.25
ORP	mV	N/A	N/A	26.40	55.6	50.8	-101.4	-49	9.8	-49	9.2	114.6	-155.1
Turbidity	NTU	N/A	N/A	1.29	1.0	6.89	2.4	29	1.9	1.	38	5.31	7.61
Laboratory Results - Natural A	ttenuation Para	meters											
Nitrogen, Nitrate (as N)	mg/L	N/A	N/A									0.28	
Sulfate	mg/L	N/A	N/A									9.3	
Sulfide	mg/L	N/A	N/A						-		-	< 1.0	
Ferrous Iron	mg/L	N/A	N/A									< 0.100	
Total Iron	mg/L	N/A	N/A									0.289	
Carbon Dioxide	mg/L	N/A	N/A						-			< 5.0	
Methane	mg/L	N/A	N/A						-			< 4	
Dissolved Nitrogen	mg/L	N/A	N/A									17	
Dissolved Oxygen	mg/L	N/A	N/A									7.9	
Laboratory Results - Organic	,	•	•				•					=	
Volatile Organic Compounds													
Benzene	μg/L	5*	9	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	84
Carbon Disulfide	µg/L	329	1,700	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	μg/L	700*	2,300	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	6.0
Toluene	µg/L	1,000*	1,100	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Total Xylenes	μg/L	31,000	200,000	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Semivolatile Organic Compound		01,000	200,000	10.0	10.0	1 0.0	10.0	10.0	1 0.0	10.0	1 0.0	10.0	10.0
Acenaphthene	μg/L	2.000*	6.100	2.3	<0.50	0.83	< 0.50	< 10	< 10	< 10	< 10	< 10	< 10
Acenaphthylene	µg/L	470	3,100	<1.0	<1.0	< 1.0	< 1.0	< 10	< 10	< 10	< 10	< 10	< 10
Anthracene	μg/L	4,700	31.000	0.051	0.055	< 0.050	< 0.050	< 10	< 10	< 10	< 10	< 10	< 10
Benzo[a]anthracene	μg/L	1.17	3.92	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20
Benzo[a]pyrene	μg/L	0.2*	0.39	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20
Benzo[b]fluoranthene	μg/L	1.17	3.92	<0.10	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20
Benzo[g,h,i]perylene	μg/L	10	10	<0.10	<0.10	< 0.10	< 0.10	< 10	< 10	< 10	< 10	< 10	< 10
Benzo[k]fluoranthene	μg/L	11.7	39.2	<0.050	<0.050	< 0.050	< 0.050	< 10	< 10	< 10	< 10	< 10	< 10
Chrysene	μg/L	117	392	<0.050	<0.050	< 0.050	< 0.050	< 10	< 10	< 10	< 10	< 10	< 10
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20
2,4-Dimehylphenol	μg/L	700*	700*	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Fluoranthene	μg/L	1,000*	4,100	<0.10	<0.10	< 0.10	< 0.10	< 10	< 10	< 10	< 10	< 10	< 10
Fluorene	μg/L	1,000*	4,100	0.40	<0.10	< 0.10	< 0.10	< 10	< 10	< 10	< 10	< 10	< 10
Indeno[1,2,3-cd]pyrene	μg/L	1,17	3.92	<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20
2-Methylphenol	μg/L μg/L	780	5,100	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3 & 4 Methylphenol	μg/L	780	510	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Naphthalene		20*	20*	<0.50	<0.50	1.1	< 0.50	< 10	< 10	< 10	< 10	< 10	< 10
· ·	μg/L	470	3.100	<0.50 <b>0.068</b>	<0.050	< 0.050	< 0.50	< 10	< 10	< 10	< 10	< 10	< 10
Phenanthrene	μg/L		-,									< 10	
Phenol	μg/L	9,390	61,000	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10		< 10
Pyrene	μg/L	1,000*	3,100	< 0.050	<0.050	< 0.050	< 0.050	< 10	< 10	< 10	< 10	< 10	< 10
Inorganic Constituents					1	,				1	1		
Antimony	μg/L	6.3	40		< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	44.2
Arsenic	μg/L	50*	50*		< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50	< 50
Barium	μg/L	2,000	7,200		30.9	44.8	24.7	33.1	29.8	22.9	21.2	< 20	103
Beryllium	μg/L	31	200		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Cadmium	μg/L	7.8	51		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium	μg/L	100	310		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	14.6
Copper	μg/L	630	4,100		14.4	11.9	12	< 10	< 10	< 10	< 10	12.4	11.4
Lead	μg/L	15*	15*		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Nickel	μg/L	100	2,000		< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	23.3
Zinc	μg/L	4,700	31,000		< 20	< 20	< 20	43.3	29.3	23.8	22.8	78.1	26.5
Mercury	μg/L	2*	2*		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Total Cyanide	μg/L	310	2,000	-	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10

Notes:
Analyte was detected above laboratory detection limit
Analyte concentration exceeds the Type 2 RRS (RRS applicable to the well location)
\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical

\*Highest RRS equals Type 1 RRS; therefore, the ft AMSL - feet Above Mean Sea Level RRS - Risk Reduction Standard SU - Standard Units μS/cm - microsiemens per centimeter μg/L - micrograms per liter mg/L - milligrams per liter mV - millivolts NTU - nephelometric turbidity units NYA - RRS are not applicable to this parameter -- Not Analyzed Values are listed with the laboratory-reported nur

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

### Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017 Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

I											MW-	206D							
Parameter	Units	Type 2 RRS	Type 4 RRS	2/27/2017	4/6/2016	02/17/15	08/05/14	02/18/14	08/08/13	02/08/13	11/08/12		08/12 DUP	05/15/12	02/14/12	11/18/11	08/11/11	05/05/11	02/23/11
Field Groundwater Qua	lity Paramet	ers		2/21/2011	., 0, 20.0	02/	00/00/	02,10,11	00,00,.0	02/00/10	,	00,00,12	00,12 20.	00, 10, 12	02/11/12	,,	00/11/11	00/00/	02/20/11
рН	SU	N/A	N/A	6.23	6.13	6.10	6.10	6.05	5.94	6.11	6.00	5.	99	6.18	6.25	6.33	5.95	6.08	6.05
Specific Conductance	μm/cm	N/A	N/A	518.9	530	560	481	453	463	441	456		65	477	500	473	328	368	440
Temperature	°Celsius	N/A	N/A	21.61	22.36	13.62	24.50	21.60	26.53	21.19	21.75	29	.12	24.98	20.30	21.99	27.97	20.45	21.61
Dissolved Oxygen	mg/L	N/A	N/A	0.11	0.35	0.77	0.51	0.33	1.42	0.27	0.25	0	.2	0.22	0.22	0.31	0.93	0.58	0.19
ORP	mV	N/A	N/A	-4.60	18.1	17.5	-0.2	11.6	-196.8	10.6	-6.8	-6	5.6	-74.4	-75.7	-69.8	22.1	-19.2	-15.4
Turbidity	NTU	N/A	N/A	11.48	5.1	55.7	2.29	4.31	3.22	22.8	4.83	5.	42	1.42	36.9	9.82	57.3	9.9	15.9
Laboratory Results - Na	tural Attenu	ation Parame	ters		•	•	•	•	•	•		•		•		•		•	*
Nitrogen, Nitrate (as N)	mg/L	N/A	N/A					< 0.25		< 0.050					< 0.050				< 0.050
Sulfate	mg/L	N/A	N/A					110		99					5.6				78
Sulfide	mg/L	N/A	N/A					< 1.0		< 1.0					8.8				< 1.0
Ferrous Iron	mg/L	N/A	N/A					4.00		15 HF					4.3 HF				12
Total Iron	mg/L	N/A	N/A					12.8		< 0.10					7.5				22
Carbon Dioxide	mg/L	N/A	N/A					110		70					2.3				1.3
Methane	mg/L	N/A	N/A					54		100					690				100
Dissolved Nitrogen	mg/L	N/A	N/A					20							4.3				4.5
Dissolved Oxygen	mg/L	N/A	N/A					4.4		8.0					1.4				1.5
Laboratory Results - Or		ituents							L.	<u> </u>									
Volatile Organic Compou	<u> </u>	*																	
Benzene	μg/L	5*	9	19	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	1.6	< 1.0	2.7	2.7	19	60	50	< 5.0	< 5.0	< 5.0
Carbon Disulfide	μg/L	329	1,700	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0					
Ethylbenzene	μg/L	700*	2,300	89	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	3.3	< 1.0	1.1	1.1	43	120	100	< 5.0	< 5.0	< 5.0
Toluene	µg/L	1,000*	1,100	6.3	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 50	21	< 5.0	< 5.0	< 5.0
Total Xylenes	μg/L	31,000	200,000	11.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	3.8	< 50	34	< 5.0	< 5.0	< 5.0
Semivolatile Organic Cor		,								_		-		l		l .			
Acenaphthene	μg/L	2.000*	6.100	30	3.3	< 10	< 10	< 10	< 10	< 0.20	13	22	34	18					
Acenaphthylene	µg/L	470	3,100	1.5	4.3	< 10	< 10	< 10	< 10	< 0.20	18	1.4	2.1	2.9					
Anthracene	μg/L	4,700	31,000	0.55	0.10	< 10	< 10	< 10	< 10	< 0.20	< 0.20	0.55	1.1	0.52					
Benzo[a]anthracene	μg/L	1.17	3.92	0.081	0.11	0.10	0.14	0.13	< 0.20	< 0.20	0.23	< 0.19	< 0.20	< 0.21					
Benzo[a]pyrene	µg/L	0.2*	0.39	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20	< 0.20	< 0.20	< 0.19	< 0.20	< 0.21					
Benzo[b]fluoranthene	µg/L	1.17	3.92	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.20	< 0.20	< 0.19	< 0.20	< 0.21					
Benzo[g,h,i]perylene	μg/L	10	10	<0.10	< 0.10	< 10	< 10	< 10	< 10	< 0.20	< 0.20	< 0.19	< 0.20	< 0.21					
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 0.050	< 0.050	< 10	< 10	< 10	< 10	< 0.20	< 0.20	< 0.19	< 0.20	< 0.21					
Chrysene	μg/L	117	392	0.057	0.084	< 10	< 10	< 10	< 10	< 0.20	< 0.20	< 0.19	< 0.20	< 0.21					
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.20	< 0.20	< 0.19	< 0.20	< 0.21					
2,4-Dimehylphenol	μg/L	700*	700*	<10	< 10	< 10	< 10	< 10	< 10	< 2.0	< 2.0	< 1.9	< 2.0	< 2.1					
Fluoranthene	μg/L	1,000*	4,100	1.3	0.54	< 10	< 10	< 10	< 10	< 0.20	1.0	1.3	1.8	1.1					
Fluorene	μg/L	1,000*	4,100	9.50	1.9	< 10	< 10	< 10	< 10	< 0.20	8.3	8.0	13	5.3					
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20	< 0.20	< 0.20	< 0.19	< 0.20	< 0.21					
2-Methylphenol	μg/L	780	5,100	<10	< 10	< 10	< 10	< 10	< 10	< 2.0	< 2.0	< 1.9	< 2.0	< 2.1					
3 & 4 Methylphenol	μg/L	78	510	<10	< 10	< 10	< 10	< 10	< 10	< 2.0	< 2.0	< 1.9	< 2.0	< 2.1					
Naphthalene	μg/L	20*	20*	530	< 0.50	< 10	< 10	< 10	< 10	< 0.20	3.4	28	170 D	180	1,300	990	< 5.0	54	< 5.0
Phenanthrene	μg/L	470	3,100	3.5	0.059	< 10	< 10	< 10	< 10	< 0.20	1.1	0.52	2.9	1.8					
Phenol	μg/L	9,390	61,000	<10	< 10	< 10	< 10	< 10	< 10	< 0.98	< 1.0	< 0.96	< 0.99	< 1.1					
Pyrene	μg/L	1,000*	3,100	3.3	3.6	< 10	< 10	< 10	< 10	< 0.20	4.2	1.9	2.4	3.3					
Inorganic Constituents																			
Antimony	μg/L	6.3	40		< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20					
Arsenic	μg/L	50*	50*		< 50	< 50	< 50	< 50	< 50	< 20	< 20	< 20	< 20	< 20	-				
Barium	μg/L	2,000	7,200		49	120	143	62	86	< 89	62	1,900	1,900	470	2,700	1,900	55	250	170
Beryllium	μg/L	31	200		< 10	< 10	< 10	< 10	< 10	< 4.0	< 4.0	< 4.0	< 4.0	< 4.0	-				
Cadmium	μg/L	7.8	51		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0					
Chromium	μg/L	100	310		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Copper	μg/L	630	4,100		< 10	< 10	< 10	< 10	< 10	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20
Lead	μg/L	15*	15*		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Nickel	μg/L	100	2,000		< 20	< 20	< 20	< 20	< 20	< 40	< 40	110	110	52	130	110	< 40	44	< 40
Zinc	μg/L	4,700	31,000		< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20					
Mercury	μg/L	2*	2*		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20					
Total Cyanide	µg/L	310	2,000		< 10	< 10	< 10	< 10	< 10	< 10	< 10	23	18	15	42				15
Notes:	- · · · · ·		,	•													•	•	

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical

ft AMSL - feet Above Mean Sea Level RRS - Risk Reduction Standard

RRS - Risk Reduction Standard
SU - Standard Units
μS/cm - microsiemens per centimeter
μg/L - micrograms per liter
mg/L - milligrams per liter

mV - millivolts

NTU - nephelometric turbidity units

N/A - RRS are not applicable to this parameter

-- Not Analyzed HF - Holding time of 15 minutes was exceeded

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

### Appendix F Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017 Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

_ 1		Type 2	Type 4										MW-	-207D									
Parameter	Units	RRS	RRS	02/23/17	04/06/16	02/17/15	08/05/14	02/20/14	08/08/13	02/11/13	11/06/12	08/09/12		02/15/12	11/17/11	08/10/11	05/05/11	02/23/11	02/11 DUP	11/09/11	08/10/10	05/11/10	03/17/10
Field Groundwater Qua	lity Paramet				, ,,,,,,,,	52,	30,00,.7	J=,=V, . T	30,00,.0	, ,_,,.0		-0,00,.2	J	32, . 0, . 2		30,.0,.1	30,00,.1	J=,=V, 11		,	20, . 0, . 0	, ,,,,,,,	1 00,
pH	SU	N/A	N/A	6.80	7.01	6.85	7.26	7.00	6.31	6.57	10.62	5.91	6.92	6.63	6.54	6.37	6.65	6.48	6.48	9.74	6.50	6.24	6.51
Specific Conductance	μm/cm	N/A	N/A	543.10	0.500	0.499	0.584	0.493	506	526	326	529	469	473	452	494	473	394	394	231	482	467	485
Temperature	°Celsius	N/A	N/A	22.93	18.23	18.85	26.61	19.20	24.43	22.17	22.25	26.91	24.10	20.66	21.49	26.36	19.18	18.29	18.29	26.91	28.31	23.02	17.29
Dissolved Oxygen	mg/L	N/A	N/A	0.11	0.78	1.67	1.03	0.59	1.28	0.83	0.11	0.25	0.34	3.96	0.35	0.54	0.71	0.45	0.45	1.02	2.82	0.29	0.5
ORP	mV	N/A	N/A	-85.10	-67.9	-58.5	-82.2	183.5	-212.1	-94.9	-46.7	-81.2	-77.3	-83.4	-83.3	-77.2	-112.4	-81.6	-81.6	-14.8	-74.6	-58.7	-75.4
Turbidity	NTU	N/A	N/A	8.45	9.4	45.9	5.38	10.4	1.32	8.71	25	32.0	50.1	9.17	7.83	9.41	7.49	9.41	9.41	5.4	2.3	0.65	22.6
Laboratory Results - Na	atural Attenu	ation Param									,v												
Nitrogen, Nitrate (as N)	mg/L	N/A	N/A					< 0.25		< 0.050				< 0.050				< 0.050	< 0.050				< 0.050
Sulfate	mg/L	N/A	N/A					4.4		< 5.0				< 5.0				< 5.0	< 5.0				< 5.0
Sulfide	mg/L	N/A	N/A	-				< 1.0		< 1.0				2.2				< 1.0	1.3				< 1.0
Ferrous Iron	mg/L	N/A	N/A	-				< 0.100		2.5 HF				1.1 HF				0.96	0.55				1.1
Total Iron	mg/L	N/A	N/A	-				0.687		8.8				5.4				4.1	4.5				5.4
Carbon Dioxide	mg/L	N/A	N/A					22		59				1.1				0.79	0.88				0.67
Methane	mg/L	N/A	N/A	-				48		2000			-	1200				470	530				58
Dissolved Nitrogen	mg/L	N/A	N/A					19						4.9				4.9	4.3				4.0
Dissolved Oxygen	mg/L	N/A	N/A					5.4		7.4				1.7				1.6	1.4				1.3
Laboratory Results - Or	ganic Cons	tituents			•	•	•			•					•	•	•				•	•	
Volatile Organic Compour																							
Benzene	μg/L	5*	9	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	2.9	< 1.0	1.8	1.2	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	18
Carbon Disulfide	μg/L	329	1,700	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0										
Ethylbenzene	μg/L	700*	2,300	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	1.8	< 1.0	1.8	1.8	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0				< 5.0
Toluene	μg/L	1,000*	1,100	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0				< 5.0
Total Xylenes	μg/L	31,000	200,000	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0				< 5.0
Semivolatile Organic Com	npounds																						
Acenaphthene	μg/L	2,000*	6,100	1.4	1.4	< 10	< 10	< 10	14	8.0	2.7	7.0	9.3					-					
Acenaphthylene	μg/L	470	3,100	<1.0	< 1.0	< 10	< 10	< 10	< 10	0.69	0.50	0.76	1.5										
Anthracene	μg/L	4,700	31,000	< 0.050	0.055	< 10	< 10	< 10	< 10	0.24	< 0.20	0.24	0.25					-					
Benzo[a]anthracene	μg/L	1.17	3.92	< 0.050	0.21	< 0.050	< 0.050	< 0.050	< 0.20	< 0.20	< 0.20	< 0.19	< 0.22					-					
Benzo[a]pyrene	μg/L	0.2*	0.39	< 0.050	0.29	< 0.050	< 0.050	< 0.050	< 0.20	< 0.20	< 0.20	< 0.19	< 0.22					-					
Benzo[b]fluoranthene	μg/L	1.17	3.92	< 0.10	0.30	< 0.10	< 0.10	< 0.10	< 0.20	< 0.20	< 0.20	< 0.19	< 0.22										
Benzo[g,h,i]perylene	μg/L	10	10	<0.10	0.43	< 10	< 10	< 10	< 10	< 0.20	< 0.20	< 0.19	< 0.22										
Benzo[k]fluoranthene	μg/L	11.7	39.2	<0.050	0.38	< 10	< 10	< 10	< 10	< 0.20	< 0.20	< 0.19	< 0.22										
Chrysene	μg/L	117	392	<0.050	0.23	< 10	< 10	< 10	< 10	< 0.20	< 0.20	< 0.19	0.22										
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	0.35	< 0.10	< 0.10	< 0.10	< 0.20	< 0.20	< 0.20	< 0.19	< 0.22										
2,4-Dimehylphenol	μg/L	700*	700*	<10	< 10	< 10	< 10	< 10	< 10	< 2.0	< 2.0	< 1.9	< 2.2										
Fluoranthene	μg/L	1,000*	4,100	1.1	0.68	< 10	< 10	< 10	< 10	2.0	1.4	2.0	1.7										
Fluorene	μg/L	1,000*	4,100	0.54	0.28	< 10	< 10	< 10	11	6.5	2.0	5.4	3.1										
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	<0.050	0.38	< 0.050	< 0.050	< 0.050	< 0.20	< 0.20	< 0.20	< 0.19	< 0.22										
2-Methylphenol	μg/L	780	5,100	<10	< 10	< 10	< 10	< 10	< 10	< 2.0	< 2.0	< 1.9	< 2.2										
3 & 4 Methylphenol	μg/L	78	510	<10	< 10	< 10	< 10	< 10	< 10	< 2.0	< 2.0	< 1.9	< 2.2										
Naphthalene	μg/L	20*	20*	<0.50	< 0.50	< 10	< 10	< 10	< 10	7.8	2.7	8.4	3.3	21	15	< 5.0	8.8	61	64	< 5.0	< 5.0	< 5.0	22
Phenanthrene	μg/L	470	3,100	<0.050	0.061	< 10	< 10	< 10	< 10	< 0.20	< 0.20	0.22	0.28										
Phenol	μg/L	9,390	61,000	<10	< 10	< 10	< 10	< 10	< 10	< 0.99	< 0.99	< 0.97	< 1.1										-
Pyrene	μg/L	1,000*	3,100	2.0	1.1	< 10	< 10	< 10	< 10	2.9	1.9	2.6	2.9										
Inorganic Constituents		0.0	40												1				, ,		1	1	
Antimony	μg/L	6.3	40	-	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20										<del></del>
Arsenic	μg/L	50*	50*	-	< 50	< 50	< 50	< 50	< 50	40	41	< 20	< 20										
Barium	μg/L	2,000	7,200	-	2,450	2,890	2,950	1,980	2,920	3,300	230	2,600	2,200	2,400	2,400	2,400	2,300	2,300	2,100	-			2,300
Beryllium	µg/L	31	200	-	< 10	< 10	< 10	< 10	< 10	< 4.0	< 4.0	< 4.0	< 4.0										
Cadmium	μg/L	7.8	51	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0										
Coppor	μg/L	100 630	310 4.100	-	< 10 < 10	< 10	< 10	< 10	< 10	< 10	< 10 <b>37</b>	< 10 <b>27</b>	< 10 <b>44</b>	< 10	< 10	< 10	< 10	< 10	< 10		-		< 10 < 20
Copper	μg/L		,	-		< 10	< 10	< 10	< 10	< 20				< 20	< 20	< 20	< 20	< 20	< 20				
Lead	μg/L	15*	15*	-	< 10	< 10	< 10	< 10	< 10	12	19	25	36	< 10	19	< 10	< 10	< 10	< 10				< 10
Nickel	µg/L	100	2,000	-	54	< 20	< 20	< 20	< 20	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40				< 40
Zinc	µg/L	4,700	31,000		< 20	< 20	< 20	< 20	< 20	31	62	57	98										
Mercury Total Cyanide	μg/L μg/L	2* 310	2* 2,000	-	< 0.20 < 10	< 0.20 <b>3.6</b>	< 0.20 <b>4.3</b>	< 0.20	< 0.20 <b>23</b>	< 0.20 <b>22</b>	< 0.20 < 10	< 0.20 <b>29</b>	< 0.20 <b>24</b>	 14				 19	 19				 53
			/ 000																				

Notes:

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Standard Units

µS/cm - microsiemens per centimeter

μS/cm - microsiemens per centimeter μg/L - micrograms per liter mg/L - milligrams per liter mV - milligrams per liter mV - millivolts NTU - nephelometric turbidity units N/A - RRS are not applicable to this parameter -- Not Analyzed HF - Holding time of 15 minutes was exceeded Values are literal with the laboratory greated and

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

## Appendix F Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017 Atlanta Gas Light Company

ormer	Man	ufact	_		Plant
	M	acon	Geo	rgia	

Parameter	Units	Type 2 RRS	Type 4 RRS	00/00/1=	0.4/0.2/1.2	00/4=/-=	00/01/15	00/45/11	00/07/10		300D	05//5//0	00/55/15	444000	00/4:	05/01/11	00/05**
		• •	71	02/22/17	04/06/16	02/17/15	08/04/15	02/18/14	02/05/13	11/06/12	08/07/12	05/15/12	02/09/12	11/18/11	08/11/11	05/04/11	02/22/1
ield Groundwater Quality	SU SU	rs N/A	N/A	6.11	6.13	6.05	6.03	6.02	6.04	5.98	5.46	6.66	6.53	6.2	6.16	6.13	6.23
Specific Conductance	μm/cm	N/A	N/A	540	292	384	378	158	399	396	420	431	518	390	453	419	421
emperature	°Celsius	N/A	N/A	20.70	17.77	16.29	24.89	20.89	20.37	20.90	22.72	23.84	16.90	19.76	25.76	21.39	21.8
Dissolved Oxygen	mg/L	N/A	N/A	0.11	0.79	0.88	0.37	0.86	1.00	2.41	1.12	0.13	1.11	0.32	0.33	0.24	0.16
)RP	mV	N/A	N/A	5.30	66.1	21.6	14.2	96.1	23.6	-18.6	16.3	-78.8	-55.7	-63.6	150.5	-90.6	-32.0
urbidity	NTU	N/A	N/A	3.69	0.83	0.44	2.67	0.88	2.48	3.12	0.90	0.21	9.72	5.06	9.12	4.20	0.79
aboratory Results - Natu	ural Attenua	tion Parameter	s	-													
litrogen, Nitrate (as N)	mg/L	N/A	N/A					< 0.25	< 0.050				< 0.050				< 0.0
Sulfate	mg/L	N/A	N/A					2.0	< 5.0				< 5.0				5.1
Sulfide	mg/L	N/A	N/A					< 1.0	< 1.0				1.4				< 1.
errous Iron	mg/L	N/A	N/A					< 0.100	6.8 HF				9.1 HF				3.8
otal Iron Carbon Dioxide	mg/L mg/L	N/A N/A	N/A N/A					<b>0.425</b> < 5.0	6.3 55				9.5 0.98				0.6
Methane	mg/L	N/A	N/A					5	32				650				1.2
Dissolved Nitrogen	mg/L	N/A	N/A					19	23				5.7				4.2
Dissolved Oxygen	mg/L	N/A	N/A					9.5	7.4				1.7				1.4
aboratory Results - Orga					ı		ı			ı	ı	ı		ı	1		1
olatile Organic Compound																	
Benzene	μg/L	5*	9	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5
Carbon Disulfide	μg/L	329	1,700	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0					
thylbenzene	μg/L	700*	2,300	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5
oluene	μg/L	1,000*	1,100	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 1.0	< 1.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5
otal Xylenes	μg/L	31,000	200,000	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5
Semivolatile Organic Comp		0.000+	0.400	.0.50	.0.50	. 10	. 40	. 40	. 0.40	. 0.00		. 0.00		1	1	1	
cenaphthene	μg/L	2,000*	6,100	<0.50	< 0.50	< 10	< 10	< 10	< 0.19	< 0.20	< 0.20	< 0.22					-
cenaphthylene	μg/L	470 4,700	3,100 31,000	<1.0 <0.050	< 1.0 < 0.050	< 10 < 10	< 10 < 10	< 10 < 10	< 0.19 < 0.19	< 0.20 < 0.20	< 0.20 < 0.20	< 0.22 < 0.22					<del>  -</del>
Anthracene Benzo[a]anthracene	μg/L μg/L	1.17	31,000	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.19	< 0.20	< 0.20	< 0.22					-
Benzo[a]pyrene	μg/L μg/L	0.2*	0.39	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.19	< 0.20	< 0.20	< 0.22					-
Benzo[b]fluoranthene	μg/L μg/L	1.17	3.92	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.19	< 0.20	< 0.20	< 0.22					
Benzo[g,h,i]perylene	μg/L	10	10	<0.10	< 0.10	< 10	< 10	< 10	< 0.19	< 0.20	< 0.20	< 0.22					-
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 0.050	< 0.050	< 10	< 10	< 10	< 0.19	< 0.20	< 0.20	< 0.22					-
Chrysene	μg/L	117	392	< 0.050	< 0.050	< 10	< 10	< 10	< 0.19	< 0.20	< 0.20	< 0.22					
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.19	< 0.20	< 0.20	< 0.22					
,4-Dimehylphenol	μg/L	700*	700*	<10	< 10	< 10	< 10	< 10	< 1.9	< 2.0	< 2.0	< 2.2					
luoranthene	μg/L	1,000*	4,100	<0.10	< 0.10	< 10	< 10	< 10	< 0.19	< 0.20	< 0.20	< 0.22					
luorene	μg/L	1,000*	4,100	<0.10	< 0.10	< 10	< 10	< 10	< 0.19	< 0.20	< 0.20	< 0.22					
ndeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.19	< 0.20	< 0.20	< 0.22					
-Methylphenol	µg/L	780	5,100 510	<10	< 10	< 10	< 10	< 10	< 1.9	< 2.0	< 2.0 < 2.0	< 2.2					
& 4 Methylphenol Japhthalene	μg/L μg/L	78 20*	20*	<10 <0.50	< 10 < 0.50	< 10 < 10	< 10 < 10	< 10 < 10	< 1.9 < 0.19	< 2.0 < 0.20	< 0.20	< 2.2 < 0.22	< 5.0	 < 5.0	 < 5.0	< 5.0	< 5
Phenanthrene	μg/L μg/L	470	3,100	<0.050	< 0.050	< 10	< 10	< 10	< 0.19	< 0.20	< 0.20	< 0.22	< 5.0	< 5.0	< 5.0	< 5.0	< 5
Phenol	μg/L	9,390	61,000	<10	< 10	< 10	< 10	< 10	< 0.13	< 1.0	< 1.0	< 1.1					
Pyrene	μg/L	1,000*	3,100	<0.050	< 0.050	< 10	< 10	< 10	< 0.19	< 0.20	< 0.20	< 0.22					-
norganic Constituents	F-5	.,,,,,,	-,										I.			1	
Intimony	µg/L	6.3	40		< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20					
rsenic	μg/L	50*	50*		< 50	< 50	< 50	< 50	< 20	< 20	< 20	< 20					
Barium	μg/L	2,000	7,200		1,270	1,550	1,520	619	1,500	1,600	1,700	1,500	1,700	1,600	1,600	1,700	1,50
Beryllium	μg/L	31	200		< 10	15.1	11.3	< 10.0	18	19	19	17					-
Cadmium	μg/L	7.8	51		52.1	< 5.0	< 5.0	20.3	< 5.0	< 5.0	< 5.0	< 5.0					-
Chromium	μg/L	100	310		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1
Copper	µg/L	630	4,100		< 10	< 10	< 10	< 10	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 2
ead	µg/L	15*	15*		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 1
lickel	μg/L	100	2,000		55.8	25.3	25.1	< 20.0	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 4
linc	μg/L μg/L	4,700 2*	31,000 2*		<b>770</b> < 0.20	<b>52.2</b> < 0.00020	<b>88.4</b> < 0.00020	<b>39.1</b> < 0.00020	<b>28</b> < 0.20	<b>22</b> < 0.20	<b>27</b> < 0.20	<b>25</b> < 0.20					
1ercury	μg/L μg/L	310	2,000		< 10.0	< 0.00020	< 0.00020	< 0.00020	< 10	< 0.20	< 0.20	< 0.20	< 10	<del>-</del>			< 1
Mercury Total Cyanide			2,000		\ 10.0	\ 0.010	< 0.010	< 0.010	\ 10	< 10	\ 10	_ 10	\ 10				_ \

# Appendix F Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017 Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

ameters	Type 4 RRS	02/21/17	08/23/16	04/07/16	08/13/15	02/17/15	08/07/14	02/20/14	08/07/13	02/07/13	02/13 DUP	MW-301D 11/07/12	11/12 DUP	08/09/12	05/16/12	05/12 DUP	02/16/12	02/12 DUP	11/15/11	08/10/11	05/04/11	02/24
unicicio																						
U N/A	N/A	6.06	6.12	6.07	6.13	6.10	7.28	6.26	5.62	6	33	6.	12	5.82	6	.38	5.	96	6.07	6.07	5.99	6
/cm N/A	N/A	774	352.7	842	586	747	748.0	598.0	572		26	56		619		37		47	529	478	459	
Isius N/A	N/A	20.53	27.77	17.10	22.07	13.45	23.12	18.36	22.03	16	.68	18	.79	24.00	24	.49	20	.44	23.5	24.18	20.40	2
g/L N/A	N/A	0.29	0.20	0.29	0.05	3.51	0.18	0.48	0.41	0	64	0.:	21	1.27	0	.25	1.	98	0.37	1.31	0.54	(
ıV N/A	N/A	-17.00	-47.9	-82.9	-104.9	-98.3	-160.5	-78.2	-190.8	-8	2.6	-16	7.4	3.0	-6	5.8	-65	5.9	-128.9	-98.1	-71.8	-7
TU N/A	N/A	0.50	3.6	3.24	0.86	1.41	0.00	7.12	0.4	0	68	0.	91	4.32	5	.56	3.:	23	7.68	4.96	4.38	9
ttenuation Paramet	ers																					
g/L N/A	N/A							< 0.25		< 0.050	< 0.050						< 0.050	< 0.050				<
g/L N/A	N/A							2.6		2.0	2.4						12	12			-	<
	N/A										7.1 HF							4.9 HF			-	
	N/A										7.0							5.8				
																						(
										26	24											
·										-												
	N/A							2.0		5.4	3.8						1.9	1.9			-	
Constituents																						
n I ===															- 10			=-			070	
g/L 5*																						
																						<u> </u>
	200,000	<5.0	V.6>	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0	< 2.0	< 10	< 2.0	< 10	< 5.0	< 50	< 50	< 10	< 10	130	
	6 100	0.75	0.97	0.58	0.51	< 10	< 10	< 10	< 10	< 2 N	< 20	0.26	0.24	< 0.10	< 22	< 22				I		
				_																		
g/L 10						< 10		< 10														
g/L 11.7	39.2	< 0.050	< 0.050	< 0.050	< 0.050	< 10	< 10	< 10	< 10	< 2.0	< 2.0	< 0.20	< 0.20	< 0.19	< 2.2	< 2.2					-	
g/L 117	392	< 0.050	< 0.050	< 0.050	< 0.050	< 10	< 10	< 10	< 10	< 2.0	< 2.0	< 0.20	< 0.20	< 0.19				-			-	
g/L 0.3*	0.39	<0.10	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 2.0	< 2.0	< 0.20	< 0.20	< 0.19	< 2.2	< 2.2					-	
g/L 700*	700*	<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 20	< 20	< 2.0	< 2.1	< 1.9	< 22	< 22						
g/L 1,000*	4,100	0.16	< 0.10	< 0.10	< 0.10	< 10	< 10	< 10	< 10	< 2.0	< 2.0	< 0.20	< 0.21	< 0.19	< 2.2	< 2.2					-	-
g/L 1,000*	4,100	3.8	0.77	2.7	2.3	< 10	< 10	< 10	< 10	< 2.0	< 2.0	1.3	1.8	< 0.19	< 2.2	< 2.2						-
g/L 1.17	3.92	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050				< 2.0	< 2.0	< 0.20	< 0.21	< 0.19								
·																						-
																						-
																				1		39
																						-
																	1			1		<del>                                     </del>
J/L 1,000	3,100	<u> </u>	0.91	0.070	0.000	< 10	< 10	< 10	< 10	< 2.0	< 2.0	< 0.20	< 0.20	< 0.19	< 2.2	< 2.2					-	
v/I 6.2	40		- 20	- 20	- 20	- 20	z 20	- 20	- 20	- 20	- 20	× 20	- 20	- 20	- 20	- 20				1		Ι.
		+															2500	2600	2500	2100	2300	14
																						- 13
																					-	
g/L 100					< 10	< 10				< 10	< 10	< 10	< 10		< 10		< 10	< 10	< 10			<
1/L 630	4,100		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	<
g/L 15*	15*		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	<
g/L 100	2,000		< 20	43.4	< 20	< 20	< 20	< 20	< 20	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	<
g/L 4,700	31,000		< 20	< 20.0	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20	< 20					-	
g/L 2*	2*		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20						
g/L 310	2,000		<10	121	43	87	106	62	83	84	81	93	96	< 10	85	91	96	86				
9/19/19/19/19/19/19/19/19/19/19/19/19/19	N/A	N/A	N/A   N/A   N/A		N/A	N/A	N/A   N/A   N/A	N/A   N/A   N/A	N/A	N/A	NNA	N/A	N/A   N/A	N/A	N/A	NA NA NA	NA NA NA	NA NA	NA NA	NA NA	NA   NA	NA   NA

## Appendix F Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017 Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

	T	ı	1						MW-302D						1				MW-	302DD				
Parameter	Units	Type 2 RRS	Type 4 RRS	02/21/17	04/07/16	08/12/15	02/18/15	08/07/14	02/19/14	08/08/13	02/08/13	11/07/12	11/15/11	02/24/11	02/23/17	08/24/16	04/07/16	08/12/15	02/17/15	08/07/14	02/19/14	02/19/14 DUP	08/08/13	08/13 DUP
Field Groundwater Qua	lity Paramete	rs															. ,							
рН	SU	N/A	N/A	5.69	5.72	5.67	5.67	5.93	5.79	5.73	5.91	5.83	6.11	6.51	7.46	7.49	7.50	7.47	7.77	7.54	7.		7.	.31
Specific Conductance	μm/cm	N/A	N/A	1028.2	1202	1.068	1.173	0.957	1.052	1690	1502	1862	1432	1069	557.3	677.3	0.732	0.616	0.665	0.678	0.5			677
Temperature	°Celsius	N/A	N/A	22.62	24.69	26.87	15.17	28.41	23.33	24.19	13.32	20.79	21.39	21.05	22.27	23.42	21.98	26.20	14.48	29.20	20.			3.24
Dissolved Oxygen	mg/L	N/A	N/A	6.21	0.20	0.18	0.58	0.55	0.54	0.45	0.94	0.17	0.22	0.09	0.21	0.29	0.16	0.26	1.18	0.56	0.3			.87
Turbidity	mV NTU	N/A N/A	N/A N/A	25.1 12.65	-113.3 5.22	-64.0 4.07	-45.4 4.33	3.2 15.3	-12.0 8.87	-32.5 9.42	-8.3 9.2	-77.1 2.25	-89 6.67	-74 8.62	-167.7 2.64	-296.3 6.8	-240.1 2.96	-215.9 31.9	-169.5 4.42	-136.6 2.85	-14 1.9			02.9 .82
Laboratory Results - Na				12.00	5.22	4.07	4.33	15.3	0.07	9.42	9.2	2.25	0.07	0.02	2.04	0.0	2.90	31.9	4.42	2.00	1.:	90	4.	02
Nitrogen, Nitrate (as N)	mg/L	N/A	N/A						< 2.5		< 0.050			< 0.050							< 0.25	< 0.25		
Sulfate	mg/L	N/A	N/A						470		1.0			400				_			28.0	27.0		
Sulfide	mg/L	N/A	N/A						< 1.0		< 1.0			< 1.0							< 1.0	< 1.0		
Ferrous Iron	mg/L	N/A	N/A						6.04		31 HF			9.3							0.112	0.112		
Total Iron	mg/L	N/A	N/A						6.84		< 0.10			15				-			1.25	1.27		
Carbon Dioxide	mg/L	N/A	N/A						190		30			0.99							6.4	5.6		
Methane	mg/L	N/A	N/A						35		44			24				-			100	98		
Dissolved Nitrogen	mg/L	N/A N/A	N/A N/A						24					4.2				-			16	17		
Dissolved Oxygen Laboratory Results - Or	mg/L		IN/A						2.4		10			1.4				-	-		2.2	2.9	-	
Volatile Organic Compou	<u> </u>	lueilts																						
Benzene	μq/L	5*	9	5.4	< 5.0	15	12	< 5.0	550	< 5.0	15	5.9	34	25	6.4	24	20	11	13	7.6	35	35	810	780
Carbon Disulfide	μg/L	329	1,700	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 2.0	< 2.0			<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	μg/L	700*	2,300	<5.0	< 5.0	5.8	< 5.0	32	31	11	12	5.4	< 5.0	< 5.0	<5.0	33	48	30	45	< 5.0	15	14	55	55
Toluene	μg/L	1,000*	1,100	<5.0	< 5.0	19	12	< 5.0	610	49	1.4	16	36	< 5.0	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	17	16
Total Xylenes	μg/L	31,000	200,000	<5.0	6.8	16	13	< 5.0	170	39	10	15	21	< 5.0	<5.0	6.8	5.4	< 5.0	< 5.0	7.2	17	16	61	63
Semivolatile Organic Cor												•		•		•								
Acenaphthene	μg/L	2,000*	6,100	2.5	0.75	4.6	< 10 17	< 10	< 10	< 10	< 0.24	7.0			<0.50	1.4	1.1	1.0	< 10	< 10	< 10	< 10	< 10	< 10
Acenaphthylene Anthracene	µg/L	470 4.700	3,100 31,000	7.2 1.9	<b>1.5</b> < 0.050	21 4.1	< 10	< 10 < 10	< 10 < 10	<b>42</b> < 10	< 0.24 < 0.24	29 3.5			<1.0 <0.050	1.2 0.066	< 1.0 <b>0.057</b>	1.8 0.083	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10
Benzo[a]anthracene	μg/L μg/L	1.17	3.92	<0.050	< 0.050	0.053	0.26	0.069	0.18	0.31	< 0.24	0.21			<0.050	< 0.050	< 0.057	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20	< 0.20
Benzo[a]pyrene	μg/L	0.2*	0.39	<0.050	< 0.050	< 0.050	0.28	0.053	0.19	0.27	< 0.24	< 0.20			<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.20	< 0.20
Benzo[b]fluoranthene	µg/L	1.17	3.92	<0.10	< 0.10	< 0.10	0.22	< 0.10	0.17	< 0.20	< 0.24	< 0.20			<0.10	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.20
Benzo[g,h,i]perylene	μg/L	10	10	<0.10	< 0.10	< 0.10	< 10	< 10	< 10	< 10	< 0.24	< 0.20		-	<0.10	<0.10	< 0.10	< 0.10	< 10	< 10	< 10	< 10	< 10	< 10
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 0.050	< 0.050	< 0.050	< 10	< 10	< 10	< 10	< 0.24	< 0.20			< 0.050	< 0.050	< 0.050	< 0.050	< 10	< 10	< 10	< 10	< 10	< 10
Chrysene	μg/L	117	392	< 0.050	< 0.050	< 0.050	< 10	< 10	< 10	< 10	< 0.24	0.21			< 0.050	< 0.050	< 0.050	< 0.050	< 10	< 10	< 10	< 10	< 10	< 10
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.20	< 0.24	< 0.20			<0.10	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.13	< 0.20	< 0.20
2,4-Dimehylphenol	μg/L	700* 1.000*	700* 4.100	<10 <b>0.96</b>	< 10 <b>0.20</b>	< 10 2.2	< 10 < 10	< 10 < 10	< 10 < 10	< 10	< 2.4	< 2.0 <b>2.1</b>			<10	<10	< 10 < 0.10	< 10 < 0.10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10 < 10	< 10
Fluoranthene Fluorene	μg/L μg/L	1,000*	4,100	6.8	0.20	9.0	< 10 12	< 10	< 10	< 10 <b>15</b>	< 0.24	18			<0.10 <b>0.24</b>	<0.10 <b>0.77</b>	< 0.10 <b>0.55</b>	< 0.10 <b>0.68</b>	< 10	< 10	< 10	< 10	< 10	< 10 < 10
Indeno[1,2,3-cd]pyrene	μg/L μg/L	1,000	3.92	<0.050	< 0.050	< 0.050	0.087	< 0.050	0.080	< 0.20	< 0.24	< 0.20			<0.050	<0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.072	< 0.20	< 0.20
2-Methylphenol	μg/L	780	5,100	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 2.4	< 2.0			<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
3 & 4 Methylphenol	μg/L	78	510	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 2.4	< 2.0			<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Naphthalene	μg/L	20*	20*	5.5	< 0.50	170	120	130	300	200	< 0.24	250	170	13	< 0.50	22	73	< 0.050	< 10	< 10	< 10	< 10	180	140
Phenanthrene	μg/L	470	3,100	11	0.058	21	15	< 10	17	21	< 0.24	26			< 0.050	0.13	0.19	0.17	< 10	< 10	< 10	< 10	< 10	< 10
Phenol	μg/L	9,390	61,000	<10	< 10	< 10	< 10	< 10	< 10	< 10	< 1.2	< 0.99			<10	<10	< 10	< 10	< 10	< 10	< 10	< 10	19	28
Pyrene	μg/L	1,000*	3,100	1.2	0.39	2.7	< 10	< 10	< 10	< 10	< 0.24	2.6			< 0.050	0.12	0.066	0.058	< 10	< 10	< 10	< 10	< 10	< 10
Inorganic Constituents		0.0	40		00	00	00	00	00	00	00	00		1	ī	- 00	00	00	00	00	00	00	00	- 00
Antimony Arsenic	μg/L μg/L	6.3 50*	40 50*		< 20 < 50	< 20 < 50	< 20 < 50	< 20 < 50	< 20 < 50	< 20 < 50	< 20 < 20	< 20 < 20				< 20 < 50	< 20 < 50	< 20 < 50	< 20 < 50	< 20 < 50	< 20 < 50	< 20 < 50	< 20 < 50	< 20 < 50
Barium	μg/L μg/L	2.000	7.200		55.3	60.6	< 50 <b>68.7</b>	< 50 <b>71.5</b>	< 50 48	26.3	< 20 <b>24</b>	<b>26</b>	130	210		< 50 <b>808</b>	< 50 <b>865</b>	819	<b>757</b>	< 50 654	< 50 <b>546</b>	< 50 554	< 50 <b>601</b>	613
Beryllium	μg/L	31	200		< 10	< 10	< 10	< 10	< 10	< 10	< 4.0	< 4.0				< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Cadmium	μg/L	7.8	51		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0				< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium	µg/L	100	310		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Copper	μg/L	630	4,100		< 10	< 10	< 10	< 10	< 10	< 10	< 20	< 20	< 20	< 20		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Lead	μg/L	15*	15*		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10		< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Nickel	μg/L	100	2,000	-	73.1	< 20.0	< 20.0	< 20	< 20	< 20	< 40	< 40	< 40	< 40		36.1	35.8	< 0.0200	< 20	< 20	< 20	< 20	< 20	< 20
Zinc	μg/L	4,700	31,000		< 20	35	124	< 20	31.2	43.3	< 20	< 20				< 20	< 20	0.0686	< 20	< 20	< 20	< 20	< 20	< 20
Mercury	µg/L	2*	2*		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20				< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Total Cyanide	μg/L	310	2,000		< 10	< 10	0.017	0.189	0.425	382	< 10	< 10		32		< 10	< 10	42	24	69	38	39	70	63
Notes:																								

Notes:

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

'Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical

ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Standard Units

µS/cm - microsiemens per centimeter

µg/L - militgrams per liter

my/- milligrams per liter

my/- milligrams per liter

my/- milligrams per liter

my/- ribligrams per liter

my/- ribligrams per liter

hov - nephelometric turbidity units

NTU - nephelometric turbidity units

NTU - RRS are not applicable to this parameter

-- Not Analyzed

HF - Holding time of 15 minutes was exceeded

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

## Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017

### Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

_								MW-303D (	Abandoned)				
Parameter	Units	Type 2 RRS	Type 4 RRS	08/07/13	03/13/13	11/08/12	08/09/12	05/17/12	02/16/12	11/16/11	08/09/11	05/03/11	03/14/11
ield Groundwater Qualit	y Parameter	s											
Н	SU	N/A	N/A	6.61	6.94	6.45	6.44	7.01	6.94	6.81	6.43	6.42	5.64
Specific Conductance	μm/cm	N/A	N/A	147	133	125	176	170	152	183	172	156	194
Temperature	°Celsius	N/A	N/A	26.22	19.19	18.9	25.32	25.72	20.25	23.04	23.71	20.77	21.97
Dissolved Oxygen	mg/L	N/A	N/A	0.12	2.72	0.71	0.48	3.49	3.17	0.18	0.11	0.07	0.08
ORP	mV	N/A	N/A	-75.6	-104.1	-65.1	-85.4	72.5	-88.1	-120.3	158.5	-87.2	13.0
Turbidity	NTU	N/A	N/A	2.32	9.97	0.72	1.79	2.36	9.85	9.8	6.52	20.1	21.4
aboratory Results - Natu	ıral Attenuat	ion Parameters			•		•		•			•	•
Nitrogen, Nitrate (as N)	mg/L	N/A	N/A		< 0.050				< 0.050				< 0.050
Sulfate	mg/L	N/A	N/A		5.0				< 5.0				< 5.0
Sulfide	mg/L	N/A	N/A		1.2				1.9				< 1.0
errous Iron	mg/L	N/A	N/A		< 0.10 HF				0.90 HF				0.38
Total Iron	mg/L	N/A	N/A		1.6				2.6				1.7
Carbon Dioxide	mg/L	N/A	N/A		10				0.33				0.18
Methane	mg/L	N/A	N/A		130				680				6.9
Dissolved Nitrogen	mg/L	N/A	N/A		18				6000				4.8
Dissolved Oxygen	mg/L	N/A	N/A		8.5				1.8				1.5
aboratory Results - Orga					0.0		l.	ı	1.0		ı	t.	1.0
olatile Organic Compound		401110											
Benzene	μg/L	5*	9	31	5.0	30	3.1	< 1.0	16	20	34	40	56
Carbon Disulfide	μg/L μg/L	329	1,700	< 5.0	< 2.0	< 2.0	< 2.0	< 2.0					
Ethylbenzene	μg/L μg/L	700*	2.300	< 5.0 <b>6.0</b>	1.2	6.3	< 1.0	< 1.0	< 5.0	< 5.0	6.2	8.6	10
oluene	μg/L μg/L	1,000*	1,100	< 5.0	< 1.0	3.0	< 1.0	< 1.0	< 5.0	< 5.0	< 5.0	5.2	9.1
otal Xylenes		31,000	200,000	14	< 2.0	14	< 2.0	< 2.0	8.8	15	30	49	54
Gemivolatile Organic Comp	µg/L	31,000	200,000	14	< 2.0	14	< 2.0	< 2.0	0.0	13	30	49	34
		2.000*	6.100	. 10	0.33	4.0	< 0.19	< 0.23			I		I
Acenaphthene	μg/L	2,000*	-,	< 10		1.8							
Acenaphthylene	μg/L	470	3,100	< 10	< 0.19	< 0.19	< 0.19	< 0.23					
Anthracene	μg/L	4,700	31,000	< 10	< 0.19	< 0.19	< 0.19	< 0.23					
Benzo[a]anthracene	μg/L	1.17	3.92	< 0.20	< 0.19	< 0.19	< 0.19	< 0.23					
Benzo[a]pyrene	μg/L	0.2*	0.39	< 0.20	< 0.19	< 0.19	< 0.19	< 0.23				-	
Benzo[b]fluoranthene	μg/L	1.17	3.92	< 0.20	< 0.19	< 0.19	< 0.19	< 0.23					
Benzo[g,h,i]perylene	μg/L	10	10	< 10	< 0.19	< 0.19	< 0.19	< 0.23					
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 10	< 0.19	< 0.19	< 0.19	< 0.23					
Chrysene	μg/L	117	392	< 10	< 0.19	< 0.19	< 0.19	< 0.23					
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	< 0.20	< 0.19	< 0.19	< 0.19	< 0.23					
2,4-Dimehylphenol	μg/L	700*	700*	< 10	< 1.9	3.2	< 1.9	< 2.3					
-luoranthene	μg/L	1,000*	4,100	< 10	< 0.19	< 0.19	< 0.19	< 0.23					
luorene	μg/L	1,000*	4,100	< 10	< 0.19	0.3	< 0.19	< 0.23					
ndeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.20	< 0.19	< 0.19	< 0.19	< 0.23					
2-Methylphenol	μg/L	780	5,100	< 10	< 1.9	< 1.9	< 1.9	< 2.3					
8 & 4 Methylphenol	μg/L	78	510	< 10	< 1.9	< 1.9	< 1.9	< 2.3					
Naphthalene	μg/L	20*	20*	31	< 0.19	43	< 0.19	< 0.23	28	42	110 *	170	140
Phenanthrene	μg/L	470	3,100	< 10	< 0.19	1.8	< 0.19	< 0.23					
Phenol	μg/L	9,390	61,000	< 10	< 0.97	< 0.97	< 0.97	< 1.1					
Pyrene	μg/L	1,000*	3,100	< 10	< 0.19	< 0.19	< 0.19	< 0.23					
norganic Constituents													
Intimony	μg/L	6.3	40	< 20	< 20	< 20	< 20	< 20					
rsenic	μg/L	50*	50*	< 50	< 20	< 20	< 20	< 20					
Barium	μg/L	2,000	7,200	649	630	610	760	640	730	830	760	830	850
eryllium	μg/L	31	200	< 10	< 4.0	< 4.0	< 4.0	< 4.0					
admium	μg/L	7.8	51	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0					
hromium	μg/L	100	310	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	11	< 10
Copper	μg/L	630	4,100	< 10	< 20	< 20	< 20	< 20	< 20	< 20	< 20	20	< 20
ead	μg/L	15*	15*	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
lickel	μg/L	100	2,000	< 20.	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40	< 40
linc	μg/L	4,700	31,000	32.5	< 20	< 20	< 20	< 20					
	μg/L	2*	2*	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20					
Mercury													

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical

ft AMSL - feet Above Mean Sea Level RRS - Risk Reduction Standard

RRS - Risk Reduction Standard
SU - Standard Units
μS/cm - microsiemens per centimeter
μg/L - micrograms per liter
mg/L - milligrams per liter

mV - millivolts

NTU - nephelometric turbidity units

N/A - RRS are not applicable to this parameter

-- Not Analyzed
HF - Holding time of 15 minutes was exceeded

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

4th Semiannual Progress Report May 2017 ERM

# Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017

### Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

							MW-305D			
Parameter	Units	Type 2 RRS	Type 4 RRS	02/27/17	08/25/16	04/07/16	08/13/15	02/18/15	08/07/14	02/20/14
Field Groundwater Quality Parameters										
pH	SU	N/A	N/A	12.36	12.13	12.13	12.28	12.56	12.30	11.97
Specific Conductance	μm/cm	N/A	N/A	5070.3	648.7	5,247	2,966	3,696	2,987	2,224
Temperature	°Celsius	N/A	N/A	21.05	26.70	23.92	26.30	11.21	23.22	22.08
Dissolved Oxygen	mg/L	N/A	N/A	3.56	0.76	4.63	0.34	3.06	0.29	0.46
ORP	mV	N/A	N/A	-47.4	-105.2	-44.3	-183.3	13.1	-152.2	-161.3
Turbidity	NTU	N/A	N/A	1.46	5.4	2.89	2.3	2.48	3.15	2.09
Laboratory Results - Natural Attenuation	Parameters									
Nitrogen, Nitrate (as N)	mg/L	N/A	N/A							< 2.5
Sulfate	mg/L	N/A	N/A	-	-		-	-		< 10
Sulfide	mg/L	N/A	N/A					-		< 1.0
Ferrous Iron	mg/L	N/A	N/A							< 0.100
Total Iron	mg/L	N/A	N/A				-			< 0.100
Carbon Dioxide	mg/L	N/A	N/A							< 5.0
Methane	mg/L	N/A	N/A							13
Dissolved Nitrogen	mg/L	N/A	N/A							17
Dissolved Oxygen	mg/L	N/A	N/A							4.1
Laboratory Results - Organic Constituent	ts									
Volatile Organic Compounds										
Benzene	μg/L	5*	9	9,600	22,000	14,000	3,700	11,000	9,300	12,000
Carbon Disulfide	μg/L	329	1,700	<250	<250	< 5.0	< 5.0	< 500	< 500	< 500
Ethylbenzene	μg/L	700*	2,300	250	770	290	49	< 500	< 500	< 500
Toluene	ug/L	1.000*	1,100	5.000	12.000	6.900	1,600	4.500	3,900	5,600
Total Xylenes	μg/L	31,000	200,000	960	3,000	1100	270	< 500	< 500	810
Semivolatile Organic Compounds	<u> </u>	01,000	200,000		0,000			1000	1000	0.0
Acenaphthene	μg/L	2,000*	6,100	3.3	13	2.5	2.7	< 10	< 10	< 10
Acenaphthylene	µg/L	470	3,100	51	200	51	12	73	79	78
Anthracene	µg/L	4,700	31,000	1.5	7.9	9.1	3.4	< 10	< 10	< 10
Benzo[a]anthracene	μg/L	1.17	3.92	0.099	0.21	0.14	1.3	0.64	2.6	0.45
Benzo[a]pyrene	μg/L	0.2*	0.39	<0.050	<0.050	0.077	0.91	0.49	1.90	0.16
Benzo[b]fluoranthene	μg/L	1.17	3.92	0.12	<0.10	0.16	1.1	0.45	1.6	0.18
Benzo[g,h,i]perylene	µg/L	10	10	<0.10	0.15	< 1.0	0.36	< 10	< 10	< 10
Benzo[k]fluoranthene	µg/L	11.7	39.2	<0.050	<0.050	< 0.050	0.24	< 10	< 10	< 10
Chrysene	μg/L	117	392	0.076	0.16	0.11	1.0	< 10	< 10	< 10
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	0.18	< 1.0	0.32	< 0.10	< 0.10	< 0.10
2,4-Dimehylphenol	μg/L	700*	700*	<10	<10	< 50	< 50	< 10	< 10	< 10
Fluoranthene	μg/L	1,000*	4,100	1.1	4.1	1.1	4.3	< 10	< 10	< 10
Fluorene	μg/L μg/L	1,000*	4,100	9.0	46	7.2	7.8	21	24	22
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	<0.050	0.12	< 0.050	0.32	0.13	0.56	< 0.050
2-Methylphenol	μg/L	780	5,100	<10	<10	< 50	< 50	< 10	< 10	< 10
3 & 4 Methylphenol	μg/L μg/L	78	510	<10	<10	< 50	< 50 < 50	< 10	< 10	< 10
Naphthalene	μg/L μg/L	20*	20*	3,500	9,600	3600	220	1,300	1,100	2,000
Phenanthrene		470	3,100	9.3	52	10	16	33	39	37
Phenol	μg/L μg/L	9,390	61,000	<b>9.3</b> <10	<10	< 10	< 50	< 10	< 10	< 10
Pyrene	μg/L	1,000*	3,100	1.1	5.1		5.7		< 10	< 10
Inorganic Constituents	µg/L	1,000	3,100	1.1	J. 1	1.5	J./	< 10	< 10	< 10
		6.3	40		00	00	00	00	00	00
Antimony	µg/L	6.3	40		< 20	< 20	< 20	< 20	< 20	< 20
Arsenic	µg/L	50*	50*		< 50	< 50	< 50	< 50	< 50	< 50
Barium	µg/L	2,000	7,200		606	450	140	236	136	130
Beryllium	μg/L	31	200		< 10	< 10	< 10	< 10	< 10	< 10
Cadmium	μg/L	7.8	51		< 10	< 10	< 50.0	< 50.0	< 50.0	< 50
Chromium	μg/L	100	310		19.7	< 5.0	169	107	112	245
Copper	μg/L	630	4,100		17.6	< 10	139	< 10	< 10	< 10
Lead	μg/L	15*	15*		< 10	< 10	< 10	< 10	< 10	< 10
Nickel	μg/L	100	2,000		< 10	< 10	< 10	< 10	< 10	< 10
Zinc	μg/L	4,700	31,000		< 20	< 20	< 20	< 20	< 20	< 20
Mercury	μg/L	2*	2*		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Total Cyanide	μg/L	310	2,000		< 10	< 10	< 10	< 10	< 10	< 10

Notes:

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level
RRS - Risk Reduction Standard
SU - Standard Units
μS/cm - microsiemens per centimeter
μg/L - micrograms per liter
mg/L - milligrams per liter
mV - millivolts
NTU - nephelometric turbidity units

NTU - nephelometric turbidity units
N/A - RRS are not applicable to this parameter

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

### Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017 Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

- ·							MW-306D			
Parameter	Units	Type 2 RRS	Type 4 RRS	02/24/17	08/23/16	04/07/16	08/14/15	02/18/15	08/06/14	02/19/14
ield Groundwater Quality Paramete	ers	•	•	•		•	•	•	•	
oH .	SU	N/A	N/A	11.42	11.57	12.03	12.01	12.23	11.91	11.97
Specific Conductance	μm/cm	N/A	N/A	1574.6	2094.7	3,670	3,275	2,321	3,425	2,351
emperature	°Celsius	N/A	N/A	22.85	30.70	22.10	24.76	16.24	25.73	22.44
Dissolved Oxygen	mg/L	N/A	N/A	5.42	5.70	4.89	3.40	7.05	1.02	3.09
ORP	mV	N/A	N/A	-28.8	10.7	10.1	-114.5	41.8	-133.0	-99.4
Turbidity	NTU	N/A	N/A	0.66	0.9	0.79	1.75	4.17	1.29	0.48
Laboratory Results - Natural Atten	uation Parameters									
Nitrogen, Nitrate (as N)	mg/L	N/A	N/A					< 2.5		< 2.5
Sulfate	mg/L	N/A	N/A					< 10		< 10
Sulfide	mg/L	N/A	N/A					< 1.0		< 1.0
errous Iron	mg/L	N/A	N/A					< 0.100		< 0.100
Total Iron	mg/L	N/A	N/A					< 0.100		< 0.100
Carbon Dioxide	mg/L	N/A	N/A					< 5.0		< 5.0
Methane	mg/L	N/A	N/A					96		460
Dissolved Nitrogen	mg/L	N/A	N/A					22		20
Dissolved Oxygen	mg/L	N/A	N/A					9.7		7.6
aboratory Results - Organic Cons	stituents									
Volatile Organic Compounds										
Benzene	μg/L	5*	9	<5.0	190	440	570	790	1,200	1,400
Carbon Disulfide	μg/L	329	1,700	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	μg/L	700*	2,300	5.9	23	87	110	130	230	360
Foluene	μg/L	1,000*	1,100	<5.0	7.2	18	32	37	60	96
otal Xylenes	μg/L	31,000	200,000	<5.0	18	61	79	130	190	340
Semivolatile Organic Compounds		•		•		•	•			
Acenaphthene	μg/L	2,000*	6,100	1.3	7.2	< 50	23	29	41	28
Acenaphthylene	μg/L	470	3,100	<1.0	<1.0	< 1.0	< 1.0	< 10	< 10	< 10
Anthracene	μg/L	4.700	31.000	0.053	0.21	0.31	0.51	< 10	< 10	< 10
Benzo[a]anthracene	μg/L	1.17	3.92	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Benzo[a]pyrene	μg/L	0.2*	0.39	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
Benzo[b]fluoranthene	μg/L	1.17	3.92	<0.10	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	μg/L	10	10	<0.10	<0.10	< 0.10	< 0.10	< 10	< 10	< 10
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 0.050	< 0.050	< 0.050	< 0.050	< 10	< 10	< 10
Chrysene	μg/L	117	392	< 0.050	< 0.050	< 0.050	< 0.050	< 10	< 10	< 10
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
2,4-Dimehylphenol	μg/L	700*	700*	<10	<10	< 10	< 10	< 10	< 10	< 10
Fluoranthene	μg/L	1,000*	4,100	0.11	0.16	0.19	0.32	< 10	< 10	< 10
Fluorene	μg/L	1,000*	4,100	0.57	1.8	2.5	5.5	< 10	10	< 10
ndeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050
2-Methylphenol	μg/L	780	5,100	<10	<10	< 10	< 10	< 10	14	11
3 & 4 Methylphenol	μg/L	78	510	<10	<10	< 10	< 10	< 10	< 10	< 10
Naphthalene	μg/L	20*	20*	< 0.50	1.1	63	6.5	31	< 10	190
Phenanthrene	μg/L	470	3,100	0.46	1.5	2.3	5.0	< 10	< 10	< 10
Phenol	μq/L	9,390	61,000	<10	<10	< 10	< 10	< 10	< 10	97
Pyrene	μg/L	1,000*	3,100	0.12	0.19	0.25	0.39	< 10	< 10	< 10
norganic Constituents	•									•
Antimony	μg/L	6.3	40		< 20	< 20	< 20	< 20	< 20	< 20
Arsenic	μg/L	50*	50*		< 50	< 50	< 50	< 50	< 50	< 50
Barium	µg/L	2,000	7,200		109	170	349	229	415	271
Beryllium	µg/L	31	200		< 10	< 10	< 10	< 10	< 10	< 10
Cadmium	µg/L	7.8	51		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium	µg/L	100	310		28.5	278	29.6	296	264	20
Copper	µg/L	630	4.100		30.0	28.8	26.3	16.8	12.8	< 10
_ead	µg/L	15*	15*		< 10	< 10	< 10	< 10	< 10	< 10
Nickel	µg/L	100	2,000		28.8	21.9	< 20	< 20	< 20	< 20
										< 20
	ug/l	4 700	31 000		< 7()	< 70	< /0	< /1)	< 70	
Zinc Mercury	μg/L μg/L	4,700 2*	31,000 2*		< 20 < 0.20	< 0.20				

Notes:

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Standard Units

µS/cm - microsiemens per centimeter

µg/L - micrograms per liter

my/L - milligrams per liter

mV - millivolts

NTU - neohelometric turbidity units

NTU - nephelometric turbidity units
N/A - RRS are not applicable to this parameter

-- Not Analyzed

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

### Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017 Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

							MW-307D			
Parameter	Units	Type 2 RRS	Type 4 RRS	02/22/17	08/23/16	04/06/16	08/14/15	02/18/15	08/06/14	02/20/14
Field Groundwater Quality Para	meters			*						
pH	SU	N/A	N/A	12.32	12.22	12.46	12.39	13.85	12.43	12.27
Specific Conductance	μm/cm	N/A	N/A	8534.9	835.6	9983	7857	9568	9533	7342
Temperature	°Celsius	N/A	N/A	21.33	28.70	22.8	23.76	15.28	24.29	23.38
Dissolved Oxygen	mg/L	N/A	N/A	1.54	2.74	1.92	5.24	1.08	2.24	4.92
ORP	mV	N/A	N/A	-40.90	-96.7	-18.63	-110.9	-80.7	-131.1	-115.7
Turbidity	NTU	N/A	N/A	3.83	3.4	3.12	4.18	2.46	9.69	1.58
Laboratory Results - Natural At	tenuation Parameter	rs								
Nitrogen, Nitrate (as N)	mg/L	N/A	N/A					< 2.5		< 12
Sulfate	mg/L	N/A	N/A					< 10		< 50
Sulfide	mg/L	N/A	N/A					< 1.00		< 1.0
Ferrous Iron	mg/L	N/A	N/A					< 0.100		< 0.100
Total Iron	mg/L	N/A	N/A					< 0.100		< 0.100
Carbon Dioxide	mg/L	N/A	N/A	-		-		< 5.0		< 5.0
Methane	mg/L	N/A	N/A					79		21
Dissolved Nitrogen	mg/L	N/A	N/A					24		20
Dissolved Oxygen	mg/L	N/A	N/A					8.2		9.4
Laboratory Results - Organic C	onstituents									
Volatile Organic Compounds										
Benzene	μg/L	5*	9	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	6
Carbon Disulfide	μg/L	329	1,700	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	μg/L	700*	2,300	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	14
Toluene	μg/L	1,000*	1,100	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	15
Total Xylenes	μg/L	31,000	200,000	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	16
Semivolatile Organic Compounds	3									
Acenaphthene	μg/L	2,000*	6,100	1.3	1.3	2.1	2.2	< 10	< 10	< 10
Acenaphthylene	μg/L	470	3,100	<1.0	<1.0	< 1.0	< 1.0	< 10	< 10	< 10
Anthracene	μg/L	4,700	31,000	0.29	0.29	0.26	0.25	< 10	< 10	< 10
Benzo[a]anthracene	μg/L	1.17	3.92	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.27
Benzo[a]pyrene	μg/L	0.2*	0.39	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.3
Benzo[b]fluoranthene	μg/L	1.17	3.92	<0.10	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.16
Benzo[g,h,i]perylene	μg/L	10	10	<0.10	<0.10	< 0.10	< 0.10	< 10	< 10	< 10
Benzo[k]fluoranthene	μg/L	11.7	39.2	< 0.050	< 0.050	< 0.050	< 0.050	< 10	< 10	< 10
Chrysene	μg/L	117	392	< 0.050	< 0.050	< 0.050	< 0.050	< 10	< 10	< 10
Dibenz(a,h)anthracene	μg/L	0.3*	0.39	< 0.10	<0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.58
2,4-Dimehylphenol	μg/L	700*	700*	<10	<10	< 10	< 10	< 10	< 10	< 10
Fluoranthene	μg/L	1,000*	4,100	0.27	0.30	0.25	0.24	< 10	< 10	< 10
Fluorene	μg/L	1,000*	4,100	0.42	0.53	0.61	0.78	< 10	< 10	< 10
Indeno[1,2,3-cd]pyrene	μg/L	1.17	3.92	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	< 0.050	0.32
2-Methylphenol	μg/L	780	5,100	<10	<10	< 10	< 10	< 10	< 10	< 10
3 & 4 Methylphenol	μg/L	78	510	<10	<10	< 10	< 10	< 10	< 10	< 10
Naphthalene	μg/L	20*	20*	1.7	3.2	3.5	5.7	< 10	11	47
Phenanthrene	μg/L	470	3,100	2.6	2.7	3.2	3.0	< 10	< 10	< 10
Phenol	μg/L	9,390	61,000	<10	<10	< 10	< 10	< 10	< 10	< 10
Pyrene	μg/L	1,000*	3,100	0.30	0.35	0.28	0.29	< 10	< 10	< 10
Inorganic Constituents										
Antimony	μg/L	6.3	40		< 20	< 20	< 20	< 20	< 20	< 20
Arsenic	μg/L	50*	50*		< 50	< 50	< 50	< 50	< 50	< 50
Barium	μg/L	2,000	7,200		1,210	1,140	1,140	1,140	1,140	1,140
Beryllium	μg/L	31	200		< 10	< 10	< 10	< 10	< 10	< 10
Cadmium	μg/L	7.8	51		< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
Chromium	μg/L	100	310		72.2	68.4	65.4	33.9	78.3	68.8
Copper	μg/L	630	4,100		10.6	14.4	14.7	< 10.0	< 10.0	< 10
Lead	μg/L	15*	15*		< 10	< 10	< 10	< 10	< 10	< 10
Nickel	μg/L	100	2,000		< 20	< 20	< 20	< 20	< 20	< 20
Zinc	μg/L	4,700	31,000		< 20	< 20	< 20	< 20	< 20	< 20
Mercury	μg/L	2*	2*		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
Total Cyanide	μg/L	310	2,000		< 10	< 10	< 10	< 10	< 10	< 10

Notes:

Analyte was detected above laboratory detection limit

Analyte concentration exceeds the Type 4 RRS (RRS applicable to the well location)

\*Highest RRS equals Type 1 RRS; therefore, the cleanup goal becomes the Type 1 RRS for this chemical ft AMSL - feet Above Mean Sea Level

RRS - Risk Reduction Standard

SU - Standard Units

µS/cm - microsiemens per centimeter

µg/L - micrograms per liter

mg/L - milligrams per liter

mV - millivolts

NTI I - nephelometric turbidity units

NTU - nephelometric turbidity units
N/A - RRS are not applicable to this parameter

Values are listed with the laboratory-reported number of significant figures, which varies between different constituents within the same groundwater sample, and between the same constituent in different wells.

### Historical Data Summary - Bedrock Groundwater Analytical Data November 2001 through February 2017 Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

Field Groundwater Quality Parame		Type 2 RRS	Type 4 RRS	02/22/17	08/23/16	04/05/16	MW-308D 08/12/15	02/16/15	08/06/14	02/19/1
	SU	N/A	N/A	12.24	4.01	12.25	12.40	13.35	12.14	11.66
pecific Conductance	μm/cm	N/A	N/A	422.50	416.2	3898	2905	2920	2026	1612
emperature	°Celsius	N/A	N/A	23.21	29.66	19.99	25.43	17.87	22.47	23.89
Dissolved Oxygen	mg/L	N/A	N/A	2.59	4.01	4.24	3.17	3.50	2.38	0.94
DRP	mV	N/A	N/A	-4.00	-32.5	55.8	-88.4	-12.7	-107.9	-112.6
urbidity	NTU	N/A	N/A	5.62	3.7	236	0.49	3.42	3.53	102
aboratory Results - Natural Atten	uation Parameters									
litrogen, Nitrate (as N)	mg/L	N/A	N/A					< 2.5		< 2.5
ulfate	mg/L	N/A	N/A					19		12
ulfide	mg/L	N/A	N/A	-				< 1.00		< 1.0
errous Iron	mg/L	N/A	N/A				-	< 0.100		< 0.10
otal Iron	mg/L	N/A	N/A	-			-	< 0.100		1.65
arbon Dioxide	mg/L	N/A	N/A					< 5.0		< 5.0
lethane	mg/L	N/A	N/A					47		140
issolved Nitrogen	mg/L	N/A	N/A	-			-	17		18
issolved Oxygen	ma/L	N/A	N/A					5.6		4.1
aboratory Results - Organic Cons					I.			0.0		
olatile Organic Compounds	otituonio									
enzene	μg/L	5*	9	11	13	24	23	8.2	< 5.0	6.8
enzene arbon Disulfide		329	1,700	<5.0	<5.0	< 5.0			< 5.0 < 5.0	<b>6.8</b> < 5.0
	μg/L						< 5.0	< 5.0		
thylbenzene	µg/L	700*	2,300	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.8
oluene	μg/L	1,000*	1,100	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
otal Xylenes	μg/L	31,000	200,000	<5.0	<5.0	< 5.0	< 5.0	< 5.0	< 5.0	5.4
emivolatile Organic Compounds										
cenaphthene	μg/L	2,000*	6,100	<0.50	<0.50	< 0.50	< 0.50	< 10	< 10	< 10
cenaphthylene	μg/L	470	3,100	<1.0	<1.0	< 1.0	< 1.0	< 10	< 10	< 10
nthracene	μg/L	4,700	31,000	0.078	< 0.050	0.051	< 0.050	< 10	< 10	< 10
enzo[a]anthracene	μg/L	1.17	3.92	< 0.050	< 0.050	0.087	< 0.050	< 0.050	< 0.050	< 0.05
enzo[a]pyrene	μg/L	0.2*	0.39	< 0.050	< 0.050	0.12	< 0.050	< 0.050	< 0.050	< 0.05
enzo[b]fluoranthene	μg/L	1.17	3.92	<0.10	<0.10	0.15	< 0.10	< 0.10	< 0.10	< 0.10
enzo[g,h,i]perylene	μg/L	10	10	<0.10	<0.10	0.21	< 0.10	< 10	< 10	< 10
enzo[k]fluoranthene	μg/L	11.7	39.2	< 0.050	< 0.050	0.15	< 0.050	< 10	< 10	< 10
hrysene	µg/L	117	392	<0.050	<0.050	0.091	< 0.050	< 10	< 10	< 10
ibenz(a,h)anthracene	μg/L	0.3*	0.39	<0.10	<0.10	0.16	< 0.10	< 0.10	< 0.10	< 0.10
4-Dimehylphenol	μg/L	700*	700*	<10	<10	< 10	< 10	< 10	16	25
uoranthene	μg/L	1,000*	4,100	<0.10	<0.10	< 0.10	< 0.10	< 10	< 10	< 10
		1,000*	4,100	<0.10	<0.10	< 0.10	< 0.10	< 10	< 10	< 10
uorene	μg/L	1.17	3.92		<0.10			< 0.050	< 0.050	< 0.05
deno[1,2,3-cd]pyrene	μg/L			<0.050		0.19	< 0.050			
Methylphenol	μg/L	780	5,100	<10	<10	< 10	< 10	< 10	< 10	< 10
& 4 Methylphenol	μg/L	78	510	<10	<10	< 10	< 10	< 10	< 10	< 10
aphthalene	μg/L	20*	20*	<0.50	<0.50	0.87	< 0.50	< 10	< 10	< 10
henanthrene	μg/L	470	3,100	0.060	<0.050	0.058	0.086	< 10	< 10	< 10
henol	μg/L	9,390	61,000	<10	<10	< 10	< 10	< 10	< 10	< 10
yrene	μg/L	1,000*	3,100	<0.050	<0.050	< 0.050	< 0.050	< 10	< 10	< 10
organic Constituents										
ntimony	μg/L	6.3	40		< 20	< 20	< 20	< 20	< 20	< 20
rsenic	μg/L	50*	50*		< 50	< 50	< 50	< 50	< 50	< 50
arium	μg/L	2,000	7,200		220	189	115	124	99.2	106
eryllium	μg/L	31	200	-	< 10	< 10	< 10	< 10	< 10	< 10
admium	μg/L	7.8	51	-	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
hromium	μg/L	100	310		36.5	31.4	30.7	33.9	26.8	25.7
opper	µg/L	630	4,100		< 10	< 10	< 10	< 10	< 10	< 10
ead	μg/L	15*	15*		< 10	< 10	< 10	< 10	< 10	< 10
ickel	μg/L	100	2,000		< 20	< 20	< 20	< 20	< 20	< 20
inc	μg/L	4,700	31,000		< 20	37.7	< 20	< 20	< 20	< 20
lercury	μg/L	2*	2*		< 0.20	< 0.20	< 0.20	< 0.20	< 0.20	< 0.20
otal Cyanide	μg/L	310	2,000		< 10	< 10	< 10	< 10	< 10	< 10
	µg/L	310	2,000		V 10	< 10	V 10	< 10	V 10	V 10

# **COI Concentration Trend Graphs (CD ONLY)**

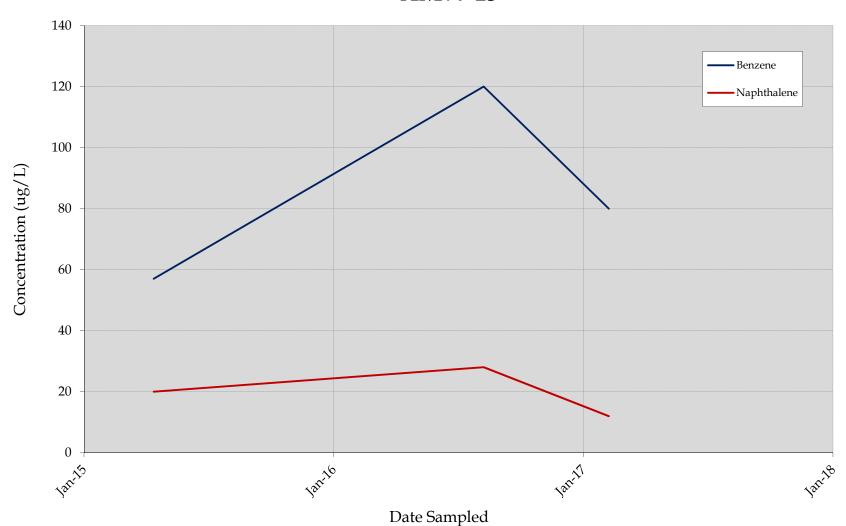
Appendix G

Project No. 0366660 Atlanta Gas Light Company

# **COI Concentration Trend Graphs**

Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

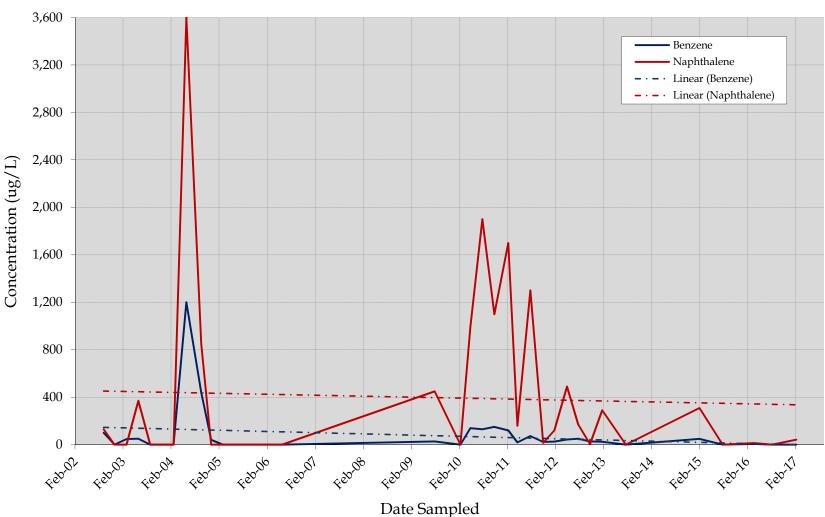
# **AMW-15**



## **COI Concentration Trend Graphs**

Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

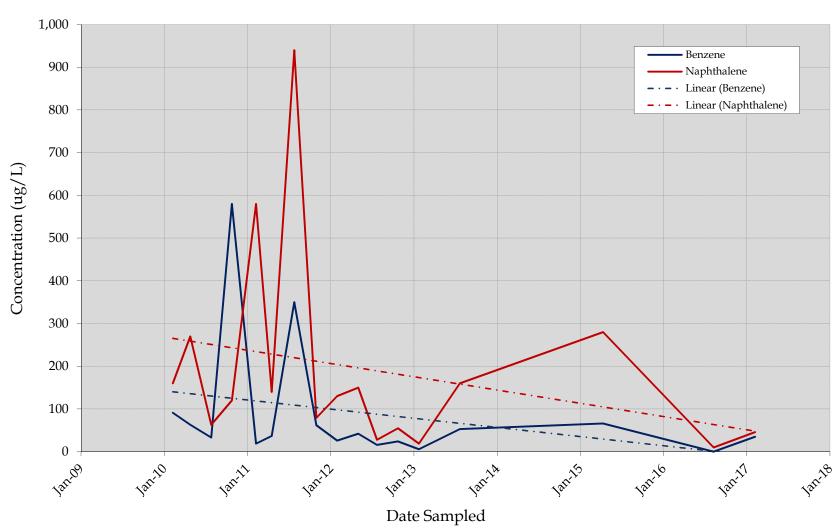
# **MW-101**



## **COI Concentration Trend Graphs**

Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

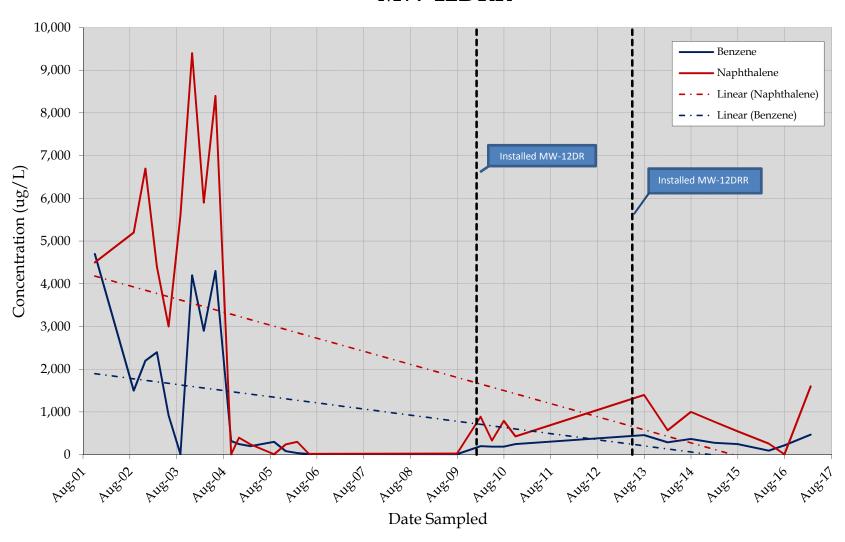
# **MW-205**



## **COI Concentration Trend Graphs**

Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

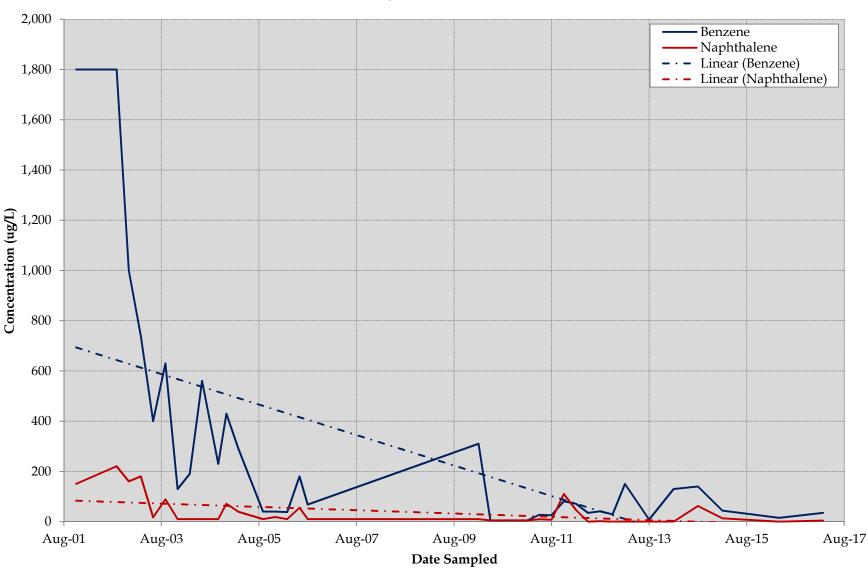
# **MW-12DRR**



# **COI Concentration Trend Graphs**

Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

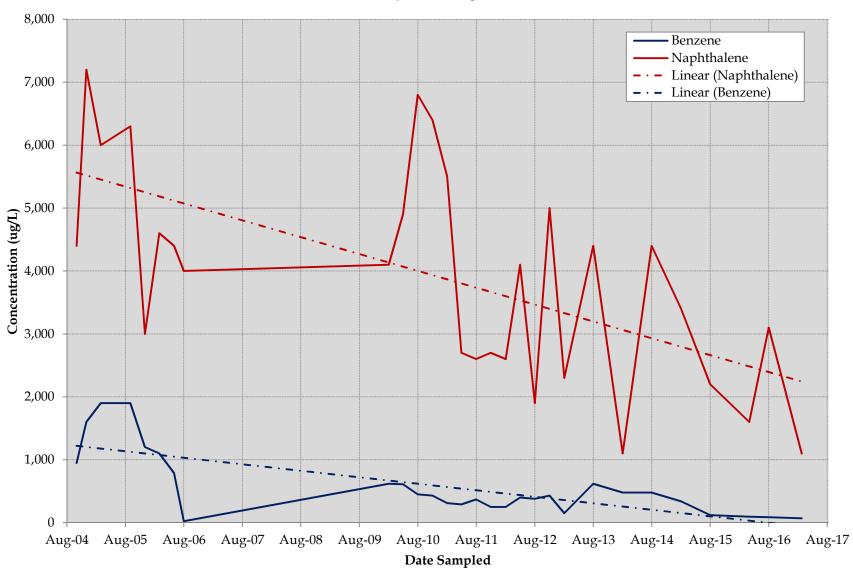
# **MW-12DD**



## **COI Concentration Trend Graphs**

Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

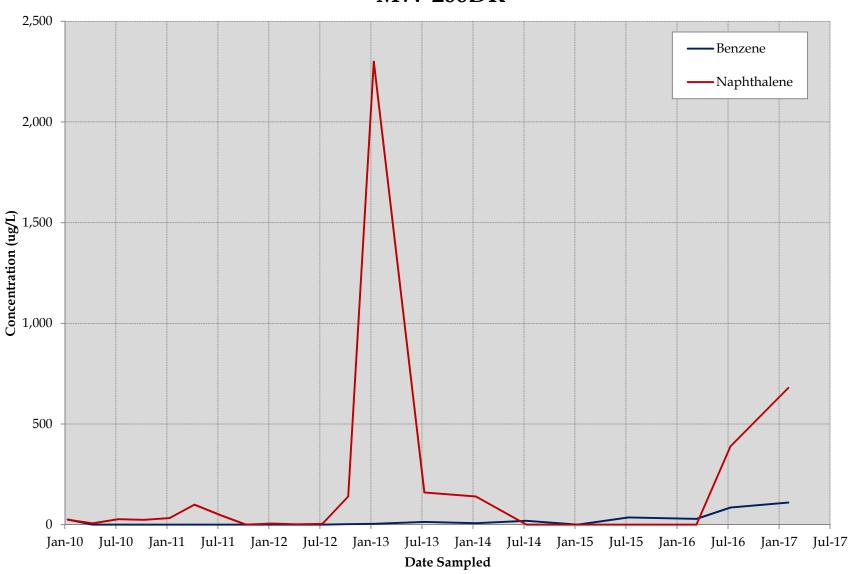
# **MW-110D**



## **COI Concentration Trend Graphs**

Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

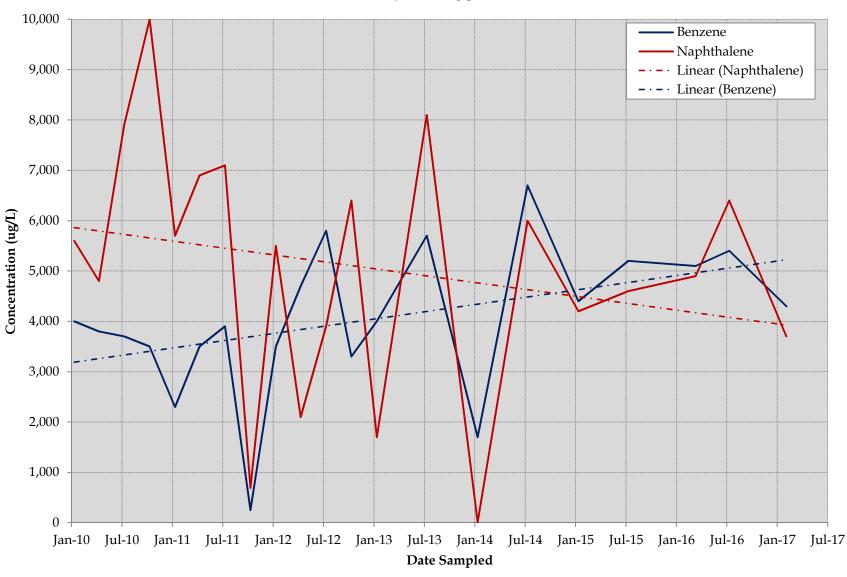
# **MW-200DR**



## **COI Concentration Trend Graphs**

Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

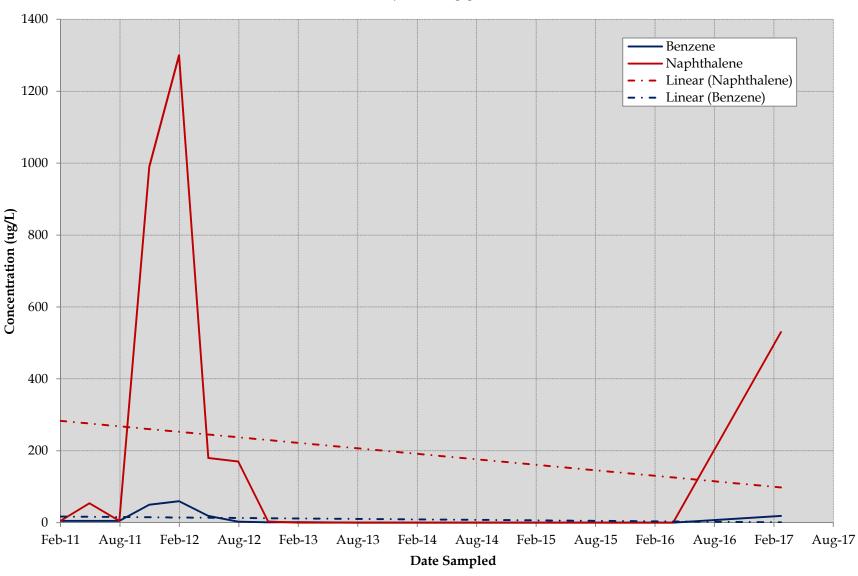
# **MW-205D**



## **COI Concentration Trend Graphs**

Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

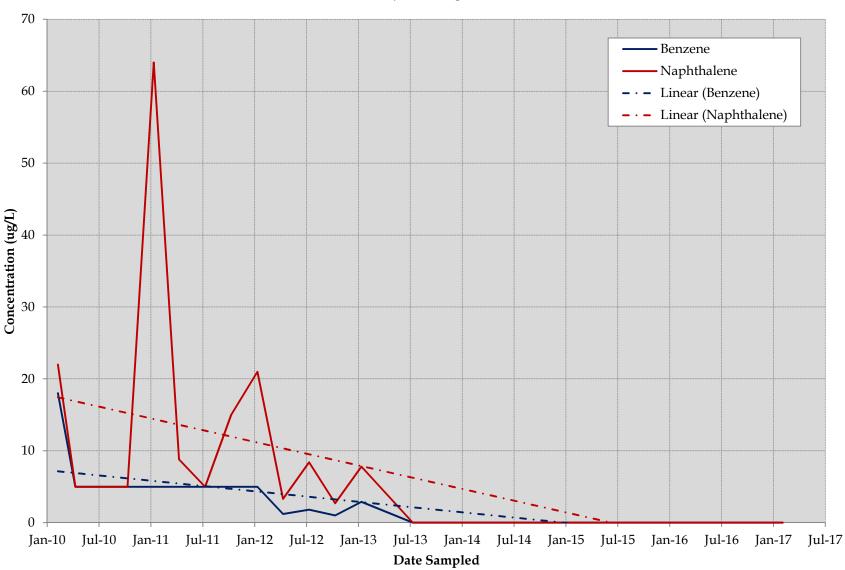
# **MW-206D**



# **COI Concentration Trend Graphs**

Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

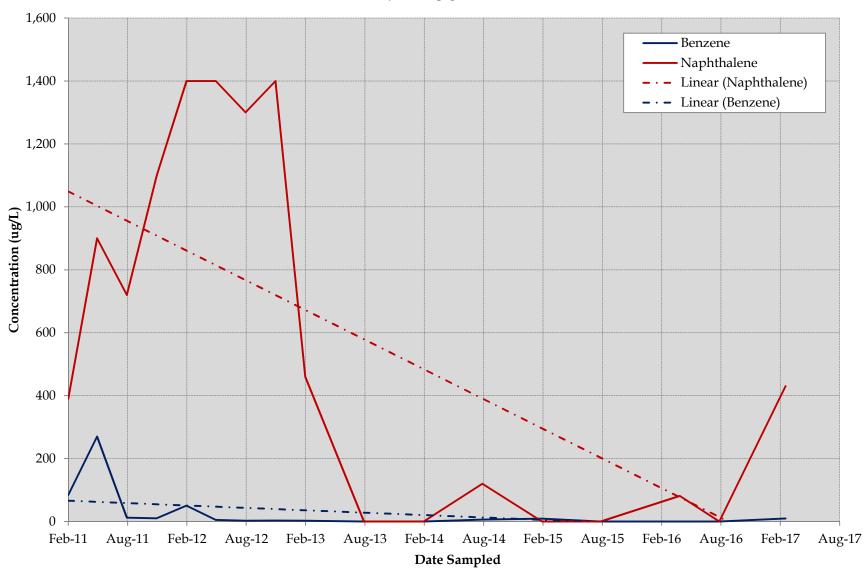
# **MW-207D**



## **COI Concentration Trend Graphs**

Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

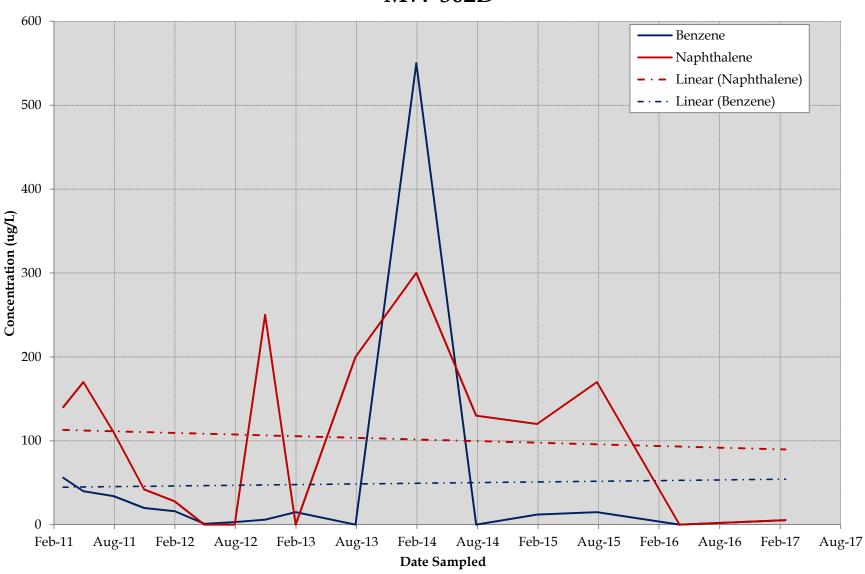
# **MW-301D**



## **COI Concentration Trend Graphs**

Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

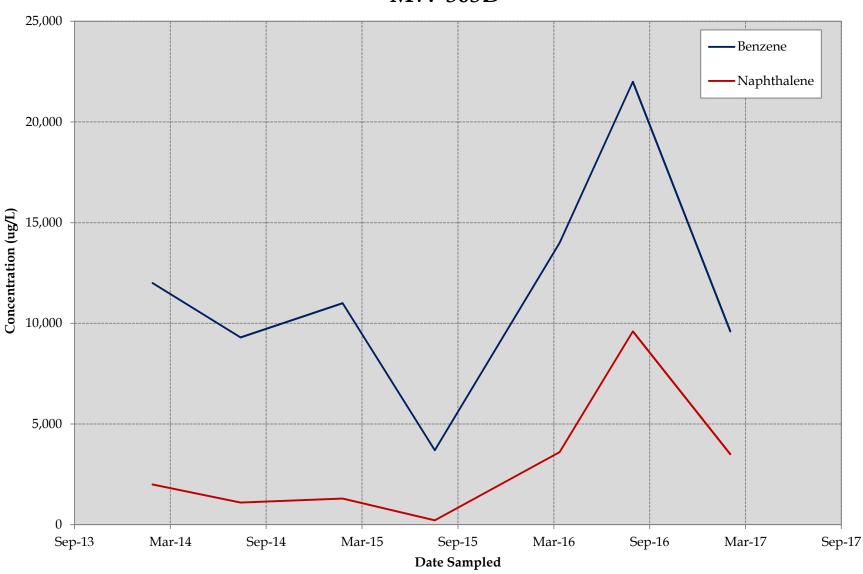
# MW-302D



## **COI Concentration Trend Graphs**

Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

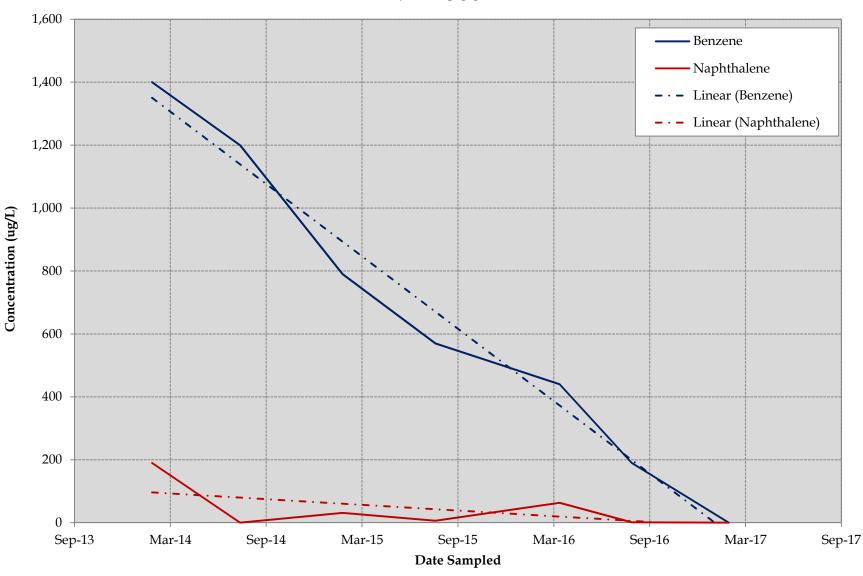
# **MW-305D**



## **COI Concentration Trend Graphs**

Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

# MW-306D



## **COI Concentration Trend Graphs**

Atlanta Gas Light Company Former Manufactured Gas Plant Site Macon, Georgia

# **MW-308D**

