



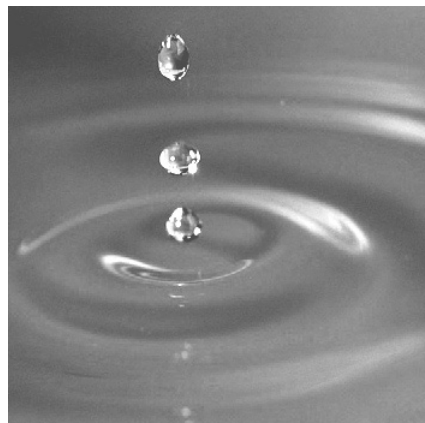
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Georgia Power Company Semiannual Groundwater Report January 2019

Plant McIntosh Inactive CCR Landfill No. 3
Permit No. 051-008D(L)(I)

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"I certify that I am a qualified geologist, having received a baccalaureate and/or post-graduate degree in geology, and have sufficient training and experience in groundwater hydrology and related fields, as demonstrated by Georgia registration and completion of accredited university courses, to enable me to make sound professional judgments regarding geologic and hydrogeologic investigations and interpretations. I further certify that I have technically reviewed this document."

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Date: 6-13-2019

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1. Introduction

Plant McIntosh is a coal-fired power generation plant owned and operated by Georgia Power Company (GPC), and is located in southeast Effingham County, Georgia, approximately 4 miles northeast of the city of Rincon, Georgia and 20 miles north-northwest of the city of Savannah, Georgia.

The plant property is on the west bank of the Savannah River at Big Kiffer Point (Figure 1). Inactive Coal Combustion Residuals (CCR) Landfill No. 3 (Landfill No. 3, the Site) received CCR from the generating process but was closed in 2008 and is now inactive. The Site is on the southwestern corner of the plant property, approximately 1.5 miles west of the Savannah River and approximately 800 feet south of Lockner Creek.

The first semiannual groundwater monitoring event for 2019 was conducted in January by GEI Consultants, Inc. (GEI) at Inactive CCR Landfill No. 3 to comply with Georgia Department of Natural Resources, Environmental Protection Division (GA EPD) Solid Waste Permit No. 051-008D(L)(I). GEI has prepared this semiannual groundwater monitoring report to summarize the January 2019 sampling results and statistical analyses on behalf of GPC. The following observations are described in this report based on review of the January 2019 sampling data and statistical analysis:

- No exceedances of the GA EPD primary or secondary drinking water standards were reported.
- Concentrations of analytes from all samples collected from downgradient monitoring wells were below the respective upper prediction limits (UPLs) except for barium in well GWC-5. An Alternate Source Demonstration (ASD) was submitted to GA EPD in August 2017 identifying natural variation as the source of elevated barium in this well. A Sen's Slope/Mann-Kendall trend test was performed to graphically and statistically to evaluate the barium concentrations in GWC-5. Barium in GWC-5 does not exhibit a statistically significant trend. Elevated barium concentrations in GWC-5 are attributable to natural variation and are not associated with impacts from the facility.

The analytical data with reference to upgradient concentration data, Georgia primary and secondary drinking water standards (maximum contaminant levels [MCLs]), and the results of statistical analyses are presented and summarized in this report. Sampling data sheets, measured depths to groundwater and calculated groundwater elevations, calculated groundwater flow rates, a potentiometric surface contour map, laboratory analyses, and statistical analyses are also included in this report.

1.1 Site History

Inactive CCR Landfill No. 3, Permit No. 051-008D(L)(I), was permitted in 1984, before the current solid waste management regulations of 1993 came into effect. The *Plant McIntosh Ash Disposal Site No. 3 Revised Design-Operation Plan Groundwater Monitoring Plan* (Groundwater Monitoring Plan [GMP]) (GPC, 1999, revised 2010) was submitted and approved in August 1999 and modified in February 2010 as part of the facility Design & Operation (D&O) Plan.

Inactive CCR Landfill No. 3 was closed in 2008. The closure certification was issued by GA EPD on March 21, 2008. Semiannual groundwater monitoring activities are performed in accordance with the facility D&O Plan and the approved August 2017 minor modification.

On August 1, 2017, GPC submitted a minor modification request to add Appendix III sampling parameters contained in 40 CFR 257, Subpart D, 80 Fed Reg. 21468 (April 17, 2015) to the routine semiannual groundwater monitoring program for Landfill No. 3. This minor modification request also included sampling for the Appendix IV parameters contained in 40 CFR 257, Subpart D, 80 Fed. Reg. 21468 (April 17, 2015) to Landfill No. 3's groundwater monitoring program if an assessment monitoring program is triggered. GPC received approval of this modification on August 9, 2017. Appendix III parameters are reported, along with parameters specific to the facility D&O Plan. For past semiannual reports, analytical results for Appendix III and IV parameters were reported to establish background data for future statistical analyses. Appendix III parameters will be statistically evaluated as part of the semiannual groundwater monitoring activities completed in April 2019. Results of the statistical analysis will be provided in a report to GA EPD on August 1, 2019. Appendix IV parameters will only be sampled in the event an assessment monitoring program is initiated.

1.2 Groundwater Monitoring

The groundwater monitoring program evaluates the aquifer immediately underlying Landfill No. 3. Sixteen wells (nine upgradient and seven downgradient) were sampled during this event (Table 1). Monitoring wells GWA-1 and GWA-2 were not sampled as replacement monitoring wells have been installed (GWA-1A, GWA-2A, and GWA-2B); GWA-1 and GWA-2 are currently only used for groundwater level measurements. Monitoring well GWC-4B was dry in January 2019 and was not sampled. Therefore, no statistical analyses are included for this well in this report. The location of each well is presented on Figure 2.

2. Field Methods

GEI conducted all the field work described herein, following the facility D&O Plan. GEI has summarized the field activities and results of the groundwater sampling event in this report.

2.1 Sampling and Chemical Analysis

Potentiometric groundwater elevations were collected from each well with an electronic water level indicator and measured to the nearest 0.01 foot on January 28, 2019 (Table 2). Wells were purged using a peristaltic pump with disposable tubing. While the well was purged, water level data and purge volumes were recorded, and the following field parameters were collected.

pH (field)	Oxidation Reduction Potential (ORP)	Temperature
Specific Conductivity	Dissolved Oxygen (DO)	Turbidity

Wells were purged using low-flow techniques until field parameters stabilized within limits established in the facility D&O Plan. No exceptions to the stabilization criteria were noted during the January 2019 event. Due to the consistent high turbidity in well GWA-7, GPC proposes to abandon GWA-7. A Southern Company Services (SCS)-contracted driller, with GEI oversight services, installed replacement well GWA-7A on August 29, 2018 in an attempt to intercept an interval with less fines than the existing well. GPC will continue to monitor and sample GWA-7 until an approval for abandonment is obtained. Field sampling data are included in Appendix A.

Once the wells were purged, samples were collected in laboratory-supplied plastic bottles. One bottle containing nitric acid preservative was collected for analysis of metals. Samples were placed in coolers with ice and shipped to the TestAmerica laboratory in Pittsburgh, Pennsylvania, under chain of custody control for analysis. TestAmerica is National Environmental Laboratory Accreditation Program (NELAP) certified by the State of Pennsylvania Department of Health (certification number 02-00416). Laboratory analytical data are included in Appendix B.

Groundwater samples were collected from all wells and analyzed according to the approved GMP (GPC, 2010) and the August 2017 minor modification request (GPC, 2017). The metals were analyzed using United States Environmental Protection Agency (EPA) SW846 Method 6020, inorganic anions (chloride, fluoride, sulfate) using EPA Method 300.0, and total dissolved solids (TDS) using Standard Method 2540C-2011.

2.2 Groundwater Flow Velocity

Horizontal flow velocity was calculated using the formulas from *Criteria for Performing Site Acceptability Studies for Solid Waste Landfills in Georgia – Circular 14* (GA EPD, 1991).

$$v = \text{linear velocity} = \frac{Ki}{\eta_e}$$

where :

K = hydraulic conductivity

$$i = \text{hydraulic gradient} = \frac{(h_1 - h_2)}{L}$$

η_e = effective porosity

h_1 and h_2 = groundwater elevation at locations 1 and 2

L = distance between locations 1 and 2

As used in previous reports and originally specified in GMP (GPC, 2010) the average hydraulic conductivity of the shallow aquifer used in the calculations is 2.24 feet per day (ft/day). Soils at the screened intervals of the wells are generally classified as silty sands (SM). The default value for effective porosity given for this type soil in EPA 530/SW-89-031 is 0.20. To calculate an average hydraulic gradient and groundwater velocity across the Site, the hydraulic gradient was calculated between three separate well pairs: GWA-1A/PZ-2 and GWA-7A/GWC-3, and GWA-3A/GWC-2 (Table 3). The average calculated groundwater flow velocity for January 2019 is 0.058 ft/day or 21.17 feet per year (ft/year).

3. Statistical Approach

The statistical approach used for data analysis is consistent with the facility D&O Plan and the Georgia Solid Waste Management Rules §391-3-4 for identifying statistically significant increases (SSIs) in constituent concentrations in downgradient wells relative to upgradient wells. Specifically, the facility D&O Plan requires an interwell prediction interval method of statistical analysis with a one of two resample plan. Statistical decisions not defined in the facility D&O Plan follow the recommendations in the EPA *Unified Guidance, Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities* (Unified Guidance) (EPA, 2009). The EPA Unified Guidance recommends an annual site-wide false positive rate of 10 percent, which is distributed equally among the total number of sampling events. A site-wide false positive rate of 5 percent is targeted for each semiannual sampling event.

The SanitasTM Groundwater statistical software was used to perform the statistical analyses. SanitasTM is a proprietary decision support software package, developed in 1991, that incorporates the statistical tests required of Subtitle C and D facilities by EPA regulations and guidance as recommended in the EPA Unified Guidance document (EPA, 2009) (SanitasTM, 2017). A flow diagram showing the decision logic of the statistical procedures utilized in the SanitasTM software is presented in Statistical Procedure Flow Chart, Figure 3. Additional details regarding the statistical approach are included as Appendix C.

Nine upgradient wells and seven downgradient groundwater quality monitoring wells (GWC-4B was dry) of Inactive CCR Landfill No. 3 were sampled and analyzed during the January 2019 event for approved GMP parameters, Appendix III parameters, and six field parameters.

4. Groundwater Monitoring Results

Groundwater samples were collected from nine upgradient wells and seven downgradient wells (GWC-4B was dry) in accordance with the prescribed sampling methods. Laboratory analyses of the samples are summarized in Table 4. A historical summary of groundwater data for the Site is included in Appendix D.

4.1 Data Validation

Values followed by a "J" flag indicate that the value is an estimated analyte (trace) concentration detected between the method detection limit (MDL) and the practical quantitation limit (PQL). Sanitas™ uses the reported trace value in the statistical analyses. All other values are either reported as detections or not detected (NDs). ND values are preceded with "<".

The relative percent difference (RPD) results for analytes with detections above the reporting limit (estimated, or "J" values were not included) are based on the equation below and results from the calculations are included in Appendix B.

$$RPD = \frac{Conc1 - Conc2}{(Conc1 + Conc2) / 2} \times 100\%$$

Sample and sample duplicate GWC-1 and DUP-LF3-01 and GWC-2 and DUP-LF3-02 analyte concentrations were above the reporting limits for all constituents. The calculated RPD for each sample pair were within acceptable levels, except for barium. The positive results for barium in samples GWC-1 and DUP-LF3-01 were qualified as estimated (J). Therefore, the direction of the bias could not be determined from this nonconformance in field samples associated with the 180-86243-2 sample delivery group. Note that the data presented in Table 4 are representative of the validated data, and not necessarily that which is included in the laboratory reports.

For the field quality analysis/quality control (QA/QC) samples FB-LF3-01/FERB-LF3-01 and FB-LF3-02/FERB-LF3-02, low level laboratory contamination was detected in select method blanks. In the associated metals method blank, laboratory blank contamination was evaluated prior to possible field blank contamination. Low level laboratory contamination was detected in the metals field blanks after evaluation of method blank contamination. Therefore, laboratory contamination was not detected in the associated field blank samples after application of laboratory blank contamination qualifications.

Based on the identification of low-level laboratory contamination in the method blanks during data validation, select sample results from the entire data set were qualified as either an estimated (J) value above the reporting limit as a high bias for chromium, vanadium, and zinc or changed

to nondetect (U) at the reporting limit for chromium, lead, and vanadium. The qualified data result is shown in Table 4.

The table in Appendix B summarizes the contamination and validation actions taken. No constituents were detected at concentrations over the laboratory reporting limit in field blanks or field equipment rinse blank samples. Copies of the laboratory analytical reports are included in Appendix B along with a copy of the GEI validation report.

4.2 Groundwater Levels

Groundwater levels were measured January 28, 2019, prior to conducting groundwater sampling, and are listed in Table 2. Potentiometric surface elevation contours and estimated groundwater flow direction developed using the January 2019 sampling event data are shown on Figure 4. The groundwater level measurements indicate groundwater flows from the southwest to the northeast across the Site (Figure 4), which is consistent with previous observations.

Monitoring wells GWA-3B and GWC-4B appear to be screened in a shallow perched zone and the groundwater elevation data from these wells were not used to create the potentiometric surface map as they are not considered to be representative of the groundwater conditions at the Site. GPC will seek approval to abandon these wells as they do not provide representative groundwater levels.

In addition, the groundwater elevations from monitoring well GWA-1 and GWA-2A were not used in the current potentiometric surface contour map due to a difference in groundwater elevations between the original wells (GWA-1 and GWA-2) and replacement wells (GWA-1A and GWA-2A). The screened lithologies for GWA-1 and GWA-2 or its replacement well (GWA-2A) do not appear to be representative of Site groundwater levels. A SCS-contracted driller, with GEI oversight services, installed GWA-2B on August 29, 2018 in the area of GWA-2/GWA-2A to determine if a screened interval can be identified that is more representative of Site groundwater (within the first water-bearing aquifer that is not perched). GPC proposes to abandon GWA-1, GWA-2, and GWA-2A upon approval from GA EPD. In the meantime, GEI will continue with the routine monitoring activities on the wells proposed for abandonment until GA EPD approves the request.

5. Statistical Results

A summary of groundwater statistical analysis of January 2019 semiannual monitoring data is included with the Sanitas™ statistical outputs in Appendix E. Results from these analyses are summarized in the following sections.

5.1 Preliminary Data Screening and Evaluation

Background data were screened using descriptive statistics to characterize the detection frequencies and data distributions, which inform subsequent analyses. The descriptive statistics (Table 5) for upgradient wells show several relevant characteristics about the data, including:

- A high rate of non-detect values in upgradient wells. Only barium, chromium, and zinc had greater than a 50 percent detection rate in pooled upgradient wells.
- Most of the well-analyte pairs had no discernable data distribution.

Background data were screened using descriptive statistics to characterize the detection frequencies and data distributions which inform subsequent analyses. Table 5 presents a summary of descriptive statistics for upgradient and downgradient monitoring wells, as well as a summary of pooled upgradient descriptive statistical results. Upgradient monitoring wells exhibit a high frequency of non-detect values for most analytes. Barium, chromium, cobalt (GWA-5 only), vanadium (GWA-1A only), and zinc were detected at a frequency of 50 percent or greater at upgradient monitoring locations. The distribution of data for most well-analyte pairs could not be determined based on this high frequency of non-detect values. A statistically increasing trend in barium concentration was identified at monitoring locations GWA-2A, GWA-3A, and GWA-4 using the Mann-Kendall analysis. Sen's Slope/Mann-Kendall plots of barium in time-series format are presented in Appendix E.

5.2 Calculating the UPLs and Screening

Upper Prediction Limits were generated in Sanitas™, following the decision rules outlined in Section 3.0 (Appendix E). A summary of the UPLs are provided in Table 6. The most recent measured concentration for each downgradient well and analyte at Landfill No. 3 was compared to the corresponding interwell UPL. All wells and analytes were below their respective UPL except for barium in well GWC-5 (Table 7).

The Sen's Slope/Mann-Kendall trend test was conducted on barium concentrations in well GWC-5. No statistically significant trend was determined.

UPLs were generated for the January 2019 groundwater data using Sanitas™, following the decision rules previously outlined in Section 3.0 of this report. Interwell UPLs are summarized on Table 6. Per the approved facility D&O Plan, upgradient monitoring well data were pooled for the construction of interwell UPLs. Barium was detected at downgradient monitoring well GWC-5 above the UPL of 0.30 milligrams per liter (mg/L) at a concentration of 0.45 mg/L (Table 7) during the January 2019 sampling event. All other analytical parameters were below the respective UPLs at each downgradient monitoring location.

Barium concentrations above the UPL in well GWC-5 were first reported in the *First 2017 Semi-Annual Groundwater Monitoring Report* (Environmental Resource Management [ERM], 2017) for the facility. An ASD was prepared by ERM in August 2017 to address the SSI in barium at this location. The ASD identified natural variability as the cause of the increase in barium concentrations. Groundwater elevation, concentration of barium, and measured specific conductivity recorded at GWC-5 are consistent with measurements collected at GWC-5 since June 2016.

To evaluate barium concentrations in GWC-5, a Sen's Slope/Mann-Kendall trend test was performed to graphically and statistically evaluate the barium concentrations in GWC-5 and is provided in Appendix E. No statistically significant increasing barium concentration trend was identified in well GWC-5 for the last 42 sampling events. As described in Section 5.1, upgradient monitoring wells GWA-2A, GWA-3A, and GWA-4 all exhibit a statistically significant increasing barium concentration trend. Additionally, the Boxplots analysis (Appendix E) indicates spatially variable barium concentrations in upgradient samples. The January 2019 barium results in GWC-5 are consistent with the findings of the August 2017 ASD; therefore, barium concentrations in GWC-5 are attributed to variability in background concentrations and are not associated with impacts from the facility.

Constituent concentrations detected during the January 2019 monitoring event in each downgradient well were also compared with the GA EPD primary and secondary MCLs on Table 4. There were no reported concentrations above the primary or secondary MCLs.

6. Summary and Recommendations

GEI conducted a groundwater sampling event in January 2019 for Plant McIntosh Inactive CCR Landfill No. 3. GEI has prepared this report summarizing field activities and the results of the groundwater sampling event. Nine upgradient wells and seven downgradient groundwater quality monitoring wells of the Site were sampled and analyzed during the January 2019 event for approved GMP parameters, Appendix III parameters, and six field parameters. All wells and analytes were below their respective UPL except for barium in well GWC-5 (Table 7).

The January 2019 barium results in GWC-5 are consistent with the findings of the August 2017 ASD; barium concentrations in GWC-5 are attributed to variability in background concentrations and are not associated with impacts from the facility.

No exceedances of the Georgia primary or secondary drinking water standards were reported. Therefore, GEI recommends the following:

- Perform semiannual groundwater monitoring in spring and fall 2019.
- Continue semiannual reporting. Submit a semiannual report evaluating data collected during the first half of the year to the GA EPD on July 31st. Submit a comprehensive annual report for data collected throughout the entire year on January 31st.
- Adopt statistical methodologies, as recommended in the EPA Unified Guidance (EPA, 2009). This includes prediction limits with retesting (interwell and/or intrawell), as well as other methods for testing data, outlier screening, and non-detect adjustment; and
- Evaluate replacement of monitoring wells GWA-3B and GWC-4B, which appear to be screened in a shallow perched zone and therefore, these wells are not considered to be representative of the groundwater conditions at the Site. In addition, GWC-4B has been dry since January 2018. GPC proposed to abandon GWA-3B and GWC-4B. In addition, the screened lithologies for GWA-1 and GWA-2 or its replacement well (GWA-2A) do not appear to be representative of Site groundwater levels. A SCS-contracted driller, with GEI oversight services, installed GWA-2B on August 29, 2018 in the area of GWA-2/GWA-2A to determine if a screened interval can be identified that is more representative of Site groundwater (within the first water-bearing aquifer that is not perched). GPC proposes to abandon GWA-1, GWA-2, and GWA-2A. Finally, due to the consistent high turbidity in well GWA-7, GPC proposes to abandon GWA-7. A SCS-contracted driller, with GEI oversight services,

installed GWA-7A on August 29, 2018 in the area of GWA-7 in an attempt to intercept an interval with less fines than the existing well. The attempt was successful with the installation of GWA-7A.

- GPC is seeking approval to abandon these wells as they do not provide representative groundwater conditions for the Site. In the meantime, GEI will continue with the routine monitoring activities on the wells proposed for abandonment until GA EPD approves the request to abandon the wells.

7. References

EPA, 2009. *Unified Guidance, Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities*. Office of Solid Waste Management Division, U.S. Environmental Protection Agency, Washington, D.C., March 2009.

ERM, 2017. *Alternate Source Demonstration, Plant McIntosh Ash Disposal Site No. 3. Atlanta*. August 2017.

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GPC, 2017. *Minor Modification to Solid Waste Handling Permits, Multiple Georgia Power Private Industry Solid Waste Disposal Facilities*, Addition of Appendix III and IV parameters to groundwater monitoring plans. August 1, 2017

Sanitas™, 2007. *Groundwater Statistical Software*, Sanitas™ Technologies, Shawnee, KS, 2007. www.sanitastech.com.

Tables

Table 1. Monitoring Well Network
Semiannual Groundwater Monitoring Report - January 2019
Georgia Power Company
Plant McIntosh Inactive CCR Landfill No. 3
Effingham County, Georgia

Well ID	Installation Date	Northing	Easting	Total Installed Depth (ft bTOC)	Ground Surface Elevation (ft)	Top of Casing Elevation (ft)	Bottom of Well Elevation (ft)	Top of Screen Elevation (ft)	Bottom of Screen Elevation (ft)	Location and Purpose
GWA-1	5/6/1998	852026.00	954547.02	36.00	63.98	66.93	30.93	41.43	31.43	Upgradient Monitoring Well
GWA-1A	1/5/2017	852024.53	954555.64	37.30	63.91	66.78	29.48	39.48	29.48	Upgradient Monitoring Well
GWA-2	5/7/1998	851831.67	954854.59	33.00	63.37	66.19	33.19	38.69	33.69	Upgradient Monitoring Well
GWA-2A	1/10/2017	851830.47	954844.74	43.18	63.34	66.34	23.16	33.16	23.16	Upgradient Monitoring Well
GWA-2B	8/29/2018	851832.11	954866.69	51.78	63.40	66.18	14.40	24.70	14.70	Upgradient Monitoring Well
GWA-3A	5/16/1998	851893.80	955179.82	33.88	59.69	62.79	28.91	39.41	29.41	Upgradient Monitoring Well
GWA-3B	5/16/1998	851892.22	955179.80	18.56	59.96	62.80	44.24	54.74	44.74	Upgradient Monitoring Well
GWA-4	5/7/1998	851980.95	955475.64	29.16	58.85	62.01	32.85	38.35	33.35	Upgradient Monitoring Well
GWA-5	5/7/1998	852110.88	955844.72	33.00	57.31	60.43	27.43	37.93	27.93	Upgradient Monitoring Well
GWA-7	11/7/2000	852261.79	954667.70	32.77	65.03	67.80	35.03	45.53	35.53	Upgradient Monitoring Well
GWA-7A	8/29/2018	852253.93	954655.56	46.94	65.64	68.18	21.24	31.54	21.54	Upgradient Monitoring Well
GWC-1	1/22/1996	852446.98	955308.28	35.96	63.28	66.08	30.12	39.92	30.62	Downgradient Monitoring Well
GWC-2	1/23/1996	852344.00	955958.34	36.78	60.56	64.21	27.43	37.23	27.93	Downgradient Monitoring Well
GWC-3	1/25/1996	852760.20	954845.76	35.51	63.71	66.91	31.40	41.20	31.90	Downgradient Monitoring Well
GWC-4A	5/16/1998	852544.54	955702.09	36.96	63.60	66.62	29.66	40.16	30.16	Downgradient Monitoring Well
GWC-4B	5/16/1998	852546.34	955700.55	18.00	63.63	66.83	48.83	59.33	49.33	Downgradient Monitoring Well
GWC-5	5/5/1998	852679.45	955461.52	30.56	64.62	68.08	37.52	48.02	38.02	Downgradient Monitoring Well
GWC-6	5/6/1998	852469.76	955055.45	32.64	65.34	68.51	35.87	41.37	36.37	Downgradient Monitoring Well
PZ-1	8/29/2018	852399.52	954905.49	52.68	64.96	67.64	14.96	25.26	15.26	Downgradient Piezometer
PZ-2	8/28/2018	852550.22	955305.10	42.26	65.24	67.50	25.24	35.54	25.54	Downgradient Piezometer
PZ-3	8/30/2018	852031.81	955677.81	41.57	58.73	61.30	19.73	30.03	20.03	Upgradient Piezometer

Notes:

bTOC - below top of casing

ft - feet

All monitoring wells are 2 inches in diameter and casing material is polyvinyl chloride (PVC)

Elevations are in feet relative to North American Vertical Datum (NAVD)88

Northing and easting are in feet North American Datum (NAD)83, State Plane Georgia East Zone

GWA-1A and GWA-2A were installed as replacement wells for GWA-1 and GWA-2, respectively

GWC-7 was originally installed 5/6/1998 and was replaced with a new well (also called GWC-7) in November 2000

GWA-7 is the same well as GWC-7, but the name was modified in February 2010 as a part of the Minor Modification Request to the D&O plan

GWA-2B is proposed as a replacement well for GWA-2/GWA-2A in the November 2018 submittal

GWA-7A is proposed as a replacement well for GWA-7 in the November 2018 submittal

Table 2. Groundwater Elevations
Semiannual Groundwater Monitoring Report - January 2019
Georgia Power Company
Plant McIntosh Inactive CCR Landfill No. 3
Effingham County, Georgia

Well ID	Ground Surface Elevation (ft)	Top of Casing Elevation (ft)	Top of Screen Elevation (ft)	Bottom of Screen Elevation (ft)	Total Installed Depth (ft bTOC)	Field Measured Depth (ft bTOC)	Previous Depth to Water (ft bTOC)	Depth to Water (ft bTOC)	Previous Groundwater Elevation (ft)	Groundwater Elevation (ft)
GWA-1	63.98	66.93	41.48	31.48	36.00	32.98	12.03	8.74	54.90	58.19
GWA-1A	63.91	66.78	38.91	28.91	37.30	38.19	12.86	9.90	53.92	56.88
GWA-2	63.37	66.19	38.87	33.87	33.00	33.52	13.19	10.44	53.00	55.75
GWA-2A	63.34	66.34	33.34	23.34	43.18	43.26	17.75	15.49	48.59	50.85
GWA-2B	63.40	66.18	24.70	14.70	51.78	52.51	NI	15.43	NI	50.75
GWA-3A	59.69	62.79	40.19	30.19	33.88	33.92	13.74	10.81	49.05	51.98
GWA-3B	59.96	62.80	55.46	45.46	18.56	18.62	11.05	6.43	51.75	56.37
GWA-4	58.85	62.01	38.35	33.35	29.16	29.19	13.63	10.42	48.38	51.59
GWA-5	57.31	60.43	37.81	27.81	33.00	28.49	12.55	8.63	47.88	51.80
GWA-7	65.03	67.80	45.53	35.53	32.77	32.89	16.55	14.06	51.25	53.74
GWA-7A	65.64	68.18	31.54	21.54	46.94	47.42	NI	15.86	NI	52.32
GWC-1	63.28	66.08	39.58	30.28	35.96	32.60	18.10	15.36	47.98	50.72
GWC-2	60.56	64.21	36.96	27.66	36.78	37.35	17.25	13.35	46.96	50.86
GWC-3	63.71	66.91	40.61	31.31	35.51	36.74	20.60	18.59	46.31	48.32
GWC-4A	63.60	66.62	41.10	31.10	36.96	36.98	19.01	15.58	47.61	51.04
GWC-4B	63.63	66.83	59.13	49.13	18.00	14.75	DRY	DRY	DRY	DRY
GWC-5	64.62	68.08	47.12	37.12	30.56	30.60	17.66	15.03	50.42	53.05
GWC-6	65.34	68.51	41.84	36.84	32.64	32.71	20.04	17.81	50.54	50.70
PZ-1	64.96	67.64	25.26	15.26	52.68	52.90	NI	18.02	NI	49.62
PZ-2	65.24	67.50	35.54	25.54	42.26	42.71	NI	16.98	NI	50.52
PZ-3	58.73	61.30	29.03	19.03	41.57	42.29	NI	9.87	NI	51.43

Notes:

All monitoring wells were gauged and depth to bottom measured on January 28, 2019

bTOC - below top of casing

Depth to water measurements made from top of casing

Elevations are in feet relative to North American Vertical Datum (NAVD)88

ft - feet

NI - not installed at time of measurement

Previous depth to water measurements collected on July 9, 2018 and recorded in the Semiannual Groundwater Report – July 2018

Table 3. Groundwater Velocity Calculations
Semiannual Groundwater Monitoring Report - January 2019
Georgia Power Company
Plant McIntosh Inactive CCR Landfill No. 3
Effingham County, Georgia

Monitoring Wells	h_1	h_2	K (ft/day)	n_e	dh (ft)	dl (ft)	i (ft/ft)	Velocity (ft/day)	Velocity (ft/year)
GWA-1A and PZ-2	56.88	50.52	2.24	0.20	6.36	915	0.0070	0.078	28.47
GWA-7A and GWC-3	52.32	48.32			4.00	541	0.0074	0.083	30.30
GWA-3A and GWC-2	51.98	50.86			1.12	899	0.0012	0.014	5.11
								Avg. (ft/day)	Avg. (ft/year)
								0.058	21.17

Notes:

ft - feet

h_1 and h_2 - groundwater elevation at location 1 and 2

K - hydraulic conductivity

n_e - effective porosity

dh - difference between h_1 and h_2

dl - distance between locations 1 and 2

i - hydraulic gradient (dh/dl)

Velocity = linear velocity = Ki/n_e

Table 4. Groundwater Analytical Results
Semiannual Groundwater Monitoring Report - January 2019
Georgia Power Company
Plant McIntosh Landfill No. 3
Effingham County, Georgia

Location Name				GWA-1A	GWA-2A	GWA-2B	GWA-3A	GWA-3B	GWA-4	GWA-5	GWA-7	GWA-7A	GWC-1		GWC-2		GWC-3	GWC-4A	GWC-5	GWC-6	
Sample Date				1/30/2019	1/30/2019	1/30/2019	1/30/2019	1/30/2019	1/30/2019	1/30/2019	1/30/2019	1/30/2019	1/30/2019	1/30/2019	DUP-Jan.19	1/31/2019	DUP-Jan.19	1/30/2019	1/30/2019	1/31/2019	1/31/2019
Analyte	CAS No.	Units	MCL																		
Field Parameters																					
Specific Conductivity	COND	uS/cm	NE	64.85	79.81	220.82	81.01	58.21	50.24	72.94	40.75	252.14		37.26		65.04	56.59	56.10	688.21	19.97	
ORP	ORP	mg/L	NE	332.31	66.92	54.19	74.04	62.44	56.20	95.25	71.90	30.75		81.51		99.85	321.41	119.02	29.86	374.10	
DO	DO	mV	NE	0.97	0.39	0.17	4.95	8.59	5.80	3.69	1.02	0.58		1.40		3.04	0.90	1.09	0.57	2.86	
pH	pH	s.u.	NE	5.17	5.42	5.08	4.88	5.13	4.94	4.72	4.96	5.15		4.81		5.38	4.91	4.52	5.69	4.52	
Temperature	TEMP	deg c	NE	16.61	15.43	15.41	16.23	15.82	14.66	15.22	15.38	15.57		17.67		16.78	17.82	18.45	13.81	18.60	
Turbidity	TURB	ntu	NE	4.30	1.30	2.57	2.87	6.68	1.84	4.71	4.96	2.43		1.19		0.84	1.17	1.30	0.58	2.30	
Appendix III Parameters																					
Boron	7440-42-8	mg/L	NE	< 0.030	< 0.030	0.77	< 0.030	0.041 J	< 0.030	0.030 J	< 0.030	1.5	< 0.030	< 0.030	0.040 J	0.038 J	< 0.030	< 0.030	< 0.030	< 0.030	
Calcium	7440-70-2	mg/L	NE	1.9	3.5	16	2.4	3.6	1.0	1.7	2.0	15	0.24 J	0.21 J	4.8	4.5	2.0	0.34	7.5	1.9	
Chloride	16887-00-6	mg/L	250**	8.2	13	7.3	15	5.8	6.9	6.5	6.5	7.1	4.9	4.8	5.2	5.2	10	12	8.0	8.5	
Fluoride	16984-48-8	mg/L	4	< 0.026	< 0.026	< 0.026	< 0.026	0.052 J	0.029 J	0.089 J	< 0.026	< 0.026	< 0.026	< 0.026	< 0.026	0.026 J	< 0.026	< 0.026	0.063 J	< 0.026	
pH	pH	s.u.	NE	5.17	5.42	5.08	4.88	5.13	4.94	4.72	4.96	5.15	4.81		5.38		4.91	4.52	5.69	4.52	
Sulfate	14808-79-8	mg/L	250**	1.2	< 0.38	74	0.41 J	7.2	3.5	15	< 0.38	85	0.58 J	0.74 J	0.57 J	0.48 J	< 0.38	0.90 J	4.8	0.86 J	
Total Dissolved Solids	TDS	mg/L	500**	82	68	140	41	53	40	67	130	180	24	34	45	45	33	37	180	84	
State Compliance Parameters																					
Barium	7440-39-3	mg/L	2	0.024	0.042	0.041	0.071	0.053	0.040	0.079	0.036	0.10	0.018 J	0.013 J	0.067	0.067	0.037	0.027	0.45	0.053	
Beryllium	7440-41-7	mg/L	0.004	0.00026 J	0.00037 J	0.0019 J	0.00051 J	0.00030 J	0.00019 J	0.00024 J	0.00047 J	0.00047 J	0.000090 J	< 0.000057	0.000065 J	0.000087 J	0.00033 J	0.000070 J	0.0012 J	0.00012 J	
Chromium	7440-47-3	mg/L	0.1	0.0061 J	< 0.0025	0.0030 J	0.0050 J	0.0070 J	0.00088 J	0.0014 J	0.01	< 0.00063	< 0.0025	0.00092 J	0.0061 J	0.0057 J	0.0047 J	< 0.00063	< 0.0025	< 0.0025	
Cobalt	7440-48-4	mg/L	NE	0.00038 J	0.00050 J	0.0044	0.0014 J	0.0019 J	0.00092 J	0.00076 J	0.0012 J	0.0047	0.00023 J	0.00013 J	0.00092 J	0.00088 J	0.00051 J	0.00038 J	0.013	0.00076 J	
Copper	7440-50-8	mg/L	1.0**	< 0.0013	0.0018 J	0.0035	< 0.0013	0.0015 J	< 0.0013	< 0.0013	0.0016 J	0.0018 J	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	
Lead	7439-92-1	mg/L	0.015	0.00021 J	< 0.000094	0.00028 J	0.00034 J	0.001	0.00013 J	0.00064 J	0.0021	< 0.000094	< 0.000094	< 0.000094	< 0.0010	< 0.0010	< 0.000094	< 0.000094	< 0.0010	< 0.0010	
Vanadium	7440-62-2	mg/L	NE	< 0.0025	< 0.0025	< 0.0025	< 0.0025	0.0043 J	< 0.00090	0.0019 J	0.0043	< 0.00090	< 0.00090	< 0.00090	< 0.0025	< 0.00090	< 0.0025	< 0.00090	< 0.0025	< 0.0025	
Zinc	7440-66-6	mg/L	5**	< 0.0024	0.0051 J	0.013 J	0.0058 J	0.0041 J	0.0060 J	0.0057 J	0.014 J	0.011 J	< 0.0024	< 0.0024	< 0.020	< 0.020	0.0033 J	0.0042 J	0.033 J	< 0.020	

General Notes:

Bolded - detected value

* EPA Action Level; **Georgia secondary drinking water standard established by EPA as a general guideline only (not enforced)

uS/cm - microsiemens per centimeter

Appendix III parameters were added to the semiannual groundwater monitoring program in the approved August 2017 minor modification request.

MCL -Maximum Contaminant Level

mg/L - milligrams per liter

mV - millivolts

NE - not established

ntu - nephelometric turbidity units

s.u. - Standard Units

State-required parameters required by the Georgia EPD per MPM on Design & Operation Plan for Landfill No. 3, dated August 1999.

Total metals analysis was performed. Temperature, specific conductance, pH, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity were measured and recorded in the field.

Validator Qualifiers:

The data presented in this table are representative of the validated data, and not necessarily that which is included in the laboratory reports.

< = The analyte was not detected at a concentration above the specified laboratory reporting limit.

J - The result is an estimated value.

Table 5. Descriptive Statistics for all Wells and Analytes
Semiannual Groundwater Monitoring Report - January 2019
Georgia Power Company
Plant McIntosh - Inactive CCR Landfill No. 3
Effingham County, Georgia

Constituent	Well	Well Direction	N	Number of Detects	Percent Detects	Mean	Standard Deviation	Distribution
Barium	GWA-1A (bg)	Upgradient	45	45	100	0.06516	0.051210	unknown
	GWA-2A (bg)	Upgradient	44	44	100	0.04645	0.034780	unknown
	GWA-3A (bg)	Upgradient	45	45	100	0.04487	0.008079	unknown
	GWA-3B (bg)	Upgradient	33	33	100	0.07239	0.02025	unknown
	GWA-4 (bg)	Upgradient	46	46	100	0.03694	0.00912	unknown
	GWA-5 (bg)	Upgradient	45	45	100	0.09831	0.04216	unknown
	GWA-7	Upgradient	45	45	100	0.06907	0.08735	unknown
	GWC-1	Downgradient	46	46	100	0.07204	0.044840	unknown
	GWC-2	Downgradient	46	46	100	0.06475	0.011810	unknown
	GWC-3	Downgradient	42	42	100	0.04300	0.009936	unknown
	GWC-4A	Downgradient	46	46	100	0.05078	0.017840	unknown
	GWC-5	Downgradient	45	45	100	0.2967	0.1432	unknown
GWC-6	Downgradient	44	44	100	0.04160	0.009372	unknown	
	Pooled Upgradient	N/A	303	303	100	0.06188	0.03614	unknown
Beryllium	GWA-1A (bg)	Upgradient	45	7	16	0.002171	0.0007694	N/A
	GWA-2A (bg)	Upgradient	44	8	18	0.002197	0.0007589	N/A
	GWA-3A (bg)	Upgradient	46	10	22	0.002084	0.0008483	N/A
	GWA-3B (bg)	Upgradient	35	5	14	0.002158	0.0007735	N/A
	GWA-4 (bg)	Upgradient	46	6	13	0.002189	0.000758	N/A
	GWA-5 (bg)	Upgradient	46	10	22	0.002209	0.0007612	N/A
	GWA-7	Upgradient	44	9	20	0.002232	0.0008461	N/A
	GWC-1	Downgradient	46	3	7	0.002422	0.0003000	N/A
	GWC-2	Downgradient	46	7	15	0.0022	0	N/A
	GWC-3	Downgradient	46	7	15	0.002217	0.0007415	N/A
	GWC-4A	Downgradient	46	4	9	0.002339	0.000544	N/A
	GWC-5	Downgradient	46	12	26	0.002056	0.0007636	N/A
GWC-6	Downgradient	45	7	16	0.002118	0	N/A	
	Pooled Upgradient	N/A	306	55	18	0.002177	0.0007879	unknown
Chromium	GWA-1A (bg)	Upgradient	45	39	87	0.011790	0.012130	unknown
	GWA-2A (bg)	Upgradient	43	19	44	0.005023	0.0048550	N/A
	GWA-3A (bg)	Upgradient	46	29	63	0.002947	0.001067	N/A
	GWA-3B (bg)	Upgradient	33	8	24	0.002591	0.0008966	N/A
	GWA-4 (bg)	Upgradient	45	9	20	0.002595	0.0010540	unknown
	GWA-5 (bg)	Upgradient	45	21	47	0.002433	0.000959	N/A
	GWA-7	Upgradient	45	44	98	0.018180	0.025110	unknown
	GWC-1	Downgradient	45	2	4	0.002445	0.000277	unknown
	GWC-2	Downgradient	46	35	76	0.003563	0.002952	N/A
	GWC-3	Downgradient	44	37	84	0.004109	0.003187	N/A
	GWC-4A	Downgradient	45	3	7	0.002571	0.0005190	N/A
	GWC-5	Downgradient	45	6	13	0.002756	0.001522	unknown
GWC-6	Downgradient	44	7	16	0.002564	0	N/A	
	Pooled Upgradient	N/A	302	169	55	0.006508	0.006582	unknown
Cobalt	GWA-1A (bg)	Upgradient	45	11	24	0.002560	0.001579	N/A
	GWA-2A (bg)	Upgradient	43	13	30	0.001994	0.0008395	N/A
	GWA-3A (bg)	Upgradient	45	12	27	0.00206	0.000674	N/A
	GWA-3B (bg)	Upgradient	33	9	27	0.002013	0.000738	unknown
	GWA-4 (bg)	Upgradient	46	12	26	0.001997	0.000783	N/A
	GWA-5 (bg)	Upgradient	45	26	58	0.002514	0.001408	N/A
	GWA-7	Upgradient	45	9	20	0.003579	0.003512	N/A
	GWC-1	Downgradient	45	1	2	0.002448	0.0003458	N/A
	GWC-2	Downgradient	46	14	30	0.002278	0.001516	N/A
	GWC-3	Downgradient	46	10	22	0.002068	0.000829	N/A
	GWC-4A	Downgradient	46	11	24	0.002090	0.000789	unknown
	GWC-5	Downgradient	46	34	74	0.005448	0.002956	N/A
GWC-6	Downgradient	46	9	20	0.002115	0.000754	N/A	
	Pooled Upgradient	N/A	302	92	30	0.002388	0.001362	unknown

Table 5. Descriptive Statistics for all Wells and Analytes
Semiannual Groundwater Monitoring Report - January 2019
Georgia Power Company
Plant McIntosh - Inactive CCR Landfill No. 3
Effingham County, Georgia

Constituent	Well	Well Direction	N	Number of Detects	Percent Detects	Mean	Standard Deviation	Distribution
Copper	GWA-1A (bg)	Upgradient	40	6	15	0.002810	0.0008463	N/A
	GWA-2A (bg)	Upgradient	36	4	11	0.002853	0.001813	N/A
	GWA-3A (bg)	Upgradient	40	1	3	0.002489	0.00007115	N/A
	GWA-3B (bg)	Upgradient	27	2	7	0.002389	0.0004237	N/A
	GWA-4 (bg)	Upgradient	40	0	0	0.002562	0.0003953	N/A
	GWA-5 (bg)	Upgradient	40	10	25	0.003365	0.0028780	N/A
	GWA-7	Upgradient	39	4	10	0.0029	0	N/A
	GWC-1	Downgradient	40	1	3	0.0026	0	N/A
	GWC-2	Downgradient	39	2	5	0.002551	0.0007236	N/A
	GWC-3	Downgradient	40	1	3	0.0025	0	N/A
	GWC-4A	Downgradient	40	0	0	0.002562	0.0003953	N/A
GWC-5	Downgradient	40	2	5	0.002457	0.0002854	N/A	
GWC-6	Downgradient	40	1	3	0.002547	0.0003004	N/A	
Pooled Upgradient	N/A		262	27	10	0.002767	0.001338	unknown
Lead	GWA-1A (bg)	Upgradient	45	9	20	0.0026	0	N/A
	GWA-2A (bg)	Upgradient	44	4	9	0.00191	0.003531	N/A
	GWA-3A (bg)	Upgradient	46	2	4	0.0010	0	N/A
	GWA-3B (bg)	Upgradient	33	9	27	0.000980	0.0002609	N/A
	GWA-4 (bg)	Upgradient	46	4	9	0.0011	0	N/A
	GWA-5 (bg)	Upgradient	46	9	20	0.0012	0	N/A
	GWA-7	Upgradient	45	14	31	0.0060	0	N/A
	GWC-1	Downgradient	45	0	0	0.0010	0	N/A
	GWC-2	Downgradient	45	2	4	0.001078	0.0006725	N/A
	GWC-3	Downgradient	45	5	11	0.0014	0	N/A
	GWC-4A	Downgradient	45	0	0	0.0010	0	N/A
GWC-5	Downgradient	44	1	2	0.0009795	0.0001357	N/A	
GWC-6	Downgradient	44	4	9	0.001229	0.0012110	N/A	
Pooled Upgradient	N/A		305	51	17	0.002107	0.002929	unknown
Vanadium	GWA-1A (bg)	Upgradient	40	23	58	0.009402	0.0117500	N/A
	GWA-2A (bg)	Upgradient	35	16	46	0.00549	0.0055480	N/A
	GWA-3A (bg)	Upgradient	40	2	5	0.002497	0.0003059	N/A
	GWA-3B (bg)	Upgradient	27	10	37	0.003193	0.0019670	N/A
	GWA-4 (bg)	Upgradient	40	2	5	0.002458	0.000266	N/A
	GWA-5 (bg)	Upgradient	39	8	21	0.003187	0.0044310	N/A
	GWA-7	Upgradient	38	18	47	0.017840	0.030200	N/A
	GWC-1	Downgradient	40	1	3	0.002595	0.0006008	N/A
	GWC-2	Downgradient	40	4	10	0.002865	0.0020630	N/A
	GWC-3	Downgradient	40	4	10	0.004025	0.0048040	N/A
	GWC-4A	Downgradient	40	0	0	0.002500	0.0000000	N/A
GWC-5	Downgradient	40	5	13	0.00432	0.007098	unknown	
GWC-6	Downgradient	39	1	3	0.002490	0	N/A	
Pooled Upgradient	N/A		259	79	31	0.006295	0.0077811	unknown
Zinc	GWA-1A (bg)	Upgradient	40	28	70	0.02490	0.018530	unknown
	GWA-2A (bg)	Upgradient	37	34	92	0.03299	0.028090	N/A
	GWA-3A (bg)	Upgradient	38	20	53	0.01241	0.007904	unknown
	GWA-3B (bg)	Upgradient	27	13	48	0.0172	0.012300	unknown
	GWA-4 (bg)	Upgradient	40	33	83	0.015320	0.010560	unknown
	GWA-5 (bg)	Upgradient	39	31	79	0.01992	0.017030	N/A
	GWA-7	Upgradient	38	24	63	0.02384	0.030800	unknown
	GWC-1	Downgradient	40	19	48	0.01237	0.008055	unknown
	GWC-2	Downgradient	40	29	73	0.01404	0.011590	unknown
	GWC-3	Downgradient	40	29	73	0.011540	0.008717	N/A
	GWC-4A	Downgradient	39	22	56	0.01237	0.008474	unknown
GWC-5	Downgradient	40	36	90	0.01865	0.009344	unknown	
GWC-6	Downgradient	34	23	68	0.01276	0	unknown	
Pooled Upgradient	N/A		259	183	70	0.02094	0.017888	unknown

Notes:

N - number of samples in a well/analyte pair

N/A - not applicable

0

Table 6. Calculated Upper Prediction Limits
Semiannual Groundwater Monitoring Report - January 2019
Georgia Power Company
Plant McIntosh - Inactive CCR Landfill No. 3
Effingham County, Georgia

Constituent	Well	Upper Limit (mg/L)	Background Number of Samples	Number of Detected Values	% Non-Detect Values	Transform	Alpha	Method
Barium	Pooled Upgradient	0.300	305	305	0	n/a	0.0000492	NP Inter (normality) 1 of 2
Beryllium	Pooled Upgradient	0.004	308	55	82	n/a	0.0000492	NP Inter (NDs) 1 of 2
Chromium	Pooled Upgradient	0.097	304	170	44	n/a	0.0000492	NP Inter (normality) 1 of 2
Cobalt	Pooled Upgradient	0.017	304	94	69	n/a	0.0000492	NP Inter (NDs) 1 of 2
Copper	Pooled Upgradient	0.019	263	29	89	n/a	0.0000492	NP Inter (NDs) 1 of 2
Lead	Pooled Upgradient	0.044	307	53	83	n/a	0.0000492	NP Inter (NDs) 1 of 2
Vanadium	Pooled Upgradient	0.110	260	78	70	n/a	0.0000492	NP Inter (NDs) 1 of 2
Zinc	Pooled Upgradient	0.150	260	185	29	n/a	0.0000492	NP Inter (normality) 1 of 2

Notes:

% - percent

* indicates the upper prediction limits was constructed with a one of two retesting strategy

mg/L - milligrams per liter

n/a - not applicable

NDs - non-detects

NP - non-parametric

Table 7. Downgradient Concentrations in Excess of UPL
Semiannual Groundwater Monitoring Report - January 2019
Georgia Power Company
Plant McIntosh - Inactive CCR Landfill No. 3
Effingham County, Georgia

Constituent	Well	Calculated UPL (mg/L)	Date	Observation (mg/L)	Trend ⁽¹⁾
Barium	GWC-5	0.30	1/31/2019	0.45	Stable

Notes:

mg/L - milligrams per liter

UPL - upper prediction limit



1. Concentration trend calculated using Mann-Kendall/Sen's Estimate of Slope analysis at 98% confidence interval.

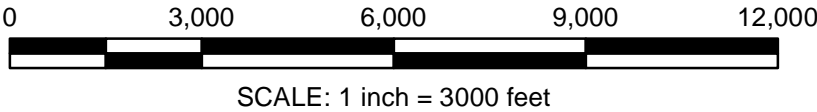
Figures



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

LEGEND

-  Inactive CCR Landfill No. 3 Approximate Boundary
-  Plant McIntosh Approximate Property Boundary



Semiannual Groundwater Monitoring Report - January 2019
 Plant McIntosh Inactive CCR Landfill No. 3
 Effingham County, Georgia

Georgia Power Company
 Atlanta, Georgia







**PLANT MCINTOSH
 SITE LOCATION MAP**

Project No. 1800205 Prepared February 2019 Fig. 1

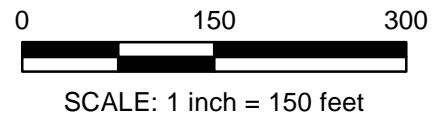



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

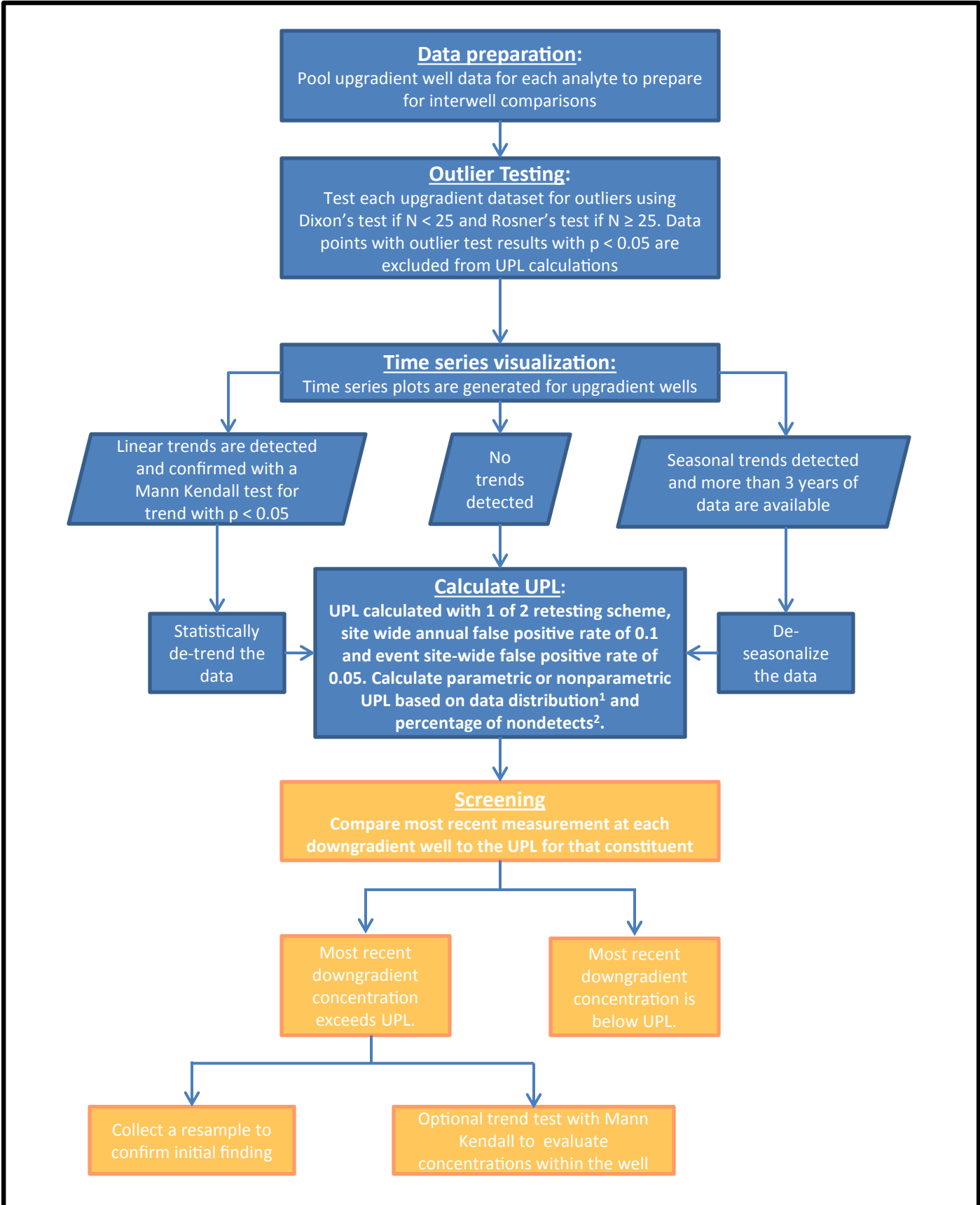
LEGEND

-  Downgradient Monitoring Well
-  Piezometer
-  Upgradient Monitoring Well
-  Proposed For Abandonment

GWA-1, GWA-2, GWA-2A, GWA-3B, GWA-7, GWC-3, and GWC-4B are proposed for abandonment.

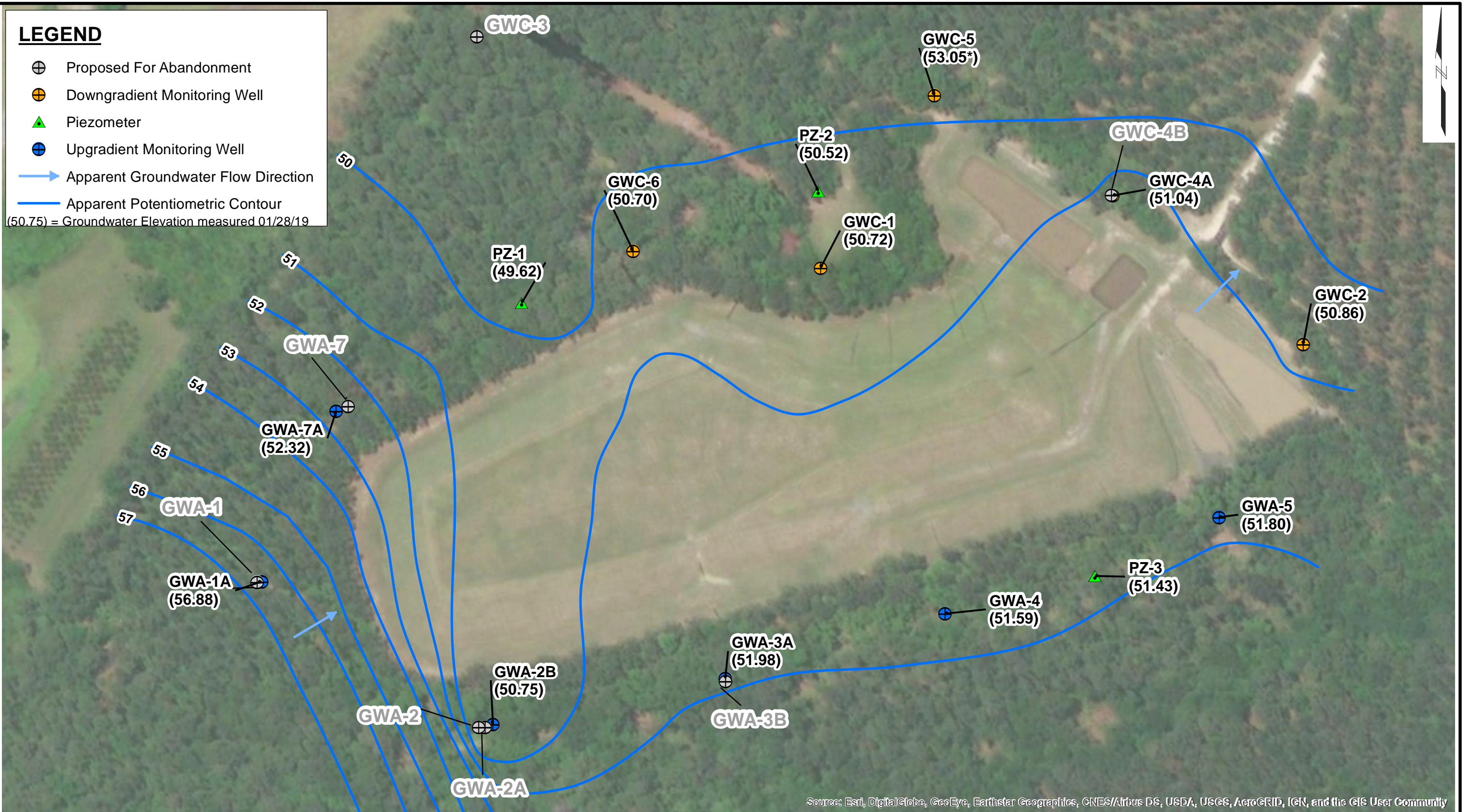


Semiannual Groundwater Monitoring Report - January 2019 Plant McIntosh Inactive CCR Landfill No. 3 Effingham County, Georgia		WELL LOCATION MAP
Georgia Power Company Atlanta, Georgia	Project No. 1800205	Prepared June 2019 Fig. 2



LEGEND

- ⊕ Proposed For Abandonment
 - ⊕ Downgradient Monitoring Well
 - ▲ Piezometer
 - ⊕ Upgradient Monitoring Well
 - Apparent Groundwater Flow Direction
 - Apparent Potentiometric Contour
- (50.75) = Groundwater Elevation measured 01/28/19

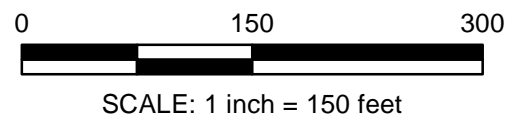



Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

NOTES

GWC-5 was not used in contouring.
 GWA-1, GWA-2, GWA-2A, GWA-3B, GWA-7, GWC-3, and GWC-4B
 are proposed for abandonment.

Elevations are in feet relative to North American
 Vertical Datum (NAVD) 88



Semiannual Groundwater Monitoring Report - January 2019 Plant McIntosh Inactive CCR Landfill No. 3 Effingham County, Georgia	 GEI Consultants	POTENTIOMETRIC SURFACE CONTOUR MAP JANUARY 2019
Georgia Power Company Atlanta, Georgia	Project No. 1800205 Prepared February 2019 Fig. 4	

Appendix A

Field Sampling Data Sheets

Water Level Measurement Data Sheet

Plant McIntosh

Georgia Power Company

Date: 1/28/2019



Gauged by: P. Adams, J. Noles, L. Coker

Provided for reference

Area	Well ID	Installed Total Depth (ft btoc)	Measured Depth to Water (ft btoc)	Measured Depth to Bottom (ft btoc)	July 2018 Depth to Water (ft btoc)	July 2018 Depth to Bottom (ft btoc)	Installed Depth to Top of Screen (ft btoc)	Notes
Landfill No. 3	GWA-1	36.00	8.74	32.98	12.03	32.92	25.45	
	GWA-1A	37.30	9.90	38.19	12.86	38.10	27.87	
	GWA-2	33.00	10.44	33.52	13.19	33.81	27.32	
	GWA-2A	43.18	15.49	43.26	17.75	43.24	33.00	
	GWA-2B	51.78	15.43	52.51	--	--	41.48	
	GWA-3A	33.88	10.81	33.92	13.74	33.88	22.60	
	GWA-3B	18.56	6.43	18.62	11.05	18.56	7.34	
	GWA-4	29.16	10.42	29.19	13.63	29.15	23.66	
	GWA-5	33.00	8.63	28.49	12.55	28.46	22.62	
	GWA-7	32.77	14.06	32.89	16.55	32.80	22.27	
	GWA-7A	46.94	15.86	47.42	--	--	36.64	
	GWC-1	35.96	15.36	32.60	18.10	32.55	26.50	
	GWC-2	36.78	13.35	37.35	17.25	37.35	27.25	
	GWC-3	35.51	18.59	36.74	20.60	36.70	26.30	
	GWC-4A	36.96	15.58	36.98	19.01	37.00	25.52	
	GWC-4B	18.00	DRY	14.75	DRY	14.71	7.70	
	GWC-5	30.56	15.03	30.60	17.66	30.54	20.96	
	GWC-6	32.64	17.81	32.71	20.04	32.62	26.67	
	PZ-1	52.68	18.02	52.90	--	--	42.38	
	PZ-2	42.26	16.98	42.71	--	--	31.96	
PZ-3	41.57	9.87	42.29	--	--	32.27		

Notes: ft = feet NM = Not Measured btoc = below top of casing bgs = below ground surface

Product Name: Low-Flow System

Date: 2019-01-30 13:03:02

Project Information:

Operator Name L Coker
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369370
Turbidity Make/Model Lamotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 33 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWA-1A
Well diameter 2 in
Well Total Depth 37.3 ft
Screen Length 10 ft
Depth to Water 10.00 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.237293 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 7.6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	12:40:46	2100.02	16.37	5.25	72.72	6.12	10.15	1.08	171.04
Last 5	12:45:46	2400.02	16.52	5.20	67.85	6.30	10.15	1.00	183.03
Last 5	12:50:46	2700.02	16.43	5.18	65.69	5.48	10.16	0.96	238.02
Last 5	12:55:46	3000.02	16.61	5.17	64.85	4.30	10.17	0.97	332.31
Last 5	13:00:46	3300.02	16.84	5.14	57.84	--	--	0.90	370.87
Variance 0			-0.09	-0.02	-2.16			-0.04	54.99
Variance 1			0.19	-0.01	-0.84			0.01	94.29
Variance 2			0.22	-0.03	-7.01			-0.07	38.56

Notes

Sampled at 13:05. Delete last reading forgot to finish low flow

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 13:11:23

Project Information:

Operator Name J. Noles
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 601533
Turbidity Make/Model Lamotte 2020we

Pump Information:

Pump Model/Type Alexis
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 43 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWA-2A
Well diameter 2 in
Well Total Depth 43.26 ft
Screen Length 10 ft
Depth to Water 15.45 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2819272 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 1.68 in
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C +/- 10%	pH +/- 0.1	SpCond μ S/cm +/- 5%	Turb NTU +/- 10%	DTW ft	RDO mg/L +/- 10%	ORP mV +/- 10
Stabilization									
Last 5	12:41:47	600.02	15.08	5.39	80.34	0.58	15.69	0.54	72.22
Last 5	12:46:47	900.02	15.41	5.39	80.04	0.58	15.69	0.48	71.50
Last 5	12:51:47	1200.02	15.41	5.40	79.85	0.57	15.69	0.44	70.00
Last 5	12:56:47	1500.21	15.42	5.41	80.58	0.98	15.69	0.44	69.01
Last 5	13:01:47	1800.21	15.43	5.42	79.81	1.30	15.69	0.39	66.92
Variance 0			0.00	0.01	-0.20			-0.04	-1.50
Variance 1			0.01	0.00	0.73			-0.01	-1.00
Variance 2			0.01	0.01	-0.77			-0.05	-2.09

Notes

Sampled at 1320 on 1-30-19.

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 14:40:05

Project Information:

Operator Name J. Noles
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 601533
Turbidity Make/Model Lamotte 2020we

Pump Information:

Pump Model/Type Alexis
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 52 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWA-2B
Well diameter 2 in
Well Total Depth 52.51 ft
Screen Length 10 ft
Depth to Water 15.25 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.322098 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 21.96 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C +/- 10%	pH +/- 0.1	SpCond μ S/cm +/- 5%	Turb NTU +/- 10%	DTW ft	RDO mg/L +/- 10%	ORP mV +/- 10
Stabilization									
Last 5	14:17:40	1799.82	15.44	5.25	221.83	4.84	17.11	0.19	47.36
Last 5	14:22:40	2099.82	15.48	5.60	216.31	3.57	17.08	0.19	25.21
Last 5	14:27:40	2399.82	15.43	5.15	220.27	2.94	17.08	0.18	55.15
Last 5	14:32:40	2699.82	15.52	5.11	220.92	3.09	17.08	0.17	53.61
Last 5	14:37:40	2999.82	15.41	5.08	220.82	2.57	17.08	0.17	54.19
Variance 0			-0.04	-0.45	3.97			-0.01	29.94
Variance 1			0.08	-0.03	0.65			-0.01	-1.54
Variance 2			-0.10	-0.03	-0.10			-0.00	0.58

Notes

Sampled at 1442 on 1-30-19.

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 13:02:00

Project Information:

Operator Name J Adcock
Company Name GEI
Project Name LF3
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369555
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 31 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWA-3A
Well diameter 2 in
Well Total Depth 33.88 ft
Screen Length 10 ft
Depth to Water 10.77 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2283661 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 30.72 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10%
Last 5	12:39:00	600.03	16.00	4.95	80.31	1.59	12.30	5.67	85.51
Last 5	12:44:00	900.52	16.20	4.95	79.70	1.41	12.66	5.56	78.82
Last 5	12:49:00	1200.52	16.45	4.95	79.62	1.71	12.98	5.53	76.82
Last 5	12:54:00	1500.52	16.45	4.92	80.26	1.75	13.15	5.19	75.19
Last 5	12:59:00	1800.52	16.23	4.88	81.01	2.87	13.33	4.95	74.04
Variance 0			0.26	-0.00	-0.08			-0.03	-2.00
Variance 1			0.00	-0.03	0.64			-0.34	-1.63
Variance 2			-0.23	-0.04	0.75			-0.24	-1.15

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 14:49:37

Project Information:

Operator Name J Adcock
Company Name GEI
Project Name LF3
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369555
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 20 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWA-3B
Well diameter 2 in
Well Total Depth 18.56 ft
Screen Length 10 ft
Depth to Water 6.54 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.1792685 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 12 in
Total Volume Pumped 13.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10%
Last 5	14:27:43	4200.23	15.57	5.16	56.74	6.88	7.49	8.98	62.31
Last 5	14:32:43	4500.23	15.64	5.15	57.04	6.79	7.50	8.88	62.47
Last 5	14:37:43	4800.23	15.73	5.14	57.43	6.72	7.51	8.78	62.37
Last 5	14:42:43	5100.23	15.73	5.13	58.08	6.81	7.52	8.71	64.85
Last 5	14:47:43	5400.23	15.82	5.13	58.21	6.68	7.53	8.59	62.44
Variance 0			0.09	-0.01	0.39			-0.10	-0.10
Variance 1			-0.00	-0.01	0.65			-0.07	2.48
Variance 2			0.09	-0.00	0.13			-0.12	-2.41

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 16:03:07

Project Information:

Operator Name J Adcock
Company Name GEI
Project Name LF3
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369555
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 30 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWA-4
Well diameter 2 in
Well Total Depth 29.16 ft
Screen Length 5 ft
Depth to Water 10.39 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 51.96 in
Total Volume Pumped 6 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10%
Last 5	15:41:25	900.02	15.77	4.94	50.59	0.90	13.25	5.93	62.56
Last 5	15:46:25	1200.02	15.65	4.96	49.94	0.98	13.90	5.86	59.26
Last 5	15:51:25	1500.02	15.15	4.96	49.62	1.53	14.20	5.83	57.34
Last 5	15:56:25	1799.94	15.03	4.96	49.43	1.62	14.50	5.79	56.75
Last 5	16:01:25	2099.95	14.66	4.94	50.24	1.84	14.72	5.80	56.20
Variance 0			-0.50	-0.01	-0.32			-0.03	-1.92
Variance 1			-0.12	0.00	-0.19			-0.05	-0.59
Variance 2			-0.37	-0.01	0.81			0.01	-0.55

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 16:50:42

Project Information:

Operator Name J. Noles
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 601533
Turbidity Make/Model Lamotte 2020we

Pump Information:

Pump Model/Type Alexis
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 28 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWA-5
Well diameter 2 in
Well Total Depth 28.49 ft
Screen Length 10 ft
Depth to Water 8.60 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 45.24 in
Total Volume Pumped 6.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10%	+/- 0.1	+/- 5%	+/- 10%		+/- 10%	+/- 10
Last 5	16:24:39	2700.07	15.82	4.71	72.93	5.15	11.74	3.70	97.21
Last 5	16:29:39	3000.07	16.02	4.71	73.10	5.52	11.91	3.69	97.80
Last 5	16:34:39	3300.07	15.93	4.71	72.79	5.30	12.17	3.63	97.28
Last 5	16:39:39	3600.07	15.77	4.72	72.29	5.70	12.25	3.65	96.87
Last 5	16:44:39	3899.88	15.22	4.72	72.94	4.71	12.27	3.69	95.25
Variance 0			-0.09	0.00	-0.32			-0.05	-0.51
Variance 1			-0.16	0.01	-0.49			0.02	-0.41
Variance 2			-0.55	-0.00	0.65			0.04	-1.63

Notes

Sampled at 1655 on 1-30-19.

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 13:53:24

Project Information:

Operator Name P Adams
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 445707
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 40 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWA-7
Well diameter 2 in
Well Total Depth 32.89 ft
Screen Length 10 ft
Depth to Water 14.06 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2685369 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	13:31:49	1200.38	15.40	4.98	33.37	6.22	14.22	1.50	75.04
Last 5	13:36:49	1500.38	15.57	4.95	33.52	5.50	14.22	1.46	75.46
Last 5	13:41:49	1800.38	15.61	4.97	33.84	5.33	14.22	1.41	73.11
Last 5	13:46:49	2100.38	15.46	4.97	36.23	5.16	14.22	1.26	72.13
Last 5	13:51:49	2400.38	15.38	4.96	40.75	4.96	14.22	1.02	71.90
Variance 0			0.05	0.02	0.32			-0.06	-2.35
Variance 1			-0.15	-0.00	2.39			-0.14	-0.98
Variance 2			-0.08	-0.01	4.52			-0.24	-0.23

Notes

Sampled at 1401

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 13:01:51

Project Information:

Operator Name P Adams
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 445707
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 50 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWA-7A
Well diameter 2 in
Well Total Depth 47 ft
Screen Length 10 ft
Depth to Water 15.8 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.3131711 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 7 in
Total Volume Pumped 3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	12:40:09	1200.02	15.66	5.56	225.03	2.68	19.40	0.54	-26.13
Last 5	12:45:09	1500.02	15.43	5.37	242.82	2.72	19.40	0.54	9.42
Last 5	12:50:09	1800.02	15.56	5.23	249.01	2.51	19.40	0.55	23.59
Last 5	12:55:09	2100.02	15.42	5.16	251.83	2.66	19.40	0.58	30.16
Last 5	13:00:09	2400.02	15.57	5.15	252.14	2.43	19.40	0.58	30.75
Variance 0			0.13	-0.14	6.19			0.02	14.17
Variance 1			-0.14	-0.06	2.82			0.02	6.57
Variance 2			0.15	-0.01	0.31			0.00	0.59

Notes

Sampled at 1304

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 14:48:10

Project Information:

Operator Name P Adams
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 445707
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 35 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-1
Well diameter 2 in
Well Total Depth 32.6 ft
Screen Length 5 ft
Depth to Water 15.36 ft

Pumping Information:

Final Pumping Rate 250 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 2 in
Total Volume Pumped 7.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	14:25:12	600.02	17.41	4.81	38.31	1.11	15.50	1.78	90.32
Last 5	14:30:12	900.02	17.45	4.81	38.02	1.25	15.50	1.56	86.91
Last 5	14:35:12	1200.02	17.50	4.82	37.76	0.97	15.50	1.50	84.39
Last 5	14:40:12	1500.02	17.63	4.80	37.52	1.43	15.50	1.51	83.46
Last 5	14:45:15	1802.74	17.67	4.81	37.26	1.19	15.50	1.40	81.51
Variance 0			0.04	0.01	-0.26			-0.06	-2.52
Variance 1			0.14	-0.02	-0.24			0.02	-0.94
Variance 2			0.04	0.01	-0.26			-0.12	-1.94

Notes

Sampled at 1451

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-31 09:59:51

Project Information:

Operator Name J. Noles
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 601533
Turbidity Make/Model Lamotte 2020we

Pump Information:

Pump Model/Type Alexis
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 35 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-2
Well diameter 2 in
Well Total Depth 37.35 ft
Screen Length 10 ft
Depth to Water 13.45 ft

Pumping Information:

Final Pumping Rate 100 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0.6 in
Total Volume Pumped 3.5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 10%	+/- 0.1	+/- 5%	+/- 10%		+/- 10%	+/- 10
Last 5	09:37:23	900.02	16.43	5.54	75.19	1.27	13.50	3.52	101.91
Last 5	09:42:23	1200.02	16.29	5.45	69.44	0.72	13.50	3.30	102.93
Last 5	09:47:23	1500.02	16.06	5.40	66.41	1.42	13.50	3.10	102.03
Last 5	09:52:23	1800.02	16.24	5.39	65.57	1.29	13.50	3.09	99.91
Last 5	09:57:23	2100.02	16.78	5.38	65.04	0.84	13.50	3.04	99.85
Variance 0			-0.23	-0.06	-3.03			-0.20	-0.90
Variance 1			0.18	-0.01	-0.84			-0.01	-2.11
Variance 2			0.54	-0.02	-0.53			-0.05	-0.06

Notes

Sampled at. 1005 on 1-31-19.

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 15:35:04

Project Information:

Operator Name L. Coker
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369370
Turbidity Make/Model Lamotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 31 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-3
Well diameter 2 in
Well Total Depth 36.74 ft
Screen Length 10 ft
Depth to Water 18.51 ft

Pumping Information:

Final Pumping Rate 130 mL/min
Total System Volume 0.2283661 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 0 in
Total Volume Pumped 4.3 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	15:07:46	600.02	17.39	4.90	56.26	0.75	18.82	0.99	390.90
Last 5	15:12:46	900.02	17.39	4.92	56.70	1.76	18.81	0.94	362.75
Last 5	15:17:46	1200.02	17.62	4.91	57.23	1.05	18.81	0.92	343.90
Last 5	15:22:46	1500.02	17.61	4.91	56.91	0.87	18.81	0.90	331.41
Last 5	15:27:46	1800.02	17.82	4.91	56.59	1.17	18.81	0.90	321.41
Variance 0			0.23	-0.00	0.53			-0.02	-18.85
Variance 1			-0.01	-0.00	-0.32			-0.02	-12.49
Variance 2			0.21	0.00	-0.32			-0.00	-10.00

Notes

Sampled at 1530

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 16:11:54

Project Information:

Operator Name P Adams
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 445707
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 35 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-4A
Well diameter 2 in
Well Total Depth 36.98 ft
Screen Length 10 ft
Depth to Water 15.58 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2462198 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 6 in
Total Volume Pumped 5 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	15:49:45	1200.02	18.30	4.51	56.49	1.12	16.08	1.70	164.25
Last 5	15:54:45	1500.02	18.42	4.52	56.26	1.01	16.08	1.50	148.42
Last 5	15:59:45	1800.02	18.33	4.52	56.26	0.92	16.08	1.33	137.81
Last 5	16:04:45	2100.02	18.56	4.53	56.15	1.22	16.08	1.18	127.26
Last 5	16:09:46	2401.02	18.45	4.52	56.10	1.30	16.09	1.09	119.02
Variance 0			-0.09	-0.00	-0.00			-0.17	-10.62
Variance 1			0.23	0.01	-0.11			-0.15	-10.55
Variance 2			-0.11	-0.01	-0.05			-0.09	-8.24

Notes

Sampled at 1623

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-31 09:56:17

Project Information:

Operator Name J Adcock
Company Name GEI
Project Name LF3
Site Name Plant McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369555
Turbidity Make/Model LaMotte 2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 30 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-5
Well diameter 2 in
Well Total Depth 30.56 ft
Screen Length 10 ft
Depth to Water 15.09 ft

Pumping Information:

Final Pumping Rate 150 mL/min
Total System Volume 0.2239027 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 37.44 in
Total Volume Pumped 5.25 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 5%	+/- 0.1	+/- 5%	+/- 5		+/- 0.2	+/- 10%
Last 5	09:28:54	600.18	13.58	5.66	699.56	0.19	16.57	0.76	40.89
Last 5	09:33:54	900.17	14.04	5.68	687.33	0.40	17.09	0.57	35.29
Last 5	09:38:54	1200.17	13.97	5.69	684.45	0.25	17.42	0.55	33.11
Last 5	09:43:54	1500.18	13.71	5.69	686.41	0.91	17.70	0.57	30.99
Last 5	09:48:54	1800.17	13.81	5.69	688.21	0.58	18.00	0.57	29.86
Variance 0			-0.07	0.01	-2.88			-0.02	-2.17
Variance 1			-0.27	0.00	1.97			0.02	-2.13
Variance 2			0.10	0.00	1.79			-0.00	-1.13

Notes

Grab Samples

Product Name: Low-Flow System

Date: 2019-01-30 14:31:29

Project Information:

Operator Name L. Coker
Company Name GEI
Project Name LF3
Site Name McIntosh
Latitude 0° 0' 0"
Longitude 0° 0' 0"
Sonde SN 369370
Turbidity Make/Model Lamotte2020we

Pump Information:

Pump Model/Type Alexis Peristaltic
Tubing Type LDPE
Tubing Diameter 0.17 in
Tubing Length 28 ft

Pump placement from TOC 3 ft

Well Information:

Well ID GWC-6
Well diameter 2 in
Well Total Depth 32.71 ft
Screen Length 10 ft
Depth to Water 17.81 ft

Pumping Information:

Final Pumping Rate 200 mL/min
Total System Volume 0.2149758 L
Calculated Sample Rate 300 sec
Stabilization Drawdown 168 in
Total Volume Pumped 11 L

Low-Flow Sampling Stabilization Summary

	Time	Elapsed	Temp C	pH	SpCond μ S/cm	Turb NTU	DTW ft	RDO mg/L	ORP mV
Stabilization			+/- 0	+/- 0.1	+/- 5%	+/- 0		+/- 10%	+/- 0
Last 5	14:07:55	2100.02	18.55	5.00	41.29	1.22	28.15	5.79	395.12
Last 5	14:12:55	2400.02	18.53	4.97	41.77	1.20	29.05	5.64	395.53
Last 5	14:17:55	2700.02	18.60	4.82	42.89	1.06	30.00	3.84	386.21
Last 5	14:22:55	3000.02	18.61	4.74	45.38	2.10	30.65	3.12	374.19
Last 5	14:27:55	3300.02	18.60	4.52	19.97	2.30	31.91	2.86	374.10
Variance 0			0.07	-0.15	1.11			-1.80	-9.31
Variance 1			0.01	-0.08	2.49			-0.72	-12.02
Variance 2			-0.01	-0.22	-25.40			-0.26	-0.09

Notes

Purged dry at 14:27

Grab Samples

Appendix B

Laboratory Analytical Data and Data Validation Reports

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pittsburgh

301 Alpha Drive

RIDC Park

Pittsburgh, PA 15238

Tel: (412)963-7058

TestAmerica Job ID: 180-86243-2

TestAmerica Sample Delivery Group: L3 State Compliance

Client Project/Site: CCR - Plant McIntosh Ash Landfill #3

Revision: 1

For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

3/8/2019 2:25:15 PM

Veronica Bortot, Senior Project Manager

(412)963-2435

veronica.bortot@testamericainc.com

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results through

TotalAccess

Have a Question?



Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

Job ID: 180-86243-2

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative 180-86243-2

Revision 2 ; to set RL to those in SOW

Revised: to change RLs for B and Ca to routine

Comments

No additional comments.

Receipt

The samples were received on 1/31/2019 10:00 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 2.6° C and 2.8° C.

Receipt Exceptions

The Chain-of-Custody (COC) was incomplete as received and/or improperly completed. One out of four COC's does not have a relinquished by time listed.

Anions

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Metals

Method(s) 6020: The serial dilution performed for the following sample associated with batch 180-269787 was outside control limits for barium : GWA-3A (180-86243-6)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Laboratory: TestAmerica Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-19
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-19
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-19 *
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	01-28-19 *
Pennsylvania	NELAP	3	02-00416	04-30-19
South Carolina	State Program	4	89014	04-30-19
Texas	NELAP	6	T104704528-15-2	03-31-19 *
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-86243-1	GWC-1	Water	01/30/19 14:51	01/31/19 10:00
180-86243-2	GWA-1A	Water	01/30/19 13:05	01/31/19 10:00
180-86243-3	GWA-2A	Water	01/30/19 13:20	01/31/19 10:00
180-86243-4	GWA-2B	Water	01/30/19 14:42	01/31/19 10:00
180-86243-5	GWC-3	Water	01/30/19 15:30	01/31/19 10:00
180-86243-6	GWA-3A	Water	01/30/19 13:05	01/31/19 10:00
180-86243-7	GWA-3B	Water	01/30/19 14:55	01/31/19 10:00
180-86243-8	GWA-4	Water	01/30/19 16:10	01/31/19 10:00
180-86243-9	GWC-4A	Water	01/30/19 16:23	01/31/19 10:00
180-86243-10	GWA-5	Water	01/30/19 16:55	01/31/19 10:00
180-86243-11	GWA-7	Water	01/30/19 14:01	01/31/19 10:00
180-86243-12	GWA-7A	Water	01/30/19 13:04	01/31/19 10:00
180-86243-13	DUP-LF3-01	Water	01/30/19 00:00	01/31/19 10:00
180-86243-14	FB-LF3-01	Water	01/30/19 16:20	01/31/19 10:00
180-86243-15	FERB-LF3-01	Water	01/30/19 16:15	01/31/19 10:00

Method Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	TAL PIT
EPA 6020	Metals (ICP/MS)	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Client Sample ID: GWC-1
Date Collected: 01/30/19 14:51
Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHICS2100B		1	1 mL	1.0 mL	269535	02/05/19 15:16	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	269611	02/05/19 11:58	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020 Instrument ID: A		1			269787	02/06/19 16:07	RSK	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT

Client Sample ID: GWA-1A
Date Collected: 01/30/19 13:05
Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHICS2100B		1	1 mL	1.0 mL	269535	02/05/19 15:32	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	269611	02/05/19 11:58	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020 Instrument ID: A		1			269787	02/06/19 16:10	RSK	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT

Client Sample ID: GWA-2A
Date Collected: 01/30/19 13:20
Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHICS2100B		1	1 mL	1.0 mL	269535	02/05/19 15:48	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	269611	02/05/19 11:58	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020 Instrument ID: A		1			269787	02/06/19 16:13	RSK	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT

Client Sample ID: GWA-2B
Date Collected: 01/30/19 14:42
Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHICS2100B		1	1 mL	1.0 mL	269535	02/05/19 16:20	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	269611	02/05/19 11:58	NAM	TAL PIT

TestAmerica Pittsburgh

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Client Sample ID: GWA-2B

Lab Sample ID: 180-86243-4

Date Collected: 01/30/19 14:42

Matrix: Water

Date Received: 01/31/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	EPA 6020		1			269787	02/06/19 16:17	RSK	TAL PIT
		Instrument ID: A								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: GWC-3

Lab Sample ID: 180-86243-5

Date Collected: 01/30/19 15:30

Matrix: Water

Date Received: 01/31/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 16:04	MJH	TAL PIT
		Instrument ID: CHICS2100B								
Total Recoverable	Prep	3005A			50 mL	50 mL	269611	02/05/19 11:58	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			269787	02/06/19 16:20	RSK	TAL PIT
		Instrument ID: A								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: GWA-3A

Lab Sample ID: 180-86243-6

Date Collected: 01/30/19 13:05

Matrix: Water

Date Received: 01/31/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 17:07	MJH	TAL PIT
		Instrument ID: CHICS2100B								
Total Recoverable	Prep	3005A			50 mL	50 mL	269611	02/05/19 11:58	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			269787	02/06/19 16:30	RSK	TAL PIT
		Instrument ID: A								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: GWA-3B

Lab Sample ID: 180-86243-7

Date Collected: 01/30/19 14:55

Matrix: Water

Date Received: 01/31/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 17:23	MJH	TAL PIT
		Instrument ID: CHICS2100B								
Total Recoverable	Prep	3005A			50 mL	50 mL	269611	02/05/19 12:00	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			269787	02/06/19 16:43	RSK	TAL PIT
		Instrument ID: A								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT
		Instrument ID: NOEQUIP								

TestAmerica Pittsburgh

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Client Sample ID: GWA-4

Date Collected: 01/30/19 16:10

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 18:10	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	269612	02/05/19 12:01	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1	1.0 mL	1.0 mL	270330	02/12/19 16:13	WTR	TAL PIT
Instrument ID: X										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: GWC-4A

Date Collected: 01/30/19 16:23

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 18:26	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	269612	02/05/19 12:01	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1	1.0 mL	1.0 mL	270330	02/12/19 16:28	WTR	TAL PIT
Instrument ID: X										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: GWA-5

Date Collected: 01/30/19 16:55

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 18:42	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	269612	02/05/19 12:01	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1	1.0 mL	1.0 mL	270330	02/12/19 16:33	WTR	TAL PIT
Instrument ID: X										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT
Instrument ID: NOEQUIP										

Client Sample ID: GWA-7

Date Collected: 01/30/19 14:01

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 18:58	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	269612	02/05/19 12:01	NAM	TAL PIT

TestAmerica Pittsburgh

Lab Chronicle

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

Client Sample ID: GWA-7

Date Collected: 01/30/19 14:01

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-11

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	EPA 6020		1	1.0 mL	1.0 mL	270330	02/12/19 16:38	WTR	TAL PIT
		Instrument ID: X								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269416	02/02/19 08:18	AVS	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: GWA-7A

Date Collected: 01/30/19 13:04

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-12

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 19:45	MJH	TAL PIT
		Instrument ID: CHICS2100B								
Total Recoverable	Prep	3005A			50 mL	50 mL	269612	02/05/19 12:01	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1	1.0 mL	1.0 mL	270330	02/12/19 16:44	WTR	TAL PIT
		Instrument ID: X								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269417	02/02/19 08:25	AVS	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: DUP-LF3-01

Date Collected: 01/30/19 00:00

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-13

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 20:01	MJH	TAL PIT
		Instrument ID: CHICS2100B								
Total Recoverable	Prep	3005A			50 mL	50 mL	269612	02/05/19 12:01	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1	1.0 mL	1.0 mL	270330	02/12/19 16:49	WTR	TAL PIT
		Instrument ID: X								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269416	02/02/19 08:18	AVS	TAL PIT
		Instrument ID: NOEQUIP								

Client Sample ID: FB-LF3-01

Date Collected: 01/30/19 16:20

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-14

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 14:13	MJH	TAL PIT
		Instrument ID: CHICS2100B								
Total Recoverable	Prep	3005A			50 mL	50 mL	269612	02/05/19 12:01	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1	1.0 mL	1.0 mL	270330	02/12/19 16:54	WTR	TAL PIT
		Instrument ID: X								
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269416	02/02/19 08:18	AVS	TAL PIT
		Instrument ID: NOEQUIP								

TestAmerica Pittsburgh

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Client Sample ID: FERB-LF3-01

Lab Sample ID: 180-86243-15

Date Collected: 01/30/19 16:15

Matrix: Water

Date Received: 01/31/19 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1	1 mL	1.0 mL	269535	02/05/19 15:00	MJH	TAL PIT
Instrument ID: CHICS2100B										
Total Recoverable	Prep	3005A			50 mL	50 mL	269612	02/05/19 12:01	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1	1.0 mL	1.0 mL	270330	02/12/19 16:59	WTR	TAL PIT
Instrument ID: X										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269416	02/02/19 08:18	AVS	TAL PIT
Instrument ID: NOEQUIP										

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

NAM = Nicole Marfisi

Batch Type: Analysis

AVS = Abbey Smith

MJH = Matthew Hartman

RSK = Robert Kurtz

WTR = Bill Reinheimer

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Client Sample ID: GWC-1
Date Collected: 01/30/19 14:51
Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-1
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.9		1.0	0.71	mg/L			02/05/19 15:16	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 15:16	1
Sulfate	0.58	J	1.0	0.38	mg/L			02/05/19 15:16	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.018		0.0025	0.00037	mg/L		02/05/19 11:58	02/06/19 16:07	1
Beryllium	0.000090	J	0.0025	0.000057	mg/L		02/05/19 11:58	02/06/19 16:07	1
Cobalt	0.00023	J	0.0025	0.000075	mg/L		02/05/19 11:58	02/06/19 16:07	1
Chromium	0.0024	J B	0.0025	0.00063	mg/L		02/05/19 11:58	02/06/19 16:07	1
Lead	<0.000094		0.0010	0.000094	mg/L		02/05/19 11:58	02/06/19 16:07	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 11:58	02/06/19 16:07	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 11:58	02/06/19 16:07	1
Zinc	<0.0024		0.020	0.0024	mg/L		02/05/19 11:58	02/06/19 16:07	1
Calcium	0.24	J	0.25	0.12	mg/L		02/05/19 11:58	02/06/19 16:07	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 11:58	02/06/19 16:07	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	24		10	10	mg/L			02/02/19 08:25	1

Client Sample ID: GWA-1A
Date Collected: 01/30/19 13:05
Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-2
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.2		1.0	0.71	mg/L			02/05/19 15:32	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 15:32	1
Sulfate	1.2		1.0	0.38	mg/L			02/05/19 15:32	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.024		0.0025	0.00037	mg/L		02/05/19 11:58	02/06/19 16:10	1
Beryllium	0.00026	J	0.0025	0.000057	mg/L		02/05/19 11:58	02/06/19 16:10	1
Cobalt	0.00038	J	0.0025	0.000075	mg/L		02/05/19 11:58	02/06/19 16:10	1
Chromium	0.0061	B	0.0025	0.00063	mg/L		02/05/19 11:58	02/06/19 16:10	1
Lead	0.00021	J	0.0010	0.000094	mg/L		02/05/19 11:58	02/06/19 16:10	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 11:58	02/06/19 16:10	1
Vanadium	0.0017	J B	0.0025	0.00090	mg/L		02/05/19 11:58	02/06/19 16:10	1
Zinc	<0.0024		0.020	0.0024	mg/L		02/05/19 11:58	02/06/19 16:10	1
Calcium	1.9		0.25	0.12	mg/L		02/05/19 11:58	02/06/19 16:10	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 11:58	02/06/19 16:10	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	82		10	10	mg/L			02/02/19 08:25	1

TestAmerica Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

Client Sample ID: GWA-2A

Lab Sample ID: 180-86243-3

Date Collected: 01/30/19 13:20

Matrix: Water

Date Received: 01/31/19 10:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		1.0	0.71	mg/L			02/05/19 15:48	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 15:48	1
Sulfate	<0.38		1.0	0.38	mg/L			02/05/19 15:48	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.042		0.0025	0.00037	mg/L		02/05/19 11:58	02/06/19 16:13	1
Beryllium	0.00037	J	0.0025	0.000057	mg/L		02/05/19 11:58	02/06/19 16:13	1
Cobalt	0.00050	J	0.0025	0.000075	mg/L		02/05/19 11:58	02/06/19 16:13	1
Chromium	0.0023	J B	0.0025	0.00063	mg/L		02/05/19 11:58	02/06/19 16:13	1
Lead	<0.000094		0.0010	0.000094	mg/L		02/05/19 11:58	02/06/19 16:13	1
Copper	0.0018	J	0.0025	0.0013	mg/L		02/05/19 11:58	02/06/19 16:13	1
Vanadium	0.0019	J B	0.0025	0.00090	mg/L		02/05/19 11:58	02/06/19 16:13	1
Zinc	0.0051	J	0.020	0.0024	mg/L		02/05/19 11:58	02/06/19 16:13	1
Calcium	3.5		0.25	0.12	mg/L		02/05/19 11:58	02/06/19 16:13	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 11:58	02/06/19 16:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	68		10	10	mg/L			02/02/19 08:25	1

Client Sample ID: GWA-2B

Lab Sample ID: 180-86243-4

Date Collected: 01/30/19 14:42

Matrix: Water

Date Received: 01/31/19 10:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.3		1.0	0.71	mg/L			02/05/19 16:20	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 16:20	1
Sulfate	74		1.0	0.38	mg/L			02/05/19 16:20	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.041		0.0025	0.00037	mg/L		02/05/19 11:58	02/06/19 16:17	1
Beryllium	0.0019	J	0.0025	0.000057	mg/L		02/05/19 11:58	02/06/19 16:17	1
Cobalt	0.0044		0.0025	0.000075	mg/L		02/05/19 11:58	02/06/19 16:17	1
Chromium	0.0030	B	0.0025	0.00063	mg/L		02/05/19 11:58	02/06/19 16:17	1
Lead	0.00028	J	0.0010	0.000094	mg/L		02/05/19 11:58	02/06/19 16:17	1
Copper	0.0035		0.0025	0.0013	mg/L		02/05/19 11:58	02/06/19 16:17	1
Vanadium	0.0018	J B	0.0025	0.00090	mg/L		02/05/19 11:58	02/06/19 16:17	1
Zinc	0.013	J	0.020	0.0024	mg/L		02/05/19 11:58	02/06/19 16:17	1
Calcium	16		0.25	0.12	mg/L		02/05/19 11:58	02/06/19 16:17	1
Boron	0.77		0.050	0.030	mg/L		02/05/19 11:58	02/06/19 16:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	140		10	10	mg/L			02/02/19 08:25	1

TestAmerica Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

Client Sample ID: GWC-3

Date Collected: 01/30/19 15:30

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-5

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10		1.0	0.71	mg/L			02/05/19 16:04	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 16:04	1
Sulfate	<0.38		1.0	0.38	mg/L			02/05/19 16:04	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.037		0.0025	0.00037	mg/L		02/05/19 11:58	02/06/19 16:20	1
Beryllium	0.00033	J	0.0025	0.000057	mg/L		02/05/19 11:58	02/06/19 16:20	1
Cobalt	0.00051	J	0.0025	0.000075	mg/L		02/05/19 11:58	02/06/19 16:20	1
Chromium	0.0047	B	0.0025	0.00063	mg/L		02/05/19 11:58	02/06/19 16:20	1
Lead	<0.000094		0.0010	0.000094	mg/L		02/05/19 11:58	02/06/19 16:20	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 11:58	02/06/19 16:20	1
Vanadium	0.0017	J B	0.0025	0.00090	mg/L		02/05/19 11:58	02/06/19 16:20	1
Zinc	0.0033	J	0.020	0.0024	mg/L		02/05/19 11:58	02/06/19 16:20	1
Calcium	2.0		0.25	0.12	mg/L		02/05/19 11:58	02/06/19 16:20	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 11:58	02/06/19 16:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	33		10	10	mg/L			02/02/19 08:25	1

Client Sample ID: GWA-3A

Date Collected: 01/30/19 13:05

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-6

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15		1.0	0.71	mg/L			02/05/19 17:07	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 17:07	1
Sulfate	0.41	J	1.0	0.38	mg/L			02/05/19 17:07	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.071		0.0025	0.00037	mg/L		02/05/19 11:58	02/06/19 16:30	1
Beryllium	0.00051	J	0.0025	0.000057	mg/L		02/05/19 11:58	02/06/19 16:30	1
Cobalt	0.0014	J	0.0025	0.000075	mg/L		02/05/19 11:58	02/06/19 16:30	1
Chromium	0.0050	B	0.0025	0.00063	mg/L		02/05/19 11:58	02/06/19 16:30	1
Lead	0.00034	J	0.0010	0.000094	mg/L		02/05/19 11:58	02/06/19 16:30	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 11:58	02/06/19 16:30	1
Vanadium	0.0016	J B	0.0025	0.00090	mg/L		02/05/19 11:58	02/06/19 16:30	1
Zinc	0.0058	J	0.020	0.0024	mg/L		02/05/19 11:58	02/06/19 16:30	1
Calcium	2.4		0.25	0.12	mg/L		02/05/19 11:58	02/06/19 16:30	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 11:58	02/06/19 16:30	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	41		10	10	mg/L			02/02/19 08:25	1

TestAmerica Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

Client Sample ID: GWA-3B

Lab Sample ID: 180-86243-7

Date Collected: 01/30/19 14:55

Matrix: Water

Date Received: 01/31/19 10:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.8		1.0	0.71	mg/L			02/05/19 17:23	1
Fluoride	0.052	J	0.20	0.026	mg/L			02/05/19 17:23	1
Sulfate	7.2		1.0	0.38	mg/L			02/05/19 17:23	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.053		0.0025	0.00037	mg/L		02/05/19 12:00	02/06/19 16:43	1
Beryllium	0.00030	J	0.0025	0.000057	mg/L		02/05/19 12:00	02/06/19 16:43	1
Cobalt	0.0019	J	0.0025	0.000075	mg/L		02/05/19 12:00	02/06/19 16:43	1
Chromium	0.0070	B	0.0025	0.00063	mg/L		02/05/19 12:00	02/06/19 16:43	1
Lead	0.0010		0.0010	0.000094	mg/L		02/05/19 12:00	02/06/19 16:43	1
Copper	0.0015	J	0.0025	0.0013	mg/L		02/05/19 12:00	02/06/19 16:43	1
Vanadium	0.0043	B	0.0025	0.00090	mg/L		02/05/19 12:00	02/06/19 16:43	1
Zinc	0.0041	J	0.020	0.0024	mg/L		02/05/19 12:00	02/06/19 16:43	1
Calcium	3.6		0.25	0.12	mg/L		02/05/19 12:00	02/06/19 16:43	1
Boron	0.041	J	0.050	0.030	mg/L		02/05/19 12:00	02/06/19 16:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	53		10	10	mg/L			02/02/19 08:25	1

Client Sample ID: GWA-4

Lab Sample ID: 180-86243-8

Date Collected: 01/30/19 16:10

Matrix: Water

Date Received: 01/31/19 10:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.9		1.0	0.71	mg/L			02/05/19 18:10	1
Fluoride	0.029	J	0.20	0.026	mg/L			02/05/19 18:10	1
Sulfate	3.5		1.0	0.38	mg/L			02/05/19 18:10	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.040		0.0025	0.00037	mg/L		02/05/19 12:01	02/12/19 16:13	1
Beryllium	0.00019	J	0.0025	0.000057	mg/L		02/05/19 12:01	02/12/19 16:13	1
Cobalt	0.00092	J	0.0025	0.000075	mg/L		02/05/19 12:01	02/12/19 16:13	1
Chromium	0.00088	J	0.0025	0.00063	mg/L		02/05/19 12:01	02/12/19 16:13	1
Lead	0.00013	J	0.0010	0.000094	mg/L		02/05/19 12:01	02/12/19 16:13	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:01	02/12/19 16:13	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 12:01	02/12/19 16:13	1
Zinc	0.0060	J	0.020	0.0024	mg/L		02/05/19 12:01	02/12/19 16:13	1
Calcium	1.0		0.25	0.12	mg/L		02/05/19 12:01	02/12/19 16:13	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:01	02/12/19 16:13	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	40		10	10	mg/L			02/02/19 08:25	1

TestAmerica Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

Client Sample ID: GWC-4A

Lab Sample ID: 180-86243-9

Date Collected: 01/30/19 16:23

Matrix: Water

Date Received: 01/31/19 10:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12		1.0	0.71	mg/L			02/05/19 18:26	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 18:26	1
Sulfate	0.90	J	1.0	0.38	mg/L			02/05/19 18:26	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.027		0.0025	0.00037	mg/L		02/05/19 12:01	02/12/19 16:28	1
Beryllium	0.000070	J	0.0025	0.000057	mg/L		02/05/19 12:01	02/12/19 16:28	1
Cobalt	0.00038	J	0.0025	0.000075	mg/L		02/05/19 12:01	02/12/19 16:28	1
Chromium	<0.00063		0.0025	0.00063	mg/L		02/05/19 12:01	02/12/19 16:28	1
Lead	<0.000094		0.0010	0.000094	mg/L		02/05/19 12:01	02/12/19 16:28	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:01	02/12/19 16:28	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 12:01	02/12/19 16:28	1
Zinc	0.0042	J	0.020	0.0024	mg/L		02/05/19 12:01	02/12/19 16:28	1
Calcium	0.34		0.25	0.12	mg/L		02/05/19 12:01	02/12/19 16:28	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:01	02/12/19 16:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	37		10	10	mg/L			02/02/19 08:25	1

Client Sample ID: GWA-5

Lab Sample ID: 180-86243-10

Date Collected: 01/30/19 16:55

Matrix: Water

Date Received: 01/31/19 10:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.5		1.0	0.71	mg/L			02/05/19 18:42	1
Fluoride	0.089	J	0.20	0.026	mg/L			02/05/19 18:42	1
Sulfate	15		1.0	0.38	mg/L			02/05/19 18:42	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.079		0.0025	0.00037	mg/L		02/05/19 12:01	02/12/19 16:33	1
Beryllium	0.00024	J	0.0025	0.000057	mg/L		02/05/19 12:01	02/12/19 16:33	1
Cobalt	0.00076	J	0.0025	0.000075	mg/L		02/05/19 12:01	02/12/19 16:33	1
Chromium	0.0014	J	0.0025	0.00063	mg/L		02/05/19 12:01	02/12/19 16:33	1
Lead	0.00064	J	0.0010	0.000094	mg/L		02/05/19 12:01	02/12/19 16:33	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:01	02/12/19 16:33	1
Vanadium	0.0019	J	0.0025	0.00090	mg/L		02/05/19 12:01	02/12/19 16:33	1
Zinc	0.0057	J	0.020	0.0024	mg/L		02/05/19 12:01	02/12/19 16:33	1
Calcium	1.7		0.25	0.12	mg/L		02/05/19 12:01	02/12/19 16:33	1
Boron	0.030	J	0.050	0.030	mg/L		02/05/19 12:01	02/12/19 16:33	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	67		10	10	mg/L			02/02/19 08:25	1

TestAmerica Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

Client Sample ID: GWA-7

Date Collected: 01/30/19 14:01

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-11

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	6.5		1.0	0.71	mg/L			02/05/19 18:58	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 18:58	1
Sulfate	<0.38		1.0	0.38	mg/L			02/05/19 18:58	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.036		0.0025	0.00037	mg/L		02/05/19 12:01	02/12/19 16:38	1
Beryllium	0.00047	J	0.0025	0.000057	mg/L		02/05/19 12:01	02/12/19 16:38	1
Cobalt	0.0012	J	0.0025	0.000075	mg/L		02/05/19 12:01	02/12/19 16:38	1
Chromium	0.010		0.0025	0.00063	mg/L		02/05/19 12:01	02/12/19 16:38	1
Lead	0.0021		0.0010	0.000094	mg/L		02/05/19 12:01	02/12/19 16:38	1
Copper	0.0016	J	0.0025	0.0013	mg/L		02/05/19 12:01	02/12/19 16:38	1
Vanadium	0.0043		0.0025	0.00090	mg/L		02/05/19 12:01	02/12/19 16:38	1
Zinc	0.014	J	0.020	0.0024	mg/L		02/05/19 12:01	02/12/19 16:38	1
Calcium	2.0		0.25	0.12	mg/L		02/05/19 12:01	02/12/19 16:38	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:01	02/12/19 16:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	130		10	10	mg/L			02/02/19 08:18	1

Client Sample ID: GWA-7A

Date Collected: 01/30/19 13:04

Date Received: 01/31/19 10:00

Lab Sample ID: 180-86243-12

Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.1		1.0	0.71	mg/L			02/05/19 19:45	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 19:45	1
Sulfate	85		1.0	0.38	mg/L			02/05/19 19:45	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.10		0.0025	0.00037	mg/L		02/05/19 12:01	02/12/19 16:44	1
Beryllium	0.00047	J	0.0025	0.000057	mg/L		02/05/19 12:01	02/12/19 16:44	1
Cobalt	0.0047		0.0025	0.000075	mg/L		02/05/19 12:01	02/12/19 16:44	1
Chromium	<0.00063		0.0025	0.00063	mg/L		02/05/19 12:01	02/12/19 16:44	1
Lead	<0.000094		0.0010	0.000094	mg/L		02/05/19 12:01	02/12/19 16:44	1
Copper	0.0018	J	0.0025	0.0013	mg/L		02/05/19 12:01	02/12/19 16:44	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 12:01	02/12/19 16:44	1
Zinc	0.011	J	0.020	0.0024	mg/L		02/05/19 12:01	02/12/19 16:44	1
Calcium	15		0.25	0.12	mg/L		02/05/19 12:01	02/12/19 16:44	1
Boron	1.5		0.050	0.030	mg/L		02/05/19 12:01	02/12/19 16:44	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	180		10	10	mg/L			02/02/19 08:25	1

TestAmerica Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

Client Sample ID: DUP-LF3-01

Lab Sample ID: 180-86243-13

Date Collected: 01/30/19 00:00

Matrix: Water

Date Received: 01/31/19 10:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.8		1.0	0.71	mg/L			02/05/19 20:01	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 20:01	1
Sulfate	0.74	J	1.0	0.38	mg/L			02/05/19 20:01	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.013		0.0025	0.00037	mg/L		02/05/19 12:01	02/12/19 16:49	1
Beryllium	<0.000057		0.0025	0.000057	mg/L		02/05/19 12:01	02/12/19 16:49	1
Cobalt	0.00013	J	0.0025	0.000075	mg/L		02/05/19 12:01	02/12/19 16:49	1
Chromium	0.00092	J	0.0025	0.00063	mg/L		02/05/19 12:01	02/12/19 16:49	1
Lead	<0.000094		0.0010	0.000094	mg/L		02/05/19 12:01	02/12/19 16:49	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:01	02/12/19 16:49	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 12:01	02/12/19 16:49	1
Zinc	<0.0024		0.020	0.0024	mg/L		02/05/19 12:01	02/12/19 16:49	1
Calcium	0.21	J	0.25	0.12	mg/L		02/05/19 12:01	02/12/19 16:49	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:01	02/12/19 16:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	34		10	10	mg/L			02/02/19 08:18	1

Client Sample ID: FB-LF3-01

Lab Sample ID: 180-86243-14

Date Collected: 01/30/19 16:20

Matrix: Water

Date Received: 01/31/19 10:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			02/05/19 14:13	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 14:13	1
Sulfate	<0.38		1.0	0.38	mg/L			02/05/19 14:13	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00037		0.0025	0.00037	mg/L		02/05/19 12:01	02/12/19 16:54	1
Beryllium	<0.000057		0.0025	0.000057	mg/L		02/05/19 12:01	02/12/19 16:54	1
Cobalt	<0.000075		0.0025	0.000075	mg/L		02/05/19 12:01	02/12/19 16:54	1
Chromium	<0.00063		0.0025	0.00063	mg/L		02/05/19 12:01	02/12/19 16:54	1
Lead	<0.000094		0.0010	0.000094	mg/L		02/05/19 12:01	02/12/19 16:54	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:01	02/12/19 16:54	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 12:01	02/12/19 16:54	1
Zinc	<0.0024		0.020	0.0024	mg/L		02/05/19 12:01	02/12/19 16:54	1
Calcium	<0.12		0.25	0.12	mg/L		02/05/19 12:01	02/12/19 16:54	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:01	02/12/19 16:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			02/02/19 08:18	1

TestAmerica Pittsburgh

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Client Sample ID: FERB-LF3-01

Lab Sample ID: 180-86243-15

Date Collected: 01/30/19 16:15

Matrix: Water

Date Received: 01/31/19 10:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			02/05/19 15:00	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 15:00	1
Sulfate	<0.38		1.0	0.38	mg/L			02/05/19 15:00	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00037		0.0025	0.00037	mg/L		02/05/19 12:01	02/12/19 16:59	1
Beryllium	<0.000057		0.0025	0.000057	mg/L		02/05/19 12:01	02/12/19 16:59	1
Cobalt	<0.000075		0.0025	0.000075	mg/L		02/05/19 12:01	02/12/19 16:59	1
Chromium	<0.00063		0.0025	0.00063	mg/L		02/05/19 12:01	02/12/19 16:59	1
Lead	<0.000094		0.0010	0.000094	mg/L		02/05/19 12:01	02/12/19 16:59	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:01	02/12/19 16:59	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 12:01	02/12/19 16:59	1
Zinc	<0.0024		0.020	0.0024	mg/L		02/05/19 12:01	02/12/19 16:59	1
Calcium	<0.12		0.25	0.12	mg/L		02/05/19 12:01	02/12/19 16:59	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:01	02/12/19 16:59	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			02/02/19 08:18	1

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-269535/38
Matrix: Water
Analysis Batch: 269535

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			02/05/19 13:57	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 13:57	1
Sulfate	<0.38		1.0	0.38	mg/L			02/05/19 13:57	1

Lab Sample ID: MB 180-269535/6
Matrix: Water
Analysis Batch: 269535

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			02/05/19 05:31	1
Fluoride	<0.026		0.20	0.026	mg/L			02/05/19 05:31	1
Sulfate	<0.38		1.0	0.38	mg/L			02/05/19 05:31	1

Lab Sample ID: LCS 180-269535/37
Matrix: Water
Analysis Batch: 269535

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	24.2		mg/L		97	90 - 110
Fluoride	1.25	1.23		mg/L		98	90 - 110
Sulfate	25.0	23.8		mg/L		95	90 - 110

Lab Sample ID: 180-86243-5 MS
Matrix: Water
Analysis Batch: 269535

Client Sample ID: GWC-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	10		25.0	36.6		mg/L		107	80 - 120
Fluoride	<0.026		1.25	1.38		mg/L		110	80 - 120
Sulfate	<0.38		25.0	26.8		mg/L		107	80 - 120

Lab Sample ID: 180-86243-5 MSD
Matrix: Water
Analysis Batch: 269535

Client Sample ID: GWC-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	10		25.0	36.4		mg/L		106	80 - 120	1	20
Fluoride	<0.026		1.25	1.37		mg/L		110	80 - 120	0	20
Sulfate	<0.38		25.0	26.8		mg/L		107	80 - 120	0	20

Lab Sample ID: 180-86243-11 MS
Matrix: Water
Analysis Batch: 269535

Client Sample ID: GWA-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	6.5		25.0	31.6		mg/L		100	80 - 120
Fluoride	<0.026		1.25	1.31		mg/L		105	80 - 120
Sulfate	<0.38		25.0	25.2		mg/L		101	80 - 120

TestAmerica Pittsburgh

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 180-86243-11 MSD
Matrix: Water
Analysis Batch: 269535

Client Sample ID: GWA-7
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	6.5		25.0	33.0		mg/L		106	80 - 120	4	20
Fluoride	<0.026		1.25	1.36		mg/L		109	80 - 120	4	20
Sulfate	<0.38		25.0	26.6		mg/L		106	80 - 120	5	20

Method: EPA 6020 - Metals (ICP/MS)

Lab Sample ID: MB 180-269611/1-A
Matrix: Water
Analysis Batch: 269787

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 269611

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00037		0.0025	0.00037	mg/L		02/05/19 11:58	02/06/19 14:50	1
Beryllium	<0.000057		0.0025	0.000057	mg/L		02/05/19 11:58	02/06/19 14:50	1
Cobalt	<0.000075		0.0025	0.000075	mg/L		02/05/19 11:58	02/06/19 14:50	1
Chromium	0.00117	J	0.0025	0.00063	mg/L		02/05/19 11:58	02/06/19 14:50	1
Lead	<0.000094		0.0010	0.000094	mg/L		02/05/19 11:58	02/06/19 14:50	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 11:58	02/06/19 14:50	1
Vanadium	0.000971	J	0.0025	0.00090	mg/L		02/05/19 11:58	02/06/19 14:50	1
Zinc	<0.0024		0.020	0.0024	mg/L		02/05/19 11:58	02/06/19 14:50	1
Calcium	<0.12		0.25	0.12	mg/L		02/05/19 11:58	02/06/19 14:50	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 11:58	02/06/19 14:50	1

Lab Sample ID: LCS 180-269611/2-A
Matrix: Water
Analysis Batch: 269787

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 269611

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	2.00	2.17		mg/L		109	80 - 120
Beryllium	0.0500	0.0517		mg/L		103	80 - 120
Cobalt	0.500	0.496		mg/L		99	80 - 120
Chromium	0.200	0.212		mg/L		106	80 - 120
Lead	0.0200	0.0213		mg/L		107	80 - 120
Copper	0.250	0.254		mg/L		102	80 - 120
Vanadium	0.500	0.526		mg/L		105	80 - 120
Zinc	0.500	0.498		mg/L		100	80 - 120
Calcium	50.0	53.8		mg/L		108	80 - 120
Boron	1.00	1.03		mg/L		103	80 - 120

Lab Sample ID: 180-86243-B-6-B MS
Matrix: Water
Analysis Batch: 269787

Client Sample ID: 180-86243-B-6-B MS
Prep Type: Total Recoverable
Prep Batch: 269611

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	0.0527		2.00	2.14		mg/L		104	75 - 125
Beryllium	0.000299		0.0500	0.0493		mg/L		98	75 - 125
Cobalt	0.00192		0.500	0.458		mg/L		91	75 - 125
Chromium	0.00702		0.200	0.206		mg/L		99	75 - 125
Lead	0.00103		0.0200	0.0211		mg/L		100	75 - 125

TestAmerica Pittsburgh

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Method: EPA 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-86243-B-6-B MS
Matrix: Water
Analysis Batch: 269787

Client Sample ID: 180-86243-B-6-B MS
Prep Type: Total Recoverable
Prep Batch: 269611

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Copper	0.00150		0.250	0.241		mg/L		96	75 - 125
Vanadium	0.00432		0.500	0.498		mg/L		99	75 - 125
Zinc	0.00405		0.500	0.473		mg/L		94	75 - 125
Calcium	3.62		50.0	53.1		mg/L		99	75 - 125
Boron	0.0409		1.00	1.02		mg/L		98	75 - 125

Lab Sample ID: 180-86243-B-6-C MSD
Matrix: Water
Analysis Batch: 269787

Client Sample ID: 180-86243-B-6-C MSD
Prep Type: Total Recoverable
Prep Batch: 269611

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Barium	0.0527		2.00	2.12		mg/L		103	75 - 125	1	20
Beryllium	0.000299		0.0500	0.0491		mg/L		98	75 - 125	0	20
Cobalt	0.00192		0.500	0.460		mg/L		92	75 - 125	0	20
Chromium	0.00702		0.200	0.204		mg/L		99	75 - 125	1	20
Lead	0.00103		0.0200	0.0208		mg/L		99	75 - 125	1	20
Copper	0.00150		0.250	0.238		mg/L		95	75 - 125	1	20
Vanadium	0.00432		0.500	0.495		mg/L		98	75 - 125	0	20
Zinc	0.00405		0.500	0.465		mg/L		92	75 - 125	2	20
Calcium	3.62		50.0	53.3		mg/L		99	75 - 125	0	20
Boron	0.0409		1.00	1.01		mg/L		97	75 - 125	0	20

Lab Sample ID: MB 180-269612/1-A
Matrix: Water
Analysis Batch: 270330

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 269612

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00037		0.0025	0.00037	mg/L		02/05/19 12:01	02/12/19 15:27	1
Beryllium	<0.000057		0.0025	0.000057	mg/L		02/05/19 12:01	02/12/19 15:27	1
Cobalt	<0.000075		0.0025	0.000075	mg/L		02/05/19 12:01	02/12/19 15:27	1
Chromium	<0.00063		0.0025	0.00063	mg/L		02/05/19 12:01	02/12/19 15:27	1
Lead	<0.000094		0.0010	0.000094	mg/L		02/05/19 12:01	02/12/19 15:27	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:01	02/12/19 15:27	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 12:01	02/12/19 15:27	1
Zinc	<0.0024		0.020	0.0024	mg/L		02/05/19 12:01	02/12/19 15:27	1
Calcium	<0.12		0.25	0.12	mg/L		02/05/19 12:01	02/12/19 15:27	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:01	02/12/19 15:27	1

Lab Sample ID: LCS 180-269612/2-A
Matrix: Water
Analysis Batch: 270330

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 269612

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Barium	2.00	1.80		mg/L		90	80 - 120
Beryllium	0.0500	0.0524		mg/L		105	80 - 120
Cobalt	0.500	0.462		mg/L		92	80 - 120
Chromium	0.200	0.180		mg/L		90	80 - 120
Lead	0.0200	0.0196		mg/L		98	80 - 120
Copper	0.250	0.252		mg/L		101	80 - 120

TestAmerica Pittsburgh

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Method: EPA 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 180-269612/2-A
Matrix: Water
Analysis Batch: 270330

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 269612

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vanadium	0.500	0.468		mg/L		94	80 - 120
Zinc	0.500	0.509		mg/L		102	80 - 120
Calcium	50.0	48.8		mg/L		98	80 - 120
Boron	1.00	0.871		mg/L		87	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-269416/2
Matrix: Water
Analysis Batch: 269416

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			02/02/19 08:18	1

Lab Sample ID: LCS 180-269416/1
Matrix: Water
Analysis Batch: 269416

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	204	218		mg/L		107	80 - 120

Lab Sample ID: MB 180-269417/2
Matrix: Water
Analysis Batch: 269417

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			02/02/19 08:25	1

Lab Sample ID: LCS 180-269417/1
Matrix: Water
Analysis Batch: 269417

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	204	238		mg/L		117	80 - 120

QC Association Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

HPLC/IC

Analysis Batch: 269535

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86243-1	GWC-1	Total/NA	Water	EPA 300.0 R2.1	
180-86243-2	GWA-1A	Total/NA	Water	EPA 300.0 R2.1	
180-86243-3	GWA-2A	Total/NA	Water	EPA 300.0 R2.1	
180-86243-4	GWA-2B	Total/NA	Water	EPA 300.0 R2.1	
180-86243-5	GWC-3	Total/NA	Water	EPA 300.0 R2.1	
180-86243-6	GWA-3A	Total/NA	Water	EPA 300.0 R2.1	
180-86243-7	GWA-3B	Total/NA	Water	EPA 300.0 R2.1	
180-86243-8	GWA-4	Total/NA	Water	EPA 300.0 R2.1	
180-86243-9	GWC-4A	Total/NA	Water	EPA 300.0 R2.1	
180-86243-10	GWA-5	Total/NA	Water	EPA 300.0 R2.1	
180-86243-11	GWA-7	Total/NA	Water	EPA 300.0 R2.1	
180-86243-12	GWA-7A	Total/NA	Water	EPA 300.0 R2.1	
180-86243-13	DUP-LF3-01	Total/NA	Water	EPA 300.0 R2.1	
180-86243-14	FB-LF3-01	Total/NA	Water	EPA 300.0 R2.1	
180-86243-15	FERB-LF3-01	Total/NA	Water	EPA 300.0 R2.1	
MB 180-269535/38	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
MB 180-269535/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-269535/37	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-86243-5 MS	GWC-3	Total/NA	Water	EPA 300.0 R2.1	
180-86243-5 MSD	GWC-3	Total/NA	Water	EPA 300.0 R2.1	
180-86243-11 MS	GWA-7	Total/NA	Water	EPA 300.0 R2.1	
180-86243-11 MSD	GWA-7	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 269611

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86243-1	GWC-1	Total Recoverable	Water	3005A	
180-86243-2	GWA-1A	Total Recoverable	Water	3005A	
180-86243-3	GWA-2A	Total Recoverable	Water	3005A	
180-86243-4	GWA-2B	Total Recoverable	Water	3005A	
180-86243-5	GWC-3	Total Recoverable	Water	3005A	
180-86243-6	GWA-3A	Total Recoverable	Water	3005A	
180-86243-7	GWA-3B	Total Recoverable	Water	3005A	
MB 180-269611/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-269611/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
180-86243-B-6-B MS	180-86243-B-6-B MS	Total Recoverable	Water	3005A	
180-86243-B-6-C MSD	180-86243-B-6-C MSD	Total Recoverable	Water	3005A	

Prep Batch: 269612

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86243-8	GWA-4	Total Recoverable	Water	3005A	
180-86243-9	GWC-4A	Total Recoverable	Water	3005A	
180-86243-10	GWA-5	Total Recoverable	Water	3005A	
180-86243-11	GWA-7	Total Recoverable	Water	3005A	
180-86243-12	GWA-7A	Total Recoverable	Water	3005A	
180-86243-13	DUP-LF3-01	Total Recoverable	Water	3005A	
180-86243-14	FB-LF3-01	Total Recoverable	Water	3005A	
180-86243-15	FERB-LF3-01	Total Recoverable	Water	3005A	
MB 180-269612/1-A	Method Blank	Total Recoverable	Water	3005A	

TestAmerica Pittsburgh

QC Association Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
 SDG: L3 State Compliance

Metals (Continued)

Prep Batch: 269612 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-269612/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 269787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86243-1	GWC-1	Total Recoverable	Water	EPA 6020	269611
180-86243-2	GWA-1A	Total Recoverable	Water	EPA 6020	269611
180-86243-3	GWA-2A	Total Recoverable	Water	EPA 6020	269611
180-86243-4	GWA-2B	Total Recoverable	Water	EPA 6020	269611
180-86243-5	GWC-3	Total Recoverable	Water	EPA 6020	269611
180-86243-6	GWA-3A	Total Recoverable	Water	EPA 6020	269611
180-86243-7	GWA-3B	Total Recoverable	Water	EPA 6020	269611
MB 180-269611/1-A	Method Blank	Total Recoverable	Water	EPA 6020	269611
LCS 180-269611/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020	269611
180-86243-B-6-B MS	180-86243-B-6-B MS	Total Recoverable	Water	EPA 6020	269611
180-86243-B-6-C MSD	180-86243-B-6-C MSD	Total Recoverable	Water	EPA 6020	269611

Analysis Batch: 270330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86243-8	GWA-4	Total Recoverable	Water	EPA 6020	269612
180-86243-9	GWC-4A	Total Recoverable	Water	EPA 6020	269612
180-86243-10	GWA-5	Total Recoverable	Water	EPA 6020	269612
180-86243-11	GWA-7	Total Recoverable	Water	EPA 6020	269612
180-86243-12	GWA-7A	Total Recoverable	Water	EPA 6020	269612
180-86243-13	DUP-LF3-01	Total Recoverable	Water	EPA 6020	269612
180-86243-14	FB-LF3-01	Total Recoverable	Water	EPA 6020	269612
180-86243-15	FERB-LF3-01	Total Recoverable	Water	EPA 6020	269612
MB 180-269612/1-A	Method Blank	Total Recoverable	Water	EPA 6020	269612
LCS 180-269612/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020	269612

General Chemistry

Analysis Batch: 269416

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86243-11	GWA-7	Total/NA	Water	SM 2540C	
180-86243-13	DUP-LF3-01	Total/NA	Water	SM 2540C	
180-86243-14	FB-LF3-01	Total/NA	Water	SM 2540C	
180-86243-15	FERB-LF3-01	Total/NA	Water	SM 2540C	
MB 180-269416/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-269416/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 269417

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86243-1	GWC-1	Total/NA	Water	SM 2540C	
180-86243-2	GWA-1A	Total/NA	Water	SM 2540C	
180-86243-3	GWA-2A	Total/NA	Water	SM 2540C	
180-86243-4	GWA-2B	Total/NA	Water	SM 2540C	
180-86243-5	GWC-3	Total/NA	Water	SM 2540C	
180-86243-6	GWA-3A	Total/NA	Water	SM 2540C	
180-86243-7	GWA-3B	Total/NA	Water	SM 2540C	
180-86243-8	GWA-4	Total/NA	Water	SM 2540C	

TestAmerica Pittsburgh

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86243-2
SDG: L3 State Compliance

General Chemistry (Continued)

Analysis Batch: 269417 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86243-9	GWC-4A	Total/NA	Water	SM 2540C	
180-86243-10	GWA-5	Total/NA	Water	SM 2540C	
180-86243-12	GWA-7A	Total/NA	Water	SM 2540C	
MB 180-269417/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-269417/1	Lab Control Sample	Total/NA	Water	SM 2540C	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Chain of Custody Record

Client Information Client Contact: Joju Abraham Southern Company Address: 241 Ralph McGill Blvd SE City: Atlanta State, Zip: GA, 30308 Phone: [Redacted] Email: jbraham@southernco.com, Impetty@southernco.com Project Name: CCR - Plant McIntosh Landfill #3 Site: [Redacted]		Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Phone: 4045920096 Project #: 18019950 SSOV#: [Redacted]		Sampler: Peter A, Jake A, Lauren C, Johnnie N Carrier Tracking No(s): [Redacted]		COC No: [Redacted] Page 1 of 2 Job # [Redacted]			
Due Date Requested: [Redacted] TAT Requested (days): Standard		PO #: SCS10347656 WO #: [Redacted]		Analysis Requested TDS, 300 ORGFM, 280 chloride, Fluoride, Sulfate 6020 - Ba, Be, Cr, Co, Cu, Pb, Va, Zn Perform MS/MSD (Yes or No)		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 L - EDA Z - other (specify) Other:			
Sample Identification GWC-1 GWA-1A GWA-2A GWA-2B GWC-3 GWA-3A GWA-3B GWA-4 GWC-4A GWA-5		Sample Date 1/30/19 13:05 13:20 14:42 15:30 13:05 14:55 16:10 16:23 16:55		Sample Type (C=Comp, G=grab) G G G G G G G G G		Field Filtered Sample (Yes or No) N N N N N N N N N		Special Instructions/Note: State Compliance Event 2	
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested: I, II, III, IV, Other (specify)		Sample Disposal (A fee may be assessed if samples are retained long) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For		Special Instructions/QC Requirements:			
Empty Kit Relinquished by: [Redacted]		Date: [Redacted]		Method of Shipment: FedEx		Date/Time: 1-31-19			
Relinquished by: PEKY A		Date/Time: 1/30/19 19:00		Received by: Pauline Wintom		Date/Time: 7/10/00			
Relinquished by: [Redacted]		Date/Time: [Redacted]		Received by: [Redacted]		Date/Time: [Redacted]			
Relinquished by: [Redacted]		Date/Time: [Redacted]		Received by: [Redacted]		Date/Time: [Redacted]			
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.: [Redacted]		Cooler Temperature(s) °C and Other Remarks:		Company: [Redacted]			



Chain of Custody Record

Client Information Client Contact: Joju Abraham Company: Southern Company Address: 241 Ralph McGill Blvd SE City: Atlanta State, Zip: GA, 30308 Phone: [Redacted] Email: jbraham@southerco.com, lmpetty@southernco.com Project Name: CCR - Plant McIntosh Landfill #3 Site: [Redacted]		Lab PM: Bortot, Veronica E-Mail: veronica.bortot@testamericainc.com Phone: 4045920096		Sampler: Peter A, Jake A, Lauren C, Johnnie N Carrier Tracking No(s): [Redacted]		COC No: [Redacted] Page 1 of 2 Job #: [Redacted]	
Due Date Requested: [Redacted] TAT Requested (days): [Redacted]		Analysis Requested: [Redacted]		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2OAS Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA L - EDA Other: [Redacted]		Special Instructions/Note: Detection Event	
PO #: SCS10347656 WO #: [Redacted]		Field Filtered Sample (Yes or No)		Total Number of Containers: 2		Special Instructions/Note:	
Project #: 18019950 SSO# #: [Redacted]		Form MS/MSD (Yes or No)		TDS, 300 ORGM, 280 chloride, Fluoride, Sulfate		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Sample Date: 1/30/19 Sample Time: 14:51 Sample Type (C=Comp, G=grab): G Preservation Code: Water		Field Filtered Sample (Yes or No)		TDS, 300 ORGM, 280 chloride, Fluoride, Sulfate		Special Instructions/Note:	
Sample Date: [Redacted] Sample Time: 13:05 Sample Type: [Redacted] Preservation Code: [Redacted]		Field Filtered Sample (Yes or No)		TDS, 300 ORGM, 280 chloride, Fluoride, Sulfate		Special Instructions/Note:	
Sample Date: [Redacted] Sample Time: 13:20 Sample Type: [Redacted] Preservation Code: [Redacted]		Field Filtered Sample (Yes or No)		TDS, 300 ORGM, 280 chloride, Fluoride, Sulfate		Special Instructions/Note:	
Sample Date: [Redacted] Sample Time: 14:42 Sample Type: [Redacted] Preservation Code: [Redacted]		Field Filtered Sample (Yes or No)		TDS, 300 ORGM, 280 chloride, Fluoride, Sulfate		Special Instructions/Note:	
Sample Date: [Redacted] Sample Time: 15:30 Sample Type: [Redacted] Preservation Code: [Redacted]		Field Filtered Sample (Yes or No)		TDS, 300 ORGM, 280 chloride, Fluoride, Sulfate		Special Instructions/Note:	
Sample Date: [Redacted] Sample Time: 13:05 Sample Type: [Redacted] Preservation Code: [Redacted]		Field Filtered Sample (Yes or No)		TDS, 300 ORGM, 280 chloride, Fluoride, Sulfate		Special Instructions/Note:	
Sample Date: [Redacted] Sample Time: 14:55 Sample Type: [Redacted] Preservation Code: [Redacted]		Field Filtered Sample (Yes or No)		TDS, 300 ORGM, 280 chloride, Fluoride, Sulfate		Special Instructions/Note:	
Sample Date: [Redacted] Sample Time: 16:10 Sample Type: [Redacted] Preservation Code: [Redacted]		Field Filtered Sample (Yes or No)		TDS, 300 ORGM, 280 chloride, Fluoride, Sulfate		Special Instructions/Note:	
Sample Date: [Redacted] Sample Time: 16:23 Sample Type: [Redacted] Preservation Code: [Redacted]		Field Filtered Sample (Yes or No)		TDS, 300 ORGM, 280 chloride, Fluoride, Sulfate		Special Instructions/Note:	
Sample Date: [Redacted] Sample Time: 16:55 Sample Type: [Redacted] Preservation Code: [Redacted]		Field Filtered Sample (Yes or No)		TDS, 300 ORGM, 280 chloride, Fluoride, Sulfate		Special Instructions/Note:	
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by: [Redacted]		Method of Shipment: FedEx		Date/Time: 1-31-19	
Relinquished by: Peter A		Date: 1/30/19 19:00		Company: GEI		Received by: [Redacted]	
Relinquished by: [Redacted]		Date/Time: [Redacted]		Company: [Redacted]		Received by: [Redacted]	
Relinquished by: [Redacted]		Date/Time: [Redacted]		Company: [Redacted]		Received by: [Redacted]	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.: [Redacted]		Cooler Temperature(s) °C and Other Remarks: [Redacted]		Date/Time: 18:00	



Chain of Custody Record

Client Information		Lab PM: Bortot, Veronica		Carrier Tracking No(s):	
Client Contact: Joju Abraham		Sampler: Peter A, Jake A, Lauren C, Johnnie N		COC No:	
Company: Southern Company		Phone: 4045920096		E-Mail: veronica.bortot@testamericainc.com	
Address: 241 Ralph McGill Blvd SE		City: Atlanta		State, Zip: GA, 30308	
Phone:		PO #: SCS10347656		WO #:	
Email: jlebraham@southernco.com, limpetty@southernco.com		Project #:		SSOW#:	
CCR - Plant McIntosh Landfill #3		Site:		Analysis Requested:	
Due Date Requested:		TAT Requested (days):		Standard	
Sample Identification		Sample Date		Sample Time	
GWA-7		1/30/19		14:01	
GWA-7A		↓		13:04	
DUP-LF3-01		↓		16:20	
FB-LF3-01		↓		16:15	
FERB-LF3-01		↓		↓	
Sample Type (C=comp, G=grab)		Preservation Code		Matrix (W=water, S=solid, O=wast/oil, B1=Tissue, A=air)	
G		Water		Water	
Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		620 - Ba, Be, Cr, Co, Cu, Pb, Va, Zn	
N		N		D	
Total Number of Containers		2		Special Instructions/Note:	
State Compliance Event					
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		Return To Client <input type="checkbox"/>		Disposal By Lab <input type="checkbox"/>	
Archive For		Months		Special Instructions/QC Requirements:	
Method of Shipment: FedEx		Date/Time: 1-31-19		Company: S.A.P.H.	
Received by: Debbie Watson		Date/Time: 10:00		Company: Company	
Received by:		Date/Time:		Company:	
Received by:		Date/Time:		Company:	
Cooler Temperature(s) °C and Other Remarks:		Custody Seal No.:		Custody Seal Intact: Yes <input type="checkbox"/> No <input type="checkbox"/>	



ORIGIN ID: SAVA
VERONICA BORTOT (412) 963-7058
301 ALPHA DR
PITTSBURGH, PA 15238
UNITED STATES US

SHIP DATE: 30 JAN 1
ACTWGT: 49.10 LB
CAD: 006994919/SSFE1822
DIMS: 24x13x13 IN
BILL THIRD PARTY

0 VERONICA BORTOT

301 ALPHA DR
301 ALPHA DR
PITTSBURGH PA 15238
REF: (2) 963-7058



180-86243 Waybill

Page 52 of 53

2 of 2
32 3335 8113
ER #

AGCA

Uncorrected temp
ometer ID

Initials B
the 1/8/18

THU - 31 JAN 10:30A
PRIORITY OVERNIGHT

15238
PA-US PIT



ORIGIN ID: SAVA (412) 963-7058
VERONICA BORTOT

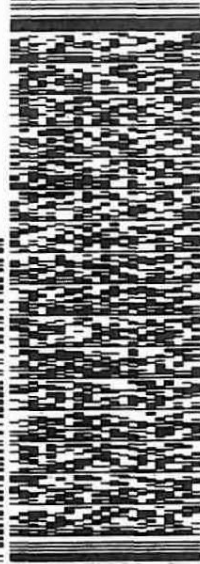
301 ALPHA DR
301 ALPHA DR
PITTSBURGH PA 15238
UNITED STATES US

0 VERONICA BORTOT

301 ALPHA DR
301 ALPHA DR
PITTSBURGH PA 15238
REF: (412) 963-7058

PO:

DEPT:



FedEx Express

MPS# 7852 3335 8124
0263
Mstr# 7852 3335 8113

XH AGCA

0201

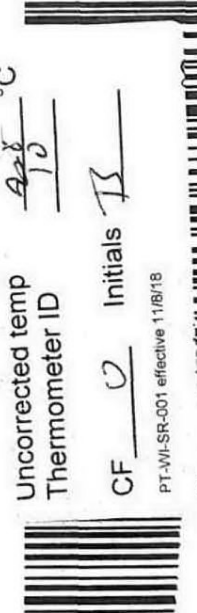
THU - 31 JAN 10:30A
PRIORITY OVERNIGHT

15238
PA-US PIT

Uncorrected temp
Thermometer ID

CF U Initials B

PT-VI-SR-001 effective 11/8/18



565J2/0E3B/23AD
AG

SHIP DATE: 30 JAN 19
ACTWGT: 53.40 LB
CAD: 006994919/SSFE1822
DIMS: 24x13x13 IN
BILL THIRD PARTY

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Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-86243-2
SDG Number: L3 State Compliance

Login Number: 86243
List Number: 1
Creator: Watson, Debbie

List Source: TestAmerica Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Pittsburgh

301 Alpha Drive

RIDC Park

Pittsburgh, PA 15238

Tel: (412)963-7058

TestAmerica Job ID: 180-86297-2

TestAmerica Sample Delivery Group: L3 State Compliance

Client Project/Site: CCR - Plant McIntosh Ash Landfill #3

Revision: 2

For:

Southern Company

PO BOX 2641 GSC8

Birmingham, Alabama 35291

Attn: Ms. Lauren Petty



Authorized for release by:

3/8/2019 2:34:15 PM

Veronica Bortot, Senior Project Manager

(412)963-2435

veronica.bortot@testamericainc.com

LINKS

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results through

TotalAccess

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Visit us at:

www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

PA Lab ID: 02-00416



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Case Narrative

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
SDG: L3 State Compliance

Job ID: 180-86297-2

Laboratory: TestAmerica Pittsburgh

Narrative

Job Narrative 180-86297-2

Revision 2 ; to set RL to those in SOW

Revised: to change RLs for B and Ca to routine

Comments

No additional comments.

Receipt

The samples were received on 2/1/2019 3:55 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.8° C.

Anions

Samples 3,5 and 6 were reanalyzed as initial results did not matching historical results; The reanalysis confirmed that the samples were switched when at the instrument for analysis. These samples were reanalyzed on 2/22/19 . Ony the results obtained from the reanalysis for these three samples are being reported.

Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Definitions/Glossary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
SDG: L3 State Compliance

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Accreditation/Certification Summary

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
 SDG: L3 State Compliance

Laboratory: TestAmerica Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Arkansas DEQ	State Program	6	88-0690	06-27-19
California	State Program	9	2891	04-30-19
Connecticut	State Program	1	PH-0688	09-30-20
Florida	NELAP	4	E871008	06-30-19
Illinois	NELAP	5	200005	06-30-19
Kansas	NELAP	7	E-10350	01-31-20
Louisiana	NELAP	6	04041	06-30-19
Nevada	State Program	9	PA00164	07-31-19
New Hampshire	NELAP	1	2030	04-04-19
New Jersey	NELAP	2	PA005	06-30-19
New York	NELAP	2	11182	03-31-19 *
North Carolina (WW/SW)	State Program	4	434	12-31-19
Oregon	NELAP	10	PA-2151	01-28-19 *
Pennsylvania	NELAP	3	02-00416	04-30-19
South Carolina	State Program	4	89014	04-30-19
Texas	NELAP	6	T104704528-15-2	03-31-19 *
US Fish & Wildlife	Federal		LE94312A-1	07-31-19
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-19
Virginia	NELAP	3	460189	09-14-19
West Virginia DEP	State Program	3	142	01-31-20
Wisconsin	State Program	5	998027800	08-31-19

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
SDG: L3 State Compliance

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-86297-1	FB-LF3-02	Water	01/31/19 08:30	02/01/19 15:55
180-86297-2	FERB-LF3-02	Water	01/31/19 08:35	02/01/19 15:55
180-86297-3	GWC-5	Water	01/31/19 10:00	02/01/19 15:55
180-86297-4	GWC-6	Water	01/31/19 10:15	02/01/19 15:55
180-86297-5	GWC-2	Water	01/31/19 10:05	02/01/19 15:55
180-86297-6	DUP-LF3-02	Water	01/31/19 00:00	02/01/19 15:55

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Method Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
SDG: L3 State Compliance

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	TAL PIT
EPA 6020	Metals (ICP/MS)	SW846	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

SM = "Standard Methods For The Examination Of Water And Wastewater"

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
 SDG: L3 State Compliance

Client Sample ID: FB-LF3-02

Date Collected: 01/31/19 08:30

Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHICS2100B		1			269666	02/06/19 06:22	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	269614	02/05/19 12:05	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020 Instrument ID: A		1			270177	02/12/19 10:15	RSK	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	269613	02/05/19 12:04	TAM	TAL PIT

Client Sample ID: FERB-LF3-02

Date Collected: 01/31/19 08:35

Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHICS2100B		1			269666	02/06/19 06:38	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	269614	02/05/19 12:05	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020 Instrument ID: A		1			270177	02/12/19 10:18	RSK	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	269613	02/05/19 12:04	TAM	TAL PIT

Client Sample ID: GWC-5

Date Collected: 01/31/19 10:00

Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHIC2100A		1	1 mL	1.0 mL	271124	02/22/19 13:23	JBF	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	269614	02/05/19 12:05	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020 Instrument ID: A		1			270177	02/12/19 10:21	RSK	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	269613	02/05/19 12:04	TAM	TAL PIT

Client Sample ID: GWC-6

Date Collected: 01/31/19 10:15

Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHICS2100B		1			269666	02/06/19 07:09	MJH	TAL PIT
Total Recoverable	Prep	3005A			50 mL	50 mL	269614	02/05/19 12:05	NAM	TAL PIT

TestAmerica Pittsburgh

Lab Chronicle

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
 SDG: L3 State Compliance

Client Sample ID: GWC-6

Date Collected: 01/31/19 10:15

Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	EPA 6020		1			270177	02/12/19 10:25	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269613	02/05/19 12:04	TAM	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: GWC-2

Date Collected: 01/31/19 10:05

Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			271124	02/22/19 13:39	JBF	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	269614	02/05/19 12:05	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			270177	02/12/19 10:28	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269613	02/05/19 12:04	TAM	TAL PIT
	Instrument ID: NOEQUIP									

Client Sample ID: DUP-LF3-02

Date Collected: 01/31/19 00:00

Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1		1			271124	02/22/19 13:54	JBF	TAL PIT
	Instrument ID: CHIC2100A									
Total Recoverable	Prep	3005A			50 mL	50 mL	269614	02/05/19 12:05	NAM	TAL PIT
Total Recoverable	Analysis	EPA 6020		1			270177	02/12/19 10:31	RSK	TAL PIT
	Instrument ID: A									
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	269613	02/05/19 12:04	TAM	TAL PIT
	Instrument ID: NOEQUIP									

Laboratory References:

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL PIT

Batch Type: Prep

NAM = Nicole Marfisi

Batch Type: Analysis

JBF = Joshua Fritsch

MJH = Matthew Hartman

RSK = Robert Kurtz

TAM = Tessa Mastalski

TestAmerica Pittsburgh

Client Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
 SDG: L3 State Compliance

Client Sample ID: FB-LF3-02

Lab Sample ID: 180-86297-1

Date Collected: 01/31/19 08:30

Matrix: Water

Date Received: 02/01/19 15:55

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			02/06/19 06:22	1
Fluoride	<0.026		0.20	0.026	mg/L			02/06/19 06:22	1
Sulfate	<0.38		1.0	0.38	mg/L			02/06/19 06:22	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00037		0.0025	0.00037	mg/L		02/05/19 12:05	02/12/19 10:15	1
Beryllium	<0.000057		0.0025	0.000057	mg/L		02/05/19 12:05	02/12/19 10:15	1
Cobalt	<0.000075		0.0025	0.000075	mg/L		02/05/19 12:05	02/12/19 10:15	1
Chromium	0.0013	J	0.0025	0.00063	mg/L		02/05/19 12:05	02/12/19 10:15	1
Lead	0.00012	J B	0.0010	0.000094	mg/L		02/05/19 12:05	02/12/19 10:15	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 12:05	02/12/19 10:15	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:05	02/12/19 10:15	1
Zinc	<0.0024		0.020	0.0024	mg/L		02/05/19 12:05	02/12/19 10:15	1
Calcium	0.15	J	0.25	0.12	mg/L		02/05/19 12:05	02/12/19 10:15	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:05	02/12/19 10:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			02/05/19 12:04	1

Client Sample ID: FERB-LF3-02

Lab Sample ID: 180-86297-2

Date Collected: 01/31/19 08:35

Matrix: Water

Date Received: 02/01/19 15:55

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			02/06/19 06:38	1
Fluoride	<0.026		0.20	0.026	mg/L			02/06/19 06:38	1
Sulfate	<0.38		1.0	0.38	mg/L			02/06/19 06:38	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00037		0.0025	0.00037	mg/L		02/05/19 12:05	02/12/19 10:18	1
Beryllium	<0.000057		0.0025	0.000057	mg/L		02/05/19 12:05	02/12/19 10:18	1
Cobalt	<0.000075		0.0025	0.000075	mg/L		02/05/19 12:05	02/12/19 10:18	1
Chromium	0.0014	J	0.0025	0.00063	mg/L		02/05/19 12:05	02/12/19 10:18	1
Lead	0.00012	J B	0.0010	0.000094	mg/L		02/05/19 12:05	02/12/19 10:18	1
Vanadium	0.00091	J	0.0025	0.00090	mg/L		02/05/19 12:05	02/12/19 10:18	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:05	02/12/19 10:18	1
Zinc	<0.0024		0.020	0.0024	mg/L		02/05/19 12:05	02/12/19 10:18	1
Calcium	0.16	J	0.25	0.12	mg/L		02/05/19 12:05	02/12/19 10:18	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:05	02/12/19 10:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			02/05/19 12:04	1

TestAmerica Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
SDG: L3 State Compliance

Client Sample ID: GWC-5
Date Collected: 01/31/19 10:00
Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-3
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.0		1.0	0.71	mg/L			02/22/19 13:23	1
Fluoride	0.063	J	0.20	0.026	mg/L			02/22/19 13:23	1
Sulfate	4.8		1.0	0.38	mg/L			02/22/19 13:23	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.45		0.0025	0.00037	mg/L		02/05/19 12:05	02/12/19 10:21	1
Beryllium	0.0012	J	0.0025	0.000057	mg/L		02/05/19 12:05	02/12/19 10:21	1
Cobalt	0.013		0.0025	0.000075	mg/L		02/05/19 12:05	02/12/19 10:21	1
Chromium	0.0019	J	0.0025	0.00063	mg/L		02/05/19 12:05	02/12/19 10:21	1
Lead	0.00024	J B	0.0010	0.000094	mg/L		02/05/19 12:05	02/12/19 10:21	1
Vanadium	0.0016	J	0.0025	0.00090	mg/L		02/05/19 12:05	02/12/19 10:21	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:05	02/12/19 10:21	1
Zinc	0.033	B	0.020	0.0024	mg/L		02/05/19 12:05	02/12/19 10:21	1
Calcium	7.5		0.25	0.12	mg/L		02/05/19 12:05	02/12/19 10:21	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:05	02/12/19 10:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	180		10	10	mg/L			02/05/19 12:04	1

Client Sample ID: GWC-6
Date Collected: 01/31/19 10:15
Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-4
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	8.5		1.0	0.71	mg/L			02/06/19 07:09	1
Fluoride	<0.026		0.20	0.026	mg/L			02/06/19 07:09	1
Sulfate	0.86	J	1.0	0.38	mg/L			02/06/19 07:09	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.053		0.0025	0.00037	mg/L		02/05/19 12:05	02/12/19 10:25	1
Beryllium	0.00012	J	0.0025	0.000057	mg/L		02/05/19 12:05	02/12/19 10:25	1
Cobalt	0.00076	J	0.0025	0.000075	mg/L		02/05/19 12:05	02/12/19 10:25	1
Chromium	0.0021	J	0.0025	0.00063	mg/L		02/05/19 12:05	02/12/19 10:25	1
Lead	0.00050	J B	0.0010	0.000094	mg/L		02/05/19 12:05	02/12/19 10:25	1
Vanadium	0.0019	J	0.0025	0.00090	mg/L		02/05/19 12:05	02/12/19 10:25	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:05	02/12/19 10:25	1
Zinc	0.0062	J B	0.020	0.0024	mg/L		02/05/19 12:05	02/12/19 10:25	1
Calcium	1.9		0.25	0.12	mg/L		02/05/19 12:05	02/12/19 10:25	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:05	02/12/19 10:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	84		10	10	mg/L			02/05/19 12:04	1

TestAmerica Pittsburgh

Client Sample Results

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
SDG: L3 State Compliance

Client Sample ID: GWC-2
Date Collected: 01/31/19 10:05
Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-5
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.2		1.0	0.71	mg/L			02/22/19 13:39	1
Fluoride	<0.026		0.20	0.026	mg/L			02/22/19 13:39	1
Sulfate	0.57	J	1.0	0.38	mg/L			02/22/19 13:39	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.067		0.0025	0.00037	mg/L		02/05/19 12:05	02/12/19 10:28	1
Beryllium	0.000065	J	0.0025	0.000057	mg/L		02/05/19 12:05	02/12/19 10:28	1
Cobalt	0.00092	J	0.0025	0.000075	mg/L		02/05/19 12:05	02/12/19 10:28	1
Chromium	0.0061		0.0025	0.00063	mg/L		02/05/19 12:05	02/12/19 10:28	1
Lead	0.00015	J B	0.0010	0.000094	mg/L		02/05/19 12:05	02/12/19 10:28	1
Vanadium	0.0010	J	0.0025	0.00090	mg/L		02/05/19 12:05	02/12/19 10:28	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:05	02/12/19 10:28	1
Zinc	0.0068	J B	0.020	0.0024	mg/L		02/05/19 12:05	02/12/19 10:28	1
Calcium	4.8		0.25	0.12	mg/L		02/05/19 12:05	02/12/19 10:28	1
Boron	0.040	J	0.050	0.030	mg/L		02/05/19 12:05	02/12/19 10:28	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	45		10	10	mg/L			02/05/19 12:04	1

Client Sample ID: DUP-LF3-02
Date Collected: 01/31/19 00:00
Date Received: 02/01/19 15:55

Lab Sample ID: 180-86297-6
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	5.2		1.0	0.71	mg/L			02/22/19 13:54	1
Fluoride	0.026	J	0.20	0.026	mg/L			02/22/19 13:54	1
Sulfate	0.48	J	1.0	0.38	mg/L			02/22/19 13:54	1

Method: EPA 6020 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	0.067		0.0025	0.00037	mg/L		02/05/19 12:05	02/12/19 10:31	1
Beryllium	0.000087	J	0.0025	0.000057	mg/L		02/05/19 12:05	02/12/19 10:31	1
Cobalt	0.00088	J	0.0025	0.000075	mg/L		02/05/19 12:05	02/12/19 10:31	1
Chromium	0.0057		0.0025	0.00063	mg/L		02/05/19 12:05	02/12/19 10:31	1
Lead	0.00012	J B	0.0010	0.000094	mg/L		02/05/19 12:05	02/12/19 10:31	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 12:05	02/12/19 10:31	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:05	02/12/19 10:31	1
Zinc	0.0065	J B	0.020	0.0024	mg/L		02/05/19 12:05	02/12/19 10:31	1
Calcium	4.5		0.25	0.12	mg/L		02/05/19 12:05	02/12/19 10:31	1
Boron	0.038	J	0.050	0.030	mg/L		02/05/19 12:05	02/12/19 10:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	45		10	10	mg/L			02/05/19 12:04	1

TestAmerica Pittsburgh

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
 SDG: L3 State Compliance

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-269666/6
Matrix: Water
Analysis Batch: 269666

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			02/06/19 05:30	1
Fluoride	<0.026		0.20	0.026	mg/L			02/06/19 05:30	1
Sulfate	<0.38		1.0	0.38	mg/L			02/06/19 05:30	1

Lab Sample ID: LCS 180-269666/5
Matrix: Water
Analysis Batch: 269666

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	24.4		mg/L		97	90 - 110
Fluoride	1.25	1.23		mg/L		98	90 - 110
Sulfate	25.0	24.0		mg/L		96	90 - 110

Lab Sample ID: 180-86297-A-5 MS
Matrix: Water
Analysis Batch: 269666

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	7.8		25.0	31.7		mg/L		96	80 - 120
Fluoride	0.11	J	1.25	1.33		mg/L		98	80 - 120
Sulfate	4.1		25.0	26.0		mg/L		88	80 - 120

Lab Sample ID: 180-86297-A-5 MSD
Matrix: Water
Analysis Batch: 269666

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Chloride	7.8		25.0	31.6		mg/L		95	80 - 120	0	20
Fluoride	0.11	J	1.25	1.34		mg/L		99	80 - 120	1	20
Sulfate	4.1		25.0	26.1		mg/L		88	80 - 120	0	20

Lab Sample ID: MB 180-271124/6
Matrix: Water
Analysis Batch: 271124

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	<0.71		1.0	0.71	mg/L			02/22/19 09:43	1
Fluoride	<0.026		0.20	0.026	mg/L			02/22/19 09:43	1
Sulfate	<0.38		1.0	0.38	mg/L			02/22/19 09:43	1

Lab Sample ID: LCS 180-271124/5
Matrix: Water
Analysis Batch: 271124

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	24.6		mg/L		98	90 - 110
Fluoride	1.25	1.32		mg/L		106	90 - 110
Sulfate	25.0	24.4		mg/L		97	90 - 110

TestAmerica Pittsburgh

QC Sample Results

Client: Southern Company
 Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
 SDG: L3 State Compliance

Method: EPA 6020 - Metals (ICP/MS)

Lab Sample ID: MB 180-269614/1-A
Matrix: Water
Analysis Batch: 270177

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 269614

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Barium	<0.00037		0.0025	0.00037	mg/L		02/05/19 12:05	02/12/19 09:34	1
Beryllium	<0.000057		0.0025	0.000057	mg/L		02/05/19 12:05	02/12/19 09:34	1
Cobalt	<0.000075		0.0025	0.000075	mg/L		02/05/19 12:05	02/12/19 09:34	1
Chromium	<0.00063		0.0025	0.00063	mg/L		02/05/19 12:05	02/12/19 09:34	1
Lead	0.000279	J	0.0010	0.000094	mg/L		02/05/19 12:05	02/12/19 09:34	1
Vanadium	<0.00090		0.0025	0.00090	mg/L		02/05/19 12:05	02/12/19 09:34	1
Copper	<0.0013		0.0025	0.0013	mg/L		02/05/19 12:05	02/12/19 09:34	1
Zinc	0.00397	J	0.020	0.0024	mg/L		02/05/19 12:05	02/12/19 09:34	1
Calcium	<0.12		0.25	0.12	mg/L		02/05/19 12:05	02/12/19 09:34	1
Boron	<0.030		0.050	0.030	mg/L		02/05/19 12:05	02/12/19 09:34	1

Lab Sample ID: LCS 180-269614/2-A
Matrix: Water
Analysis Batch: 270177

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 269614

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Barium	2.00	1.91		mg/L		96	80 - 120
Beryllium	0.0500	0.0496		mg/L		99	80 - 120
Cobalt	0.500	0.497		mg/L		99	80 - 120
Chromium	0.200	0.199		mg/L		100	80 - 120
Lead	0.0200	0.0194		mg/L		97	80 - 120
Vanadium	0.500	0.486		mg/L		97	80 - 120
Copper	0.250	0.258		mg/L		103	80 - 120
Zinc	0.500	0.497		mg/L		99	80 - 120
Calcium	50.0	49.7		mg/L		99	80 - 120
Boron	1.00	0.915		mg/L		91	80 - 120

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-269613/2
Matrix: Water
Analysis Batch: 269613

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	<10		10	10	mg/L			02/05/19 12:04	1

Lab Sample ID: LCS 180-269613/1
Matrix: Water
Analysis Batch: 269613

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	204	210		mg/L		103	80 - 120

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
SDG: L3 State Compliance

HPLC/IC

Analysis Batch: 269666

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86297-1	FB-LF3-02	Total/NA	Water	EPA 300.0 R2.1	
180-86297-2	FERB-LF3-02	Total/NA	Water	EPA 300.0 R2.1	
180-86297-4	GWC-6	Total/NA	Water	EPA 300.0 R2.1	
MB 180-269666/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-269666/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-86297-A-5 MS	Matrix Spike	Total/NA	Water	EPA 300.0 R2.1	
180-86297-A-5 MSD	Matrix Spike Duplicate	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 271124

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86297-3	GWC-5	Total/NA	Water	EPA 300.0 R2.1	
180-86297-5	GWC-2	Total/NA	Water	EPA 300.0 R2.1	
180-86297-6	DUP-LF3-02	Total/NA	Water	EPA 300.0 R2.1	
MB 180-271124/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-271124/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 269614

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86297-1	FB-LF3-02	Total Recoverable	Water	3005A	
180-86297-2	FERB-LF3-02	Total Recoverable	Water	3005A	
180-86297-3	GWC-5	Total Recoverable	Water	3005A	
180-86297-4	GWC-6	Total Recoverable	Water	3005A	
180-86297-5	GWC-2	Total Recoverable	Water	3005A	
180-86297-6	DUP-LF3-02	Total Recoverable	Water	3005A	
MB 180-269614/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 180-269614/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Analysis Batch: 270177

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86297-1	FB-LF3-02	Total Recoverable	Water	EPA 6020	269614
180-86297-2	FERB-LF3-02	Total Recoverable	Water	EPA 6020	269614
180-86297-3	GWC-5	Total Recoverable	Water	EPA 6020	269614
180-86297-4	GWC-6	Total Recoverable	Water	EPA 6020	269614
180-86297-5	GWC-2	Total Recoverable	Water	EPA 6020	269614
180-86297-6	DUP-LF3-02	Total Recoverable	Water	EPA 6020	269614
MB 180-269614/1-A	Method Blank	Total Recoverable	Water	EPA 6020	269614
LCS 180-269614/2-A	Lab Control Sample	Total Recoverable	Water	EPA 6020	269614

General Chemistry

Analysis Batch: 269613

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-86297-1	FB-LF3-02	Total/NA	Water	SM 2540C	
180-86297-2	FERB-LF3-02	Total/NA	Water	SM 2540C	
180-86297-3	GWC-5	Total/NA	Water	SM 2540C	
180-86297-4	GWC-6	Total/NA	Water	SM 2540C	
180-86297-5	GWC-2	Total/NA	Water	SM 2540C	
180-86297-6	DUP-LF3-02	Total/NA	Water	SM 2540C	

TestAmerica Pittsburgh

QC Association Summary

Client: Southern Company
Project/Site: CCR - Plant McIntosh Ash Landfill #3

TestAmerica Job ID: 180-86297-2
SDG: L3 State Compliance

General Chemistry (Continued)

Analysis Batch: 269613 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-269613/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-269613/1	Lab Control Sample	Total/NA	Water	SM 2540C	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Chain of Custody Record

Client Information Client Contact: Joju Abraham Company: Southern Company Address: 241 Ralph McGill Blvd SE City: Atlanta State, Zip: GA, 30308 Phone: _____ Email: jlabraham@southernco.com, lmpetty@southernco.com Project Name: CCR - Plant McIntosh Landfill #3 Site: _____		Sampler: Peter A. Jake A., Lauren C., Johnnie N Lab PM: Bortot, Veronica Phone: 4045920096 E-Mail: veronica.bortot@testamericainc.com Carrier Tracking No(s): _____	
Due Date Requested: _____ TAT Requested (days): _____ PO #: SCS10347656 WO #: _____ Project #: 18019950 SSOW#: _____		Analysis Requested Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No TDS, 300, ORGM, 280 chloride, Fluoride, Sulfate 6020 - Bo, Ca Total Number of Containers: 2	
Sample Identification FB-LF3-02 FERB-LF3-02 GWC-5 GWC-6 GWC-2 DUP-LF3-02		Sample Date: 1/31/19 Sample Time: 8:30 Sample Type (C=Comp, G=grab): G Preservation Code: Water PRELTA (W=water, S=solid, O=wastelol, BT=Tissue, A=Air)	
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify) _____		Special Instructions/QC Requirements: _____	
Empty Kit Relinquished by: Peter A Relinquished by: _____ Relinquished by: _____ Relinquished by: _____		Method of Shipment: FedEx Date/Time: 1/31/19 14:00 Date/Time: _____ Date/Time: _____	
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.: _____		Cooler Temperature(s) °C and Other Remarks: _____	



Chain of Custody Record

Client Information Client Contact: Joju Abraham Company: Southern Company Address: 241 Ralph McGill Blvd SE City: Atlanta State, Zip: GA, 30308 Phone: _____ Email: jabraham@southernco.com, jimpetty@southernco.com Project Name: CCR - Plant McIntosh Landfill #3 Site: _____		Lab PM: Bortol, Veronica E-Mail: veronica.bortol@testamericainc.com Carrier Tracking No(s): _____	
Sampler: Peter A, Jake A, Lauren C, Johnnie N Phone: 4045920096		COC No: _____ Page 1 of 1 Job #: _____	
Due Date Requested: _____ TAT Requested (days): Standard		Analysis Requested	
PO #: SCS10347656 WO #: _____		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Other: _____	
Sample Identification FB-LF3-02 FERB-LF3-02 GWC-5 GWC-6 DUP-LF3-02		Total Number of Containers: 2 Special Instructions/Note: State Compliance Event	
Sample Date: 1/31/19 Sample Time: 8:30 Sample Type (C=Comp, G=grab): G Preservation Code: Water		Perform MS/MSD (Yes or No): N Field Filtered Sample (Yes or No): N 6020 - Ba, Be, Cr, Co, Cu, Pb, Va, Zn: X TDS, 300, ORGM, 28D chloride, Fluoride, Sulfate: N	
Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological			
Deliverable Requested: <input type="checkbox"/> I, II, III, IV, Other (specify) _____			
Empty Kit Relinquished by: _____ Relinquished by: Peter A Relinquished by: _____ Relinquished by: _____		Date: 1/31/19 10:00 Date/Time: _____ Date/Time: _____ Date/Time: _____	
Relinquished by: Peter A Relinquished by: _____ Relinquished by: _____		Date: 1/31/19 15:55 Date/Time: _____ Date/Time: _____ Date/Time: _____	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks: _____	

- 1
- 2
- 3
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- 9
- 10
- 11
- 12
- 13

Atlanta

 681

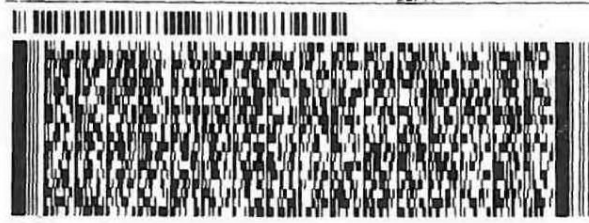
ORIGIN ID: DBNA (412) 963-2435
 VERONICA BORTOT
 301 ALPHA DR
 PITTSBURGH, PA 15238
 UNITED STATES US

SHIP DATE: 31JAN19
 ACTWGT: 32.30 LB
 CAD: 6997664/SSFO1922
 DIMS: 24x13x13 IN
 BILL RECIPIENT

TO **VERONICA BORTOT**
301 ALPHA DR

PITTSBURGH PA 15238

(412) 963-2436 REF:
 THU: DEPT:



FedEx
 Express



 180-86297 Waybill

TRK# 7852 4878 7536
 0201

FRI - 01 FEB 10:30A
PRIORITY OVERNIGHT

NA AGCA

ASR
15238
PIT
 PA-US

Uncorrected temp 018
 Thermometer ID 10
 CF 0 Initials TN
 PT-WI-SR-001 effective 11/8/18


Login Sample Receipt Checklist

Client: Southern Company

Job Number: 180-86297-2
SDG Number: L3 State Compliance

Login Number: 86297
List Number: 1
Creator: Kovitch, Christina M

List Source: TestAmerica Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



Site: Georgia Power Plant, Inactive Landfill No. 3 State Compliance
Laboratory: Test America, Pittsburgh, PA
Report No.: 180-86243-2
Reviewer: Lorie MacKinnon/GEI Consultants
Date: March 14, 2019

Samples Reviewed and Evaluation Summary

FIELD ID	LAB ID	FRACTIONS VALIDATED
GWC-1	180-86243-01	Metals, Anions, TDS
GWA-1A	180-86243-02	Metals, Anions, TDS
GWA-2A	180-86243-03	Metals, Anions, TDS
GWA-2B	180-86243-04	Metals, Anions, TDS
GWC-3	180-86243-05	Metals, Anions, TDS
GWA-3A	180-86243-06	Metals, Anions, TDS
GWA-3B	180-86243-07	Metals, Anions, TDS
GWA-4	180-86243-08	Metals, Anions, TDS
GWC-4A	180-86243-09	Metals, Anions, TDS
GWA-5	180-86243-10	Metals, Anions, TDS
GWA-7	180-86243-11	Metals, Anions, TDS
GWA-7A	180-86243-12	Metals, Anions, TDS
DUP-LF3-01	180-86243-13	Metals, Anions, TDS
FB-LF3-01	180-86243-14	Metals, Anions, TDS
FERB-LF3-01	180-86243-15	Metals, Anions, TDS

QC Samples: Field/Equipment blanks: FB-LF3-01, FERB-LF3-01
 Field Duplicate pairs: GWC-1/DUP-LF3-01

The above-listed aqueous samples, equipment blank, and field blank sample were collected on January 30, 2019 and were analyzed for select total recoverable metals by SW-846 method 6020, total dissolved solids (TDS) by Standard Methods SM 2540C, and anions (chloride, fluoride, and sulfate) by EPA method 300. The data were reviewed based on the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Inorganic Methods Data Review, January 2017 (USEPA-540-R-2017-001), as well as by the methods referenced and professional and technical judgment.

The data were evaluated based on the following parameters:

- Data Completeness
- Holding Times and Sample Preservation
- Method and Field Blanks
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Laboratory Duplicate Results
- Laboratory Control Sample (LCS) Results
- Field Duplicate Results
- Quantitation Limits

Site: Georgia Power Plant, Inactive Landfill No. 3 State Compliance
 Report No.: 180-86243-2
 Date: March 14, 2019

All results are usable as reported or usable with minor qualification due to sample matrix or laboratory quality control outliers.

The validation findings were based on the following information.

Data Completeness

The level 2 (reduced deliverable) data package was complete as received by the laboratory and included sample results, method blank, MS/MSD, laboratory duplicate, and LCS results. A revision of this report was received for review which included the correction of reporting limits.

Holding Times and Sample Preservation

All criteria were met.

Method and Field Blanks

Field Blank Results

Contamination was not detected in the associated field blank samples.

Laboratory Blank Results

Low level laboratory contamination was detected in select laboratory method blank samples. The following table summarizes the contamination and validation actions taken.

Analyte	Blank ID/ Associated Samples	Maximum Contaminant Level (mg/L)	10x Action Level (mg/L)	Validation Actions
Chromium	Method MB180-269611: GWC-1, GWA-1A, GWA-2A, GWA-2B, GWC-3, GWA-3A, GWA-3B	0.00117	0.0117	Qualify results for chromium in sample GWC-1 and GWA-2A as nondetect (U) at the RL. Estimate (J) the positive results for chromium in samples GWA-1A, GWA-2B, GWC-3, GWA-3A, and GWA-3B; High bias.
Vanadium		0.000971	0.0097	Qualify results for vanadium in samples GWA-1A, GWA-2A, GWA-2B, GWC-3, and GWA-3A as nondetect (U) at the RL. Estimate (J) the positive result for vanadium in sample GWA-3B; High bias.

Blank Actions:

If the sample result is < reporting limit (RL); report the result as nondetect (U) at the RL.

If the sample result is ≥ RL and <2x blank contamination detected; professional judgment was taken to report the result as nondetect (U) at the reported value.

If the sample result is ≥ 2x blank and < 10x Action Level; report the sample result as estimated (J); biased high.

If the sample result is nondetect or > 10x Action Level; validation action is not required.

Site: Georgia Power Plant, Inactive Landfill No. 3 State Compliance
 Report No.: 180-86243-2
 Date: March 14, 2019

MS/MSD Results

MS/MSD analyses were performed on samples GWC-3 and GWA-7 for anions and sample GWA-3A for metals. All criteria were met.

Laboratory Duplicate Results

MSD analyses were performed for anions and metals in lieu of laboratory duplicate analyses.

LCS Results

All criteria were met.

Field Duplicate Results

Samples GWC-1 and DUP-LF3-01 were submitted as the field duplicate pair with this sample set. The following table summarizes the RPDs of the detected analytes in the field duplicate pair, which were within the acceptance criteria except for barium. The positive results for barium in samples GWC-1 and DUP-LF3-01 were qualified as estimated (J). The direction of the bias cannot be determined from this nonconformance.

Analyte	GWC-1 (mg/L)	DUP-LF3-01 (mg/L)	RPD (%)
Chloride	4.9	4.8	2.1
Sulfate	0.58 J	0.74 J	24.2
Barium	0.018	0.013	32.3
Beryllium	0.000090 J	0.0025 U	NC, Within the RL
Cobalt	0.00023 J	0.00013 J	55.6, Within the RL
Chromium	0.025 U	0.00092 J	NC, Within the RL
Calcium	0.24 J	0.21 J	13.3
Total Dissolved Solids	24	34	34.5, Within the RL
NC – Not calculable Criteria: When both results are $\geq 5x$ the RL, RPDs must be $< 30\%$. When results are $< 5x$ the RL, professional judgement was taken to estimate results if the absolute difference between the original and field duplicate $> RL$.			

Quantitation Limits

Results were reported which were below the reporting limit (RL) and above the method detection limit (MDL). These results were qualified as estimated (J) by the laboratory.

DATA VALIDATION QUALIFIERS

- U - The analyte was analyzed for, but due to blank contamination was flagged as nondetect (U). The result is usable as a nondetect.
- J - Data are flagged (J) when a QC analysis fails outside the primary acceptance limits. The qualified “J” data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The ‘J’ data may be biased high or low or the direction of the bias may be indeterminable.
- UJ - The analyte was not detected above the reported sample quantitation limit. Data are flagged (UJ) when a QC analysis fails outside the primary acceptance limits. The qualified “UJ” data are not excluded from further review or consideration. However, only one flag is applied to a sample result, even though several associated QC analyses may fail. The ‘UJ’ data may be biased low.
- NJ - The analysis indicates the presence of a compound that has been “tentatively identified” (N) and the associated numerical value represents its approximate (J) concentration.
- R - Data rejected (R) on the basis of an unacceptable QC analysis should be excluded from further review or consideration. Data are rejected when associated QC analysis results exceed the expanded control limits of the QC criteria. The rejected data are known to contain significant errors based on documented information. The data user must not use the rejected data to make environmental decisions. The presence or absence of the analyte cannot be verified.

Site: Georgia Power Plant, Inactive Landfill No. 3 State Compliance
Laboratory: Test America, Pittsburgh, PA
Report No.: 180-86297-2
Reviewer: Lorie MacKinnon/GEI Consultants
Date: March 14, 2019

Samples Reviewed and Evaluation Summary

FIELD ID	LAB ID	FRACTIONS VALIDATED
FB-LF3-02	180-86297-01	Metals, Anions, TDS
FERB-LF3-02	180-86297-02	Metals, Anions, TDS
GWC-5	180-86297-03	Metals, Anions, TDS
GWC-6	180-86297-04	Metals, Anions, TDS
GWC-2	180-86297-05	Metals, Anions, TDS
DUP-LF3-02	180-86297-06	Metals, Anions, TDS

QC Samples: Field/Equipment blanks: FB-LF3-02, FERB-LF3-02
 Field Duplicate pairs: GWC-2/DUP-LF3-02

The above-listed aqueous samples, equipment blank, and field blank sample were collected on January 31, 2019 and were analyzed for select total recoverable metals by SW-846 method 6020, total dissolved solids (TDS) by Standard Methods SM 2540C, and anions (chloride, fluoride, and sulfate) by EPA method 300. The data were reviewed based on the USEPA Contract Laboratory Program National Functional Guidelines for Superfund Inorganic Methods Data Review, January 2017 (USEPA-540-R-2017-001), as well as by the methods referenced and professional and technical judgment.

The data were evaluated based on the following parameters:

- Data Completeness
- Holding Times and Sample Preservation
- Laboratory and Field Blanks
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) Results
- Laboratory Duplicate Results
- Laboratory Control Sample (LCS) Results
- Field Duplicate Results
- Quantitation Limits

All results are usable as reported or usable with minor qualification due to sample matrix or laboratory quality control outliers.

The validation findings were based on the following information.

Data Completeness

The level 2 (reduced deliverable) data package was complete as received by the laboratory and included sample results, method blank, MS/MSD, laboratory duplicate, and LCS results with the following exception: the reporting limits for boron and calcium were incorrect. Upon initial review, as the anion field duplicate results did not match and anion results for samples GWC-5 and GWC-2 were not consistent with historical results, the laboratory was requested to reanalyze anion samples GWC-5, GWC-2, and DUP-LF3-02. The reanalysis confirmed that the samples were switched when at the instrument for analysis. The anion reanalysis results were reported for these samples. A revision of this report was received for review which included the correction of reporting limits and anion results.

Holding Times and Sample Preservation

All criteria were met.

Blank Results

Laboratory Blank Results

Low level laboratory contamination was detected in the associated metals method blank. Laboratory blank contamination was evaluated prior to possible field blank contamination. The following table summarizes the contamination and validation actions taken.

Analyte	Blank ID/ Associated Samples	Concentration (mg/L)	10x Action Level (mg/L)	Validation Actions
Lead	Method blank MB180-269614: All samples	0.000279 J	0.00279	Qualify results for lead in samples FB-LF3-02, FERB-LF3-02, GWC-5, GWC-6, GWC-2, and DUP-LF3-02 as nondetect (U) at the RL.
Zinc		0.00397 J	0.0397	Qualify results for zinc in samples GWC-6, GWC-2, and DUP-LF3-02 as nondetect (U) at the reporting limit. Estimate (J) the positive result for zinc in sample GWC-5; High bias.

Blank Actions:

- If the sample result is < reporting limit (RL); report the result as nondetect (U) at the RL.
- If the sample result is \geq RL and <2x blank contamination detected; report the result as nondetect (U) at the reported value.
- If the sample result is \geq 2x blank contamination and < 10x Action Level; report the sample result as estimated (J); biased high.
- If the sample result is nondetect or > 10x Action Level; validation action is not required.

Field Blank Results

Low level laboratory contamination was detected in the metals field blanks after evaluation of method blank contamination. The following table summarizes the highest level of contamination and validation actions taken.

Site: Georgia Power Plant, Inactive Landfill No. 3 State Compliance
Report No.: 180-86297-2
Date: March 14, 2019

Analyte	Blank ID/ Associated Samples	Maximum Contaminant Level (mg/L)	10x Action Level (mg/L)	Validation Actions
Chromium	FB-LF3-02/FERB- LF3-02: All samples	0.0014	0.014	Qualify results for chromium in samples GWC-5 and GWC-6 as nondetect (U) at the RL. Estimate (J) the positive results for chromium in samples GWC-2 and DUP-LF3-02; High bias.
Calcium		0.16	1.6	Validation actions were not required.
Vanadium		0.00091	0.0091	Qualify results for vanadium in samples GWC-5, GW-6, and GWC-2 as nondetect (U) at the reporting limit.

Blank Actions:

If the sample result is < reporting limit (RL); report the result as nondetect (U) at the RL.

If the sample result is \geq RL and <2x blank contamination detected; report the result as nondetect (U) at the reported value.

If the sample result is \geq 2x blank contamination and < 10x Action Level; report the sample result as estimated (J); biased high.

If the sample result is nondetect or > 10x Action Level; validation action is not required.

MS/MSD Results

MS/MSD analyses were performed on sample GWC-2 for anions. All criteria were met.

Laboratory Duplicate Results

MSD analyses were performed for anions in lieu of laboratory duplicate analyses.

LCS Results

All criteria were met.

Field Duplicate Results

Samples GWC-2 and DUP-LF3-02 were submitted as the field duplicate pair with this sample set. The following table summarizes the RPDs of the detected analytes in the field duplicate pair, which were within the acceptance criteria.

Analyte	GWC-2 (mg/L)	DUP-LF3-02 (mg/L)	RPD (%)
Chloride	5.2	5.2	0
Fluoride	0.10 U	0.026 J	NC, Within the RL
Sulfate	0.57 J	0.48 J	17.1
Barium	0.067	0.067	0
Beryllium	0.000065 J	0.000087 J	28.9
Cobalt	0.00092 J	0.00088 J	4.4
Chromium	0.0061	0.0057	6.8
Calcium	4.8	4.5	6.5
Boron	0.040 J	0.038 J	5.1
Total Dissolved Solids	45	45	0
NC – Not calculable Criteria: When both results are \geq 5x the RL, RPDs must be <30%. When results are < 5x the RL, professional judgement was taken to estimate results if the absolute difference between the original and field duplicate >RL.			

Site: Georgia Power Plant, Inactive Landfill No. 3 State Compliance
Report No.: 180-86297-2
Date: March 14, 2019

Quantitation Limits

Results were reported that were below the reporting limit (RL) and above the method detection limit (MDL). These results were qualified as estimated (J) by the laboratory.

DATA VALIDATION QUALIFIERS

- U - The analyte was analyzed for, but due to blank contamination was flagged as nondetect (U). The result is usable as a nondetect.
- J - Data are flagged (J) when a QC analysis fails outside the primary acceptance limits. The qualified “J” data are not excluded from further review or consideration. However, only one flag (J) is applied to a sample result, even though several associated QC analyses may fail. The ‘J’ data may be biased high or low or the direction of the bias may be indeterminable.
- UJ - The analyte was not detected above the reported sample quantitation limit. Data are flagged (UJ) when a QC analysis fails outside the primary acceptance limits. The qualified “UJ” data are not excluded from further review or consideration. However, only one flag is applied to a sample result, even though several associated QC analyses may fail. The ‘UJ’ data may be biased low.
- NJ - The analysis indicates the presence of a compound that has been “tentatively identified” (N) and the associated numerical value represents its approximate (J) concentration.
- R - Data rejected (R) on the basis of an unacceptable QC analysis should be excluded from further review or consideration. Data are rejected when associated QC analysis results exceed the expanded control limits of the QC criteria. The rejected data are known to contain significant errors based on documented information. The data user must not use the rejected data to make environmental decisions. The presence or absence of the analyte cannot be verified.

Appendix C

Description of the Statistical Approach

Memo



To: Lauren M. Petty, P.G.
From: Michael Cummings
C:
Date: April 30, 2019
Re: Description of Statistical Approach
Georgia Power Company
Plant McIntosh Inactive CCR Landfill No. 3
Effingham County, Georgia

Handling of Non-Detects and Flagged Data

Non-detect values (NDs) were substituted with the most recent practical quantitation limits (PQLs, or reporting limits) as reported by the laboratory due to detection limit variations over the course of the sampling periods. Substitution of the most recent PQL generally results in a lower and more conservative prediction limit (United States Environmental Protection Agency [USEPA] 2009, Chapter 15). Handling of censored values in prediction limit calculations followed the USEPA Unified Guidance (2009):

- When data contained less than 15 percent NDs in background, simple substitution of the PQL is utilized in the statistical analysis.
- When data contained between 15 to 50 percent NDs the Kaplan-Meier non-detect adjustment was applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the PQL.
- When data contained greater than 50 percent NDs, non-parametric prediction limits were used.
- When data were 100 percent ND, no statistical analyses are required (USEPA Unified Guidance, 2009, Chapter 6).

Establishing the Upgradient Data Set

Spatial heterogeneity in background (upgradient) monitoring wells was checked visually using boxplots and statistically using the Kruskal-Wallis test (USEPA Unified Guidance, 2009). Any spatial heterogeneity was noted in the results and discussion; however, data from all upgradient wells were pooled regardless of these findings since interwell prediction limits are required by the Design and Operation (D&O) Plan.

The USEPA Unified Guidance (2009) recommends that testing of outliers be performed on background data sets. No outliers have been identified in the historical upgradient data set.

Calculating Upper Prediction Limits

The Statistical Procedure Flow Chart (Figure 3) presents the process for establishing upper prediction limits (UPLs). Specific procedures used for calculating UPLs included:

- Time series plots on all wells to examine the data visually for seasonal and directional trends.
- Sen's Slope/Mann Kendall tests for trends to confirm directional trends for wells individually and for pooled upgradient wells.
- The Shapiro-Wilk/Shapiro-Francia test for normality to test the distribution of data. After performing any needed data transformations, UPLs were constructed with at least 95 percent confidence, a 1-of-2 retesting scheme and an annual site-wide false positive rate of 10 percent. UPLs were calculated using the recommended data ladder of powers transformation and ND handling from Sanitas™.

When data followed a normal or transformed-normal distribution and detection rates were at least 50 percent, parametric prediction limits were constructed. Nonparametric prediction limits were constructed on data sets with greater than 50 percent NDs, for small datasets (five samples or fewer, per USEPA Unified Guidance), or when data did not follow a transformed normal distribution. All UPLs were constructed using pooled upgradient well data at Plant McIntosh Inactive CCR Landfill No. 3 for interwell comparisons per the approved D&O Plan for the facility.

Comparison to UPL

If the most recent downgradient concentration exceeded its respective UPL, it was flagged as an initial exceedance. Exceptions to this were as follows:

- If the upgradient wells were 100 percent ND, any detected downgradient measurement was considered a Statistically Significant Increase (SSI).
- If the most recent downgradient well result is a ND, it is assumed to be below the upgradient UPL even if the upgradient wells are 100 percent ND. As a result, the downgradient well is assumed to comply.

The most recent sample from each downgradient well was also compared to the Georgia primary or secondary drinking water standards (Table 4). Per the 1 of 2 resampling scheme for the prediction limits, any well with an initial exceedance is eligible to be resampled to confirm the initial finding (USEPA 2009).

Trend Testing

The Sen's Slope/Mann Kendall trend test was run on any downgradient wells found to exceed their respective interwell prediction limit (and which do not currently have a successful Alternative Source Demonstration established) to determine if trends in concentrations were increasing, decreasing, or stable over time. No trend tests were calculated if the dataset had fewer than five detected values and 50 percent detected values because insufficient data was available to reliably test for trends (USEPA 2009).

Appendix D

Historical Groundwater Analytical Results

**Appendix D. Groundwater Analytical Results - Historic
Semiannual Groundwater Monitoring Report - January 2019
Georgia Power Company
Plant McIntosh Inactive CCR Landfill No. 3
Effingham County, Georgia**

General Notes:

-- not available or not collected for analysis of this parameter

Bolded - detected value

MCL - Maximum Contaminant Level

µS/cm - microsiemens per centimeter

mg/L - milligrams per liter

mV - millivolts

ND - none detected

NE - not established

NTU - nephelometric turbidity units

SU - Standard Units

TDS - total dissolved solids

*Georgia secondary drinking water standard established by EPA as a general guideline only (not enforced)

Total metals analysis was performed. Temperature, specific conductance, pH, dissolved oxygen (DO), oxidation-reduction potential (ORP), and turbidity were measured and recorded in the field during well vacuation.

State-required parameters required by the Georgia EPD per minor modification request on Design & Operation Plan for LF3, dated August 1999.

Appendix III parameters were added to the semiannual groundwater monitoring program in the approved August 2017 minor modification request.

Laboratory Qualifiers:

The data presented in this table are representative of the validated data, and not necessarily that which is included in the laboratory reports.

< - The analyte was not detected at a concentration above the specified laboratory reporting limit.

J - The result is an estimated value.

Validator Qualifiers:

< - The analyte was not detected at a concentration above the specified laboratory reporting limit.

F2F1 - Field duplicate results were outside the control limit.

H - Holding times were exceeded

J - The result is an estimated value

V - Surrogate recovery is not within method control limits

Appendix D. Groundwater Analytical Results - Historic
Semiannual Groundwater Monitoring Report - January 2019
Georgia Power Company
Plant McIntosh Inactive CCR Landfill No. 3
Effingham County, Georgia

Location Name Sample Name Sample Date				GWA-1																											
				GWA-1																											
				10/5/99	11/12/99	12/29/99	2/17/00	9/13/00	11/10/00	1/4/01	12/11/01	4/4/02	12/6/02	6/28/03	12/13/03	5/28/04	12/10/04	6/24/05	12/13/05	7/12/06	12/1/06	6/21/07	12/15/07	6/22/08	12/7/08	12/7/08	12/23/09	6/24/10	1/9/11	7/11/11	
Analyte	Units	CAS No.	MCLs																												
Appendix III Parameters																															
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
pH	SU	pH	NE	6.63	5.51	5.23	5.29	5.41	5.47	5.44	4.86	5.10	4.92	4.91	4.87	4.98	4.35	4.82	4.66	5.49	--	--	--	--	--	--	--	--			
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
State Compliance Parameters																															
Barium	mg/L	7440-39-3	2	0.10	0.099	0.18	0.12	0.038	0.065	0.037	0.027	0.027	0.028	0.054	0.027	0.18	0.10	0.045	0.048	0.13	0.012	0.20	0.14	0.1	0.043	0.13	0.17	0.045	0.11	0.022	
Beryllium	mg/L	7440-41-7	0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.0013	0.0028	< 0.001	< 0.001	0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	
Chromium	mg/L	7440-47-3	0.1	0.023	0.03	0.059	0.048	< 0.01	0.018	< 0.01	< 0.01	< 0.01	0.0046	0.0082	< 0.002	0.016	0.0087	0.0069	0.0075	0.027	< 0.0025	0.012	0.0085	0.021	0.01	0.0073	0.013	0.0076	0.023	0.0042	
Cobalt	mg/L	7440-48-4	NE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.0032	0.012	< 0.0025	< 0.0025	0.0031	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	
Copper	mg/L	7440-50-8	1.0*	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.002	< 0.002	< 0.002	0.0052	< 0.002	< 0.002	< 0.002	0.0055	< 0.0025	0.0032	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	0.0025	< 0.0025	0.004	< 0.0025
Lead	mg/L	7439-92-1	0.015	0.007	0.0063	0.016	< 0.011	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.015	0.01	< 0.005	< 0.005	0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Vanadium	mg/L	7440-62-2	NE	0.02	0.027	0.055	0.042	< 0.01	0.014	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	0.017	0.0082	< 0.005	< 0.005	0.023	0.0081	0.009	0.0056	0.013	0.0027	0.0032	0.0093	0.0033	< 0.0025	< 0.0025	
Zinc	mg/L	7440-66-6	5.0*	0.043	0.035	0.058	0.051	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.01	< 0.01	0.034	0.021	< 0.01	0.013	0.074	0.048	0.067	0.053	0.024	0.0087	0.045	0.054	0.0065	0.022	0.0032	

Location Name Sample Name Sample Date				GWA-1 (continued)												GWA-1A						
				GWA-1												GWA-1A						
				1/20/12	7/13/12	1/21/13	7/20/13	1/17/14	7/11/14	7/12/14	1/16/15	7/15/15	1/16/16	6/22/16	4/19/17	7/17/17	9/20/17	1/8/18	3/27/18	7/10/18	10/08/18	01/30/19
Analyte	Units	CAS No.	MCLs																			
Appendix III Parameters																						
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
pH	SU	pH	NE	--	--	--	--	--	--	5.55	--	--	5.13	5.06	--	--	--	--	--	--	--	--
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
State Compliance Parameters																						
Barium	mg/L	7440-39-3	2	0.043	0.05	0.11	0.04	0.082	--	0.034	0.029	0.025	0.026	0.0485	0.10	0.022	0.023	0.022	0.023	0.024	0.030	0.024
Beryllium	mg/L	7440-41-7	0.004	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013 J	--	< 0.0013 J	0.00022 J	0.00015 J	0.00011 J	0.0003 J	< 0.0025	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034	0.00026 J
Chromium	mg/L	7440-47-3	0.1	0.009	0.013	0.032	0.01	0.024	--	0.0069	0.0064	0.0051	0.0066	0.0117	0.0016 J	0.003	0.0025	0.0038	0.0044	0.0045	--	0.0061 J
Cobalt	mg/L	7440-48-4	NE	< 0.0025	0.0015	0.0035	< 0.0013	0.0027	--	< 0.0013 J	< 0.0013	< 0.0013	0.00059 J	0.0012 J	< 0.0025	< 0.0025	< 0.0025	< 0.00040	< 0.00040	< 0.00040	< 0.00040	0.00038 J
Copper	mg/L	7440-50-8	1.0*	< 0.013	< 0.005	< 0.005	< 0.005	< 0.005 J	--	< 0.005 J	< 0.005	< 0.005	< 0.005	0.0028 J	--	< 0.0025	--	< 0.0021	--	< 0.0021	--	< 0.0013
Lead	mg/L	7439-92-1	0.015	< 0.013	< 0.0025	< 0.013	< 0.013	< 0.013 J	--	< 0.013	< 0.013	< 0.013	< 0.013	0.0022 J	< 0.0013	< 0.0013	0.00035 J	< 0.00035	< 0.00035	< 0.00035	< 0.00035	0.00021 J
Vanadium	mg/L	7440-62-2	NE	< 0.01	0.011	0.028	< 0.005	0.019	--	< 0.005 J	0.0012 J	< 0.005	0.0015 J	0.0062 J	--	< 0.0025	--	< 0.0014	--	< 0.0036	--	< 0.0025
Zinc	mg/L	7440-66-6	5.0*	0.0089	0.012	0.024	0.0068	0.02 V	--	0.0055	0.0043	0.0026	0.0035	0.0096 J	--	< 0.02	--	< 0.0065	--	< 0.0065	--	< 0.0024

Notes: See Page 1 for general notes, lab qualifiers, and data qualifiers.
GWA-1A was installed as a replacement well for GWA-1 in January 2017.

Appendix D. Groundwater Analytical Results - Historic
 Semiannual Groundwater Monitoring Report - January 2019
 Georgia Power Company
 Plant McIntosh Inactive CCR Landfill No. 3
 Effingham County, Georgia

Location Name				GWA-2																							
Sample Name				GWA-2																							
Sample Date				10/5/99	11/12/99	12/29/99	2/17/00	9/13/00	11/10/00	1/4/01	12/11/01	4/4/02	12/6/02	6/28/03	12/13/03	5/28/04	12/10/04	6/24/05	12/13/05	7/12/06	12/1/06	6/21/07	12/15/07	6/22/08	12/7/08	12/7/08	12/23/09
Analyte	Units	CAS No.	MCLs																								
Appendix III Parameters																											
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
pH	SU	pH	NE	5.83	5.81	5.09	5.47	5.26	5.11	5.37	5.06	5.15	5.32	5.56	5.48	5.07	5.2	5.35	4.67	6.94	--	--	--	--	--	--	
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Appendix IV and State Compliance Parameters																											
Barium	mg/L	7440-39-3	2	0.10	0.051	0.032	0.027	0.016	0.021	0.022	0.019	0.024	0.026	0.021	0.018	0.023	0.031	0.023	0.025	0.15	0.12	0.021	0.028	0.026	0.11	0.12	0.024
Beryllium	mg/L	7440-41-7	0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.0024	< 0.001	< 0.001	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013
Chromium	mg/L	7440-47-3	0.1	0.015	0.017	0.013	0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.0055	0.0063	< 0.0013	0.0022	0.0019	< 0.0013	0.0026	< 0.0013
Cobalt	mg/L	7440-48-4	NE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025
Copper	mg/L	7440-50-8	1.0*	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.035 o	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0025	0.0038	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025
Lead	mg/L	7439-92-1	0.015	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Vanadium	mg/L	7440-62-2	NE	0.019	0.023	0.012	0.014	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.0071	0.0075	< 0.0025	0.0027	< 0.0025	< 0.0025	0.0049	< 0.0025
Zinc	mg/L	7440-66-6	5.0*	0.056	0.053	0.045	0.033	0.032	0.036	0.052	0.041	0.062	0.076	0.026	0.011	0.016	< 0.01	0.011	0.017	0.059	0.063	0.018	0.0099	0.012	0.049	0.049	0.0099

Location Name				GWA-2 (continued)										GWA-2A													
Sample Name				GWA-2										GWA-2A													
Sample Date				6/24/10	7/13/12	1/21/13	7/20/13	1/17/14	7/11/14	7/12/14	1/16/15	7/15/15	1/16/16	6/23/16	4/19/17	7/18/17	9/20/17	1/8/18	3/27/18	7/10/18	10/08/18	01/30/19					
Analyte	Units	CAS No.	MCLs																								
Appendix III Parameters																											
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
pH	SU	pH	NE	--	--	--	--	--	5.66	--	--	5.43	5.81	--	--	--	5.52	5.32	5.44	5.45	5.42	--	--	--	--	--	
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	0.98 J	< 1	< 1	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.38	--	
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	--	--	--	64	62	44	24 J	36 J	58	80	68	--	--	
State Compliance Parameters																											
Barium	mg/L	7440-39-3	2	0.035	0.054	0.17	0.067	0.054	--	0.045	0.043	0.037	0.041	0.0606	0.034	0.035	0.039	0.10	0.041	0.042	0.040	0.042	--	--	--	--	
Beryllium	mg/L	7440-41-7	0.004	< 0.0013	< 0.0013	0.0037	< 0.0013	< 0.0013 J	--	< 0.0013 J	0.00038 J	0.00027 J	0.00029 J	0.0007 J	< 0.0025	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034	0.00037 J	--	--	--	
Chromium	mg/L	7440-47-3	0.1	< 0.0013	0.012	0.095 o	0.023	0.01	--	0.0055	0.0033	0.0029	0.0042	0.007 J	< 0.0025	< 0.0025	< 0.0025	< 0.0011	0.007 J	< 0.0011	0.0011 J	< 0.0025	--	--	--	--	
Cobalt	mg/L	7440-48-4	NE	< 0.0025	0.0018	0.012	0.0028	< 0.0013	--	< 0.0013 J	< 0.0013	< 0.0013	0.00052 J	0.0012 J	0.00046 J	0.00048 J	0.00044 J	0.00044 J	0.00040 J	0.00044 J	0.00044 J	0.00041 J	0.00050 J	--	--	--	
Copper	mg/L	7440-50-8	1.0*	< 0.0025	< 0.005	0.013	< 0.005	< 0.005 J	--	< 0.005	< 0.005	< 0.005	< 0.005	0.0016 J	--	< 0.0025	--	< 0.0021	--	< 0.0021	--	0.0018 J	--	--	--	--	
Lead	mg/L	7439-92-1	0.015	< 0.013	< 0.0025	0.021	< 0.013	< 0.013 J	--	< 0.013	< 0.013	< 0.013	< 0.013	0.0025 J	< 0.0013	< 0.0013	0.0058 F2F1	< 0.00035	< 0.00035	< 0.00035	< 0.00035	< 0.00035	< 0.00094	--	--	--	
Vanadium	mg/L	7440-62-2	NE	< 0.0025	0.012	0.092 o	0.019	0.0062	--	< 0.005 J	0.0017 J	0.0019 J	0.0029 J	0.0053 J	--	< 0.0025	--	< 0.0014	--	< 0.0014	--	< 0.0025	--	--	--	--	
Zinc	mg/L	7440-66-6	5.0*	0.009	0.057	0.15	0.03	0.016 V	--	0.012	0.0091	0.0087	0.009	0.0179	--	< 0.02	--	< 0.0065	--	< 0.0065	--	0.0051 J	--	--	--	--	

Notes: See Page 1 for general notes, lab qualifiers, and data qualifiers.
 GWA-2A was installed as a replacement well for GWA-2 in January 2017.

				Location Name	GWA-2B	
				Sample Name	GWA-2B	
				Sample Date	10/08/18	01/30/19
Analyte	Units	CAS No.	MCLs			
Appendix III Parameters						
Boron	mg/L	7440-42-8	NE		0.76	0.77
Calcium	mg/L	7440-70-2	NE		17	16
Chloride	mg/L	16887-00-6	250*		7.3	7.3
Fluoride	mg/L	16984-48-8	4		< 0.082	< 0.026
pH	SU	pH	NE		5.29	5.08
Sulfate	mg/L	14808-79-8	250*		73	74
TDS	mg/L	TDS	500*		170	140
State Compliance Parameters						
Barium	mg/L	7440-39-3	2		0.049	0.041
Beryllium	mg/L	7440-41-7	0.004		0.0014 J	0.0019 J
Chromium	mg/L	7440-47-3	0.1		< 0.0011	0.0030 J
Cobalt	mg/L	7440-48-4	NE		0.0051	0.0044
Copper	mg/L	7440-50-8	1.0*		--	0.0035
Lead	mg/L	7439-92-1	0.015		< 0.00035	0.00028 J
Vanadium	mg/L	7440-62-2	NE		--	< 0.0025
Zinc	mg/L	7440-66-6	5.0*		--	0.013 J

Notes: See Page 1 for general notes, lab qualifiers, and data qualifiers.
GWA-2B was installed as a proposed replacement well for GWA-2 and GWA-2A in August 2018.

Location Name Sample Name Sample Date				GWA-3A																								
				GWA-3A																								
Analyte	Units	CAS No.	MCLs	10/5/99	11/12/99	12/29/99	2/17/00	9/13/00	11/10/00	1/4/01	12/11/01	4/4/02	12/6/02	6/28/03	12/13/03	5/28/04	12/10/04	6/24/05	12/13/05	7/12/06	12/1/06	6/21/07	12/15/07	6/22/08	12/6/08	12/7/08	12/23/09	
Appendix III Parameters																												
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
pH	SU	pH	NE	6.42	5.03	4.92	5.13	4.85	5.05	5.08	4.81	4.92	5.03	4.69	4.81	3.93	4.25	4.50	4.52	3.59	--	--	--	--	--	--	--	--
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
State Compliance Parameters																												
Barium	mg/L	7440-39-3	2	0.10	0.023	0.033	0.026	0.044	0.044	0.043	0.041	0.038	0.044	0.045	0.039	0.042	0.045	0.042	0.043	0.043	0.041	0.043	0.045	0.05	0.14 o	0.046	0.049	
Beryllium	mg/L	7440-41-7	0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.0024	< 0.001	< 0.001	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	
Chromium	mg/L	7440-47-3	0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.002	0.0053	< 0.002	0.0027	0.004	0.0031	0.0031	0.0025	0.0037	0.0053	0.0044	0.0059	0.0031	0.0029	0.0025	
Cobalt	mg/L	7440-48-4	NE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0025	< 0.0025	0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	
Copper	mg/L	7440-50-8	1.0*	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	
Lead	mg/L	7439-92-1	0.015	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Vanadium	mg/L	7440-62-2	NE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0025	< 0.0025	0.0038	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	
Zinc	mg/L	7440-66-6	5.0*	0.023	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.0047	0.065 o	0.008	0.0043	0.0062	0.051 o	0.0043	0.0039	

Location Name Sample Name Sample Date				GWA-3A (continued)																							
				GWA-3A																		GWA-3A-FILTERED	GWA-3A				
Analyte	Units	CAS No.	MCLs	6/23/10	1/8/11	7/10/11	1/19/12	7/12/12	1/21/13	7/20/13	1/17/14	7/12/14	1/15/15	7/15/15	1/16/16	6/22/16	7/18/17	9/20/17	1/9/18	3/27/18	7/10/18	10/9/18	10/09/18	01/30/19			
Appendix III Parameters																											
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	< 0.05	< 0.02	< 0.021	< 0.021	< 0.021	< 0.021	< 0.030			
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	1.7	1.7	1.9	1.9	1.9	2.2	2.1	2.4			
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	7.4	7.6	8.6	9.4 J	11	14	12	15			
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	--	--	--	< 0.2	< 0.2	< 0.08	< 0.082	< 0.082	< 0.082	< 0.082	< 0.026			
pH	SU	pH	NE	--	--	--	--	--	--	--	--	5.44	--	4.98	4.87	--	--	--	4.83	4.91	4.87	4.84	--	4.88			
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	0.41 J			
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	--	--	--	32	16	4.0 J	30 J	30	56	44	41			
State Compliance Parameters																											
Barium	mg/L	7440-39-3	2	0.043	0.047	0.035	0.05	0.042	0.048	0.047	0.049	0.043	0.05	0.044	0.048	0.0486	0.046	0.10	0.050	0.054	0.056	0.061	0.054	0.071			
Beryllium	mg/L	7440-41-7	0.004	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013 J	< 0.0013 J	0.00039 J	0.00031 J	0.00034 J	0.0004 J	0.00038 J	0.00039 J	< 0.00034	< 0.00034	0.00038 J	0.00044 J	0.00036 J	0.00051 J			
Chromium	mg/L	7440-47-3	0.1	0.0013	0.0017	< 0.0013	< 0.005	< 0.0013	0.0014	0.0021	0.0023	< 0.0013 J	< 0.0013 J	< 0.0013	0.0025	0.0037 J	0.0018 J	0.0026	0.0038	0.0037	0.0022 J	0.0047	0.0023 J	0.0050 J			
Cobalt	mg/L	7440-48-4	NE	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0013	< 0.0013	< 0.0013	< 0.0013 J	< 0.0013 J	0.00086 J	0.00087 J	0.0011 J	0.0009 J	0.001 J	0.0011 J	0.0011 J	0.0011 J	0.0012 J	0.0014 J	0.0012 J	0.0014 J			
Copper	mg/L	7440-50-8	1.0*	< 0.0025	< 0.0025	< 0.0025	< 0.013	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.0036 J	< 0.0025	--	< 0.0021	--	< 0.0021	--	< 0.0013				
Lead	mg/L	7439-92-1	0.015	< 0.013	< 0.013	< 0.013	< 0.013	< 0.0025	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	0.0004 J	< 0.0013	< 0.0013	< 0.00035	< 0.00035	< 0.00035	0.00039 J	< 0.00035	0.00034 J			
Vanadium	mg/L	7440-62-2	NE	< 0.0025	< 0.0025	< 0.0025	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.0011 J	< 0.01	< 0.0025	--	< 0.0014	--	< 0.0014	--	< 0.0025				
Zinc	mg/L	7440-66-6	5.0*	< 0.0025	0.0037	0.0047	0.0045	0.0033	0.0038	0.004	0.005 V	0.004	0.0056	0.0034	0.0038	0.0077 J	< 0.02	--	< 0.0065	--	< 0.0065	--	--	0.0058 J			

Notes: See Page 1 for general notes, lab qualifiers, and data qualifiers.

Location Name				GWA-3B																						
Sample Name				GWA-3B																						
Sample Date				10/5/99	11/12/99	12/29/99	2/17/00	9/13/00	11/10/00	1/4/01	12/11/01	4/4/02	12/6/02	6/28/03	12/13/03	5/28/04	12/10/04	6/24/05	12/13/05	7/12/06	12/23/09	6/23/10	7/20/13	1/17/14		
Analyte	Units	CAS No.	MCLs																							
Appendix III Parameters																										
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
pH	SU	pH	NE	5.62	4.78	4.53	4.68	5.33	4.63	5.39	4.71	--	--	4.4	4.46	3.74	4.01	4.67	4.68	4.97	--	--	--	--		
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
State Compliance Parameters																										
Barium	mg/L	7440-39-3	2	0.077	0.065	0.079	0.089	0.069	0.071	0.073	0.081	--	--	0.072	0.099	0.091	0.1	0.083	0.082	0.075	0.14	0.077	0.045	0.092		
Beryllium	mg/L	7440-41-7	0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.0022	< 0.001	< 0.001	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013 J		
Chromium	mg/L	7440-47-3	0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	--	0.0021	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.0028	0.0041	< 0.0013	0.0021	< 0.0013		
Cobalt	mg/L	7440-48-4	NE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	--	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0025	< 0.0025	< 0.0025	< 0.0013	< 0.0013 J		
Copper	mg/L	7440-50-8	1.0*	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	--	--	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0025	< 0.0025	< 0.0025	< 0.005	< 0.005		
Lead	mg/L	7439-92-1	0.015	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	--	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013		
Vanadium	mg/L	7440-62-2	NE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	--	--	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.0061	0.0064	< 0.0025	< 0.005	< 0.005		
Zinc	mg/L	7440-66-6	5.0*	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	--	--	< 0.01	< 0.01	< 0.01	< 0.01	0.022	0.013	0.018	0.07	0.01	0.0076	0.008 V		

Location Name				GWA-3B (continued)													
Sample Name				GWA-3B													
Sample Date				7/12/14	1/15/15	7/15/15	1/16/16	6/23/16	7/18/17	9/20/17	Sept-18 FILT	1/9/18	3/28/18	7/10/18	Jul-DUP	10/08/18	01/30/19
Analyte	Units	CAS No.	MCLs														
Appendix III Parameters																	
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	0.045 J	< 0.05	0.043 J	0.026 J	0.021 J	< 0.021	0.021 J	0.024 J	0.041 J
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	2.8	2.7	2.9	2.5	2.2	1.6	1.7	1.6	3.6
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	2	4.6	4.7	7.9	8.5 J	21	20	26	5.8
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	< 0.2	0.086 J	0.088 J	< 0.08	< 0.082	< 0.082	< 0.082	0.052 J	
pH	SU	pH	NE	5.46	--	5.08	4.71	--	--	--	4.97	4.80	4.80	5.1	5.13		
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	7.1	8.8	8.7	9.8	11	3.0	2.8	1.9	7.2
TDS	mg/L	TDS	500*	--	--	--	--	--	36	56	46	12	34 J	58	70	30	53
State Compliance Parameters																	
Barium	mg/L	7440-39-3	2	0.064	0.072	0.059	0.079	0.034	0.052	0.051	0.051	0.058	0.073	0.078	0.079	0.068	0.053
Beryllium	mg/L	7440-41-7	0.004	< 0.0013 J	0.00019 J	0.00012 J	0.00013 J	< 0.003	< 0.0025	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034	0.00030 J
Chromium	mg/L	7440-47-3	0.1	< 0.0013	0.0012 J	0.0015	< 0.0013	< 0.01	< 0.0025	< 0.0025	0.0015 J	< 0.0011	< 0.0011	< 0.0011	< 0.0011	0.0013 J	0.0070 J
Cobalt	mg/L	7440-48-4	NE	< 0.0013 J	0.0011 J	0.00087 J	0.0013	< 0.01	< 0.0025	0.00041 J	< 0.0025	0.00070 J	0.00074 J	0.0012 J	0.0012 J	0.0013 J	0.0019 J
Copper	mg/L	7440-50-8	1.0*	< 0.005	< 0.005	< 0.005	< 0.005	0.0005 J	< 0.0025	--	--	< 0.0021	--	< 0.0021	< 0.0021	--	0.0015 J
Lead	mg/L	7439-92-1	0.015	< 0.013	< 0.013	< 0.013	< 0.013	0.0015 J	0.0008 J	0.0016	0.001 J	0.00041 J	0.00036 J	0.00053 J	0.00047 J	0.00099 J	0.001
Vanadium	mg/L	7440-62-2	NE	< 0.005 J	0.0016 J	0.0028 J	0.0018 J	0.0023 J	0.0014 J	--	--	< 0.0014	--	< 0.0025	< 0.0031	--	0.0043 J
Zinc	mg/L	7440-66-6	5.0*	0.0062	0.0092	0.0062	0.0053	0.0051 J	< 0.02	--	--	< 0.0065	--	< 0.0065	0.0078 J	--	0.0041 J

Notes: See Page 1 for general notes, lab qualifiers, and data qualifiers.

Location Name				GWA-4																																	
Sample Name				GWA-4																																	
Sample Date				10/5/99	11/12/99	12/29/99	2/17/00	9/13/00	11/10/00	1/4/01	12/11/01	4/4/02	12/6/02	6/28/03	12/13/03	5/28/04	12/10/04	6/24/05	12/13/05	7/12/06	12/1/06	6/21/07	12/15/07	6/21/08	12/6/08	12/7/08	12/23/09	6/23/10	1/8/11	7/10/11	1/19/12						
Analyte	Units	CAS No.	MCLs																																		
Appendix III Parameters																																					
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
pH	SU	pH	NE	6.51	5.46	5.13	5.22	4.86	5.29	5.53	5.37	5.32	5.30	4.73	4.53	4.22	4.26	4.47	4.47	3.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
State Compliance Parameters																																					
Barium	mg/L	7440-39-3	2	0.10	0.017	0.027	0.023	0.022	0.035	0.032	0.032	0.03	0.041	0.035	0.029	0.033	0.037	0.034	0.03	0.03	0.032	0.03	0.034	0.037	0.034	0.037	0.058	0.046	0.036	0.031	0.045						
Beryllium	mg/L	7440-41-7	0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.0023	< 0.001	< 0.001	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013		
Chromium	mg/L	7440-47-3	0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.0037	0.0039	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.023	0.0017	0.0027	0.0026	0.0021	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.005		
Cobalt	mg/L	7440-48-4	NE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025			
Copper	mg/L	7440-50-8	1.0*	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.013			
Lead	mg/L	7439-92-1	0.015	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013			
Vanadium	mg/L	7440-62-2	NE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.01			
Zinc	mg/L	7440-66-6	5.0*	0.039	0.025	0.023	< 0.02	0.035	0.023	0.027	0.036	0.038	0.033	0.018	0.013	< 0.01	< 0.01	< 0.01	0.011	0.0055	0.0052	0.0062	0.0055	0.011	0.008	0.011	0.0051	0.0031	0.0035	0.0081	0.017						

Location Name				GWA-4 (continued)																	
Sample Name				GWA-4																	
Sample Date				7/12/12	1/21/13	7/20/13	1/17/14	7/12/14	1/15/15	7/15/15	1/16/16	6/22/16	7/18/17	9/21/17	1/9/18	3/27/18	7/10/18	10/08/18	01/30/19		
Analyte	Units	CAS No.	MCLs																		
Appendix III Parameters																					
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	< 0.05	< 0.05	< 0.02	< 0.021	< 0.021	< 0.021	< 0.030		
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	0.86	0.9	1.0	0.89	0.99	1.1	1.0		
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	4.2	4.4	4.4	4.9 J	5.5	6.6	6.9		
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	< 0.2	< 0.2	< 0.08	< 0.082	< 0.082	< 0.082	0.029 J		
pH	SU	pH	NE	--	--	--	--	5.33	--	4.94	4.85	--	--	--	4.91	4.92	4.94	4.76	4.94		
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	4.7	4.5	3.0	3.8	3.4	3.4	3.5		
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	26	24	16	< 3.4 J	14	36	40		
State Compliance Parameters																					
Barium	mg/L	7440-39-3	2	0.039	0.042	0.054	0.057	0.042	0.041	0.04	0.04	0.0453	0.037	0.10	0.043	0.039	0.043	0.042	0.04		
Beryllium	mg/L	7440-41-7	0.004	< 0.0013	< 0.0013	< 0.0013	< 0.0013 J	< 0.0013 J	0.0002 J	0.00018 J	0.00013 J	0.0001 J	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034	0.00019 J		
Chromium	mg/L	7440-47-3	0.1	< 0.0013	< 0.0013	< 0.0013	< 0.0013 J	< 0.0013 J	< 0.0013 J	< 0.0013 J	0.00084 J	0.00083 J	0.00092 J	0.0005 J	0.0007 J	0.00073 J	0.0012 J	0.00081 J	0.00086 J	0.00092 J	0.00092 J
Cobalt	mg/L	7440-48-4	NE	< 0.0013	< 0.0013	< 0.0013	< 0.0013 J	< 0.0013 J	0.00084 J	0.00083 J	0.00092 J	0.0005 J	0.0007 J	0.00073 J	0.0012 J	0.00081 J	0.00086 J	0.00092 J	0.00092 J		
Copper	mg/L	7440-50-8	1.0*	< 0.005	< 0.005	< 0.005	< 0.005 J	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0025	< 0.0025	--	0.0025	--	< 0.0021	--	< 0.0013	
Lead	mg/L	7439-92-1	0.015	< 0.0025	< 0.013	< 0.013	< 0.013 J	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	0.0003 J	< 0.0013	0.0076	0.0023	< 0.00035	< 0.00035	< 0.00035	0.00013 J	
Vanadium	mg/L	7440-62-2	NE	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00082 J	< 0.01	< 0.0025	--	0.0072	--	< 0.0025	--	< 0.00090	
Zinc	mg/L	7440-66-6	5.0*	0.01	0.013	< 0.0025	0.0066 V	0.0054	0.0076	0.0053	0.0048	0.0038 J	< 0.02	--	0.0072 J	--	< 0.0065	--	0.0060 J		

Notes: See Page 1 for general notes, lab qualifiers, and data qualifiers.

Appendix D. Groundwater Analytical Results - Historic
Semiannual Groundwater Monitoring Report - January 2019
Georgia Power Company
Plant McIntosh Inactive CCR Landfill No. 3
Effingham County, Georgia

Location Name				GWA-5																											
Sample Name				GWA-5																											
Sample Date				10/5/99	11/12/99	12/29/99	2/17/00	9/13/00	11/10/00	1/4/01	12/11/01	4/4/02	12/6/02	6/28/03	12/13/03	5/28/04	12/10/04	6/24/05	12/13/05	7/12/06	12/1/06	6/21/2007	12/15/07	6/22/08	12/6/08	12/7/08	12/22/09	6/23/10	1/8/11	7/10/11	
Analyte	Units	CAS No.	MCLs																												
Appendix III Parameters																															
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
pH	SU	pH	NE	6.3	4.72	4.8	4.78	4.58	4.5	4.61	4.87	4.96	4.40	3.77	4.25	3.9	3.71	3.94	3.94	5.56	--	--	--	--	--	--	--	--	--	--	
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
State Compliance Parameters																															
Barium	mg/L	7440-39-3	2	0.10	0.086	0.12	0.13	0.18	0.018	0.23	0.12	0.094	0.33	0.11	0.057	0.035	0.04	0.037	0.039	0.042	0.044	0.058	0.073	0.096	0.094	0.12	0.089	0.081	0.097	0.084	
Beryllium	mg/L	7440-41-7	0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.002	0.0018	0.0036	0.0019	< 0.002	0.0035	0.0037	< 0.001	< 0.001	0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	
Chromium	mg/L	7440-47-3	0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.027	0.0051	< 0.002	0.0031	0.0067	< 0.002	< 0.002	< 0.0013	< 0.0013	0.0021	0.0022	0.0019	< 0.0013	< 0.0013	0.0032	< 0.0013	0.0019	< 0.0013	
Cobalt	mg/L	7440-48-4	NE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.018	0.01	< 0.01	< 0.01	0.007	0.0072	0.0062	0.0048	0.0032	0.0037	< 0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	0.0025	
Copper	mg/L	7440-50-8	1.0*	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.0089	0.019	0.0067	0.0057	0.0027	0.0038	< 0.0025	0.0033	< 0.0025	0.0035	< 0.0025	< 0.0025	< 0.0025	< 0.0025	0.0025	< 0.0025	< 0.0025	< 0.0025	
Lead	mg/L	7439-92-1	0.015	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.011	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Vanadium	mg/L	7440-62-2	NE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.03	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0025	< 0.0025	0.07 o	< 0.0025	0.0026	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	
Zinc	mg/L	7440-66-6	5.0*	< 0.02	< 0.02	< 0.02	< 0.02	0.021	< 0.02	< 0.02	< 0.02	< 0.02	0.06	0.19 o	0.067	0.068	0.039	0.033	0.039	0.022	0.018	0.058	0.0072	0.011	0.011	0.013	0.013	0.0084	0.0089	0.0084	

Location Name				GWA-5 (continued)																
Sample Name				GWA-5																
Sample Date				1/20/12	7/12/12	1/21/13	7/20/13	1/17/14	7/12/14	1/16/15	7/15/15	1/16/16	6/22/16	7/19/17	9/21/17	1/9/18	3/27/18	7/10/18	10/08/18	01/30/19
Analyte	Units	CAS No.	MCLs																	
Appendix III Parameters																				
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	0.07	0.07	0.042 J	0.037 J	0.042 J	0.044 J	0.030 J
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	2.6	2.7	4.1	4.8	3.7	3.2	1.7
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	5.8	6.2	9.9	13 J	17	16	6.5
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	< 0.2	0.13 J	0.13 J	0.21	0.17 J	0.11 J	0.089 J
pH	SU	pH	NE	--	--	--	--	--	3.88	--	4.19	4.35	--	--	4.4	4.11	4.62	4.51	4.72	
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	12	15	25	31	19	17	15
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	48	76	18	48 J	76	8.0	67
State Compliance Parameters																				
Barium	mg/L	7440-39-3	2	0.099	0.12	0.095	0.086	0.14	0.17	0.12	0.12	0.12	0.0839	0.085	0.10	0.13	0.18	0.14	0.11	0.079
Beryllium	mg/L	7440-41-7	0.004	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013 J	0.00043 J	0.00064 J	0.00039 J	0.0002 J	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034	0.00024 J	
Chromium	mg/L	7440-47-3	0.1	< 0.005	0.0044	< 0.0013	0.0017	< 0.0013 J	0.0014	0.0011 J	0.0016	< 0.0013	0.002 J	0.0017 J	0.0021 J	0.0019 J	< 0.0011	0.0012 J	0.0015 J	0.0014 J
Cobalt	mg/L	7440-48-4	NE	< 0.0025	0.002	0.0014	< 0.0013	0.0019	0.0026	0.0021	0.0023	0.002	0.0007 J	0.00069 J	0.00073 J	0.0014 J	0.0019 J	0.0015 J	0.0013 J	0.00076 J
Copper	mg/L	7440-50-8	1.0*	< 0.013	< 0.005	< 0.005	< 0.005	< 0.005 J	< 0.005	< 0.005	< 0.005	< 0.005	0.001 J	< 0.0025	--	< 0.0021	--	< 0.0021	< 0.0013	
Lead	mg/L	7439-92-1	0.015	< 0.013	< 0.0025	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	0.001 J	0.00081 J	0.00086 J	0.00059 J	< 0.00035	0.00045 J	0.00037 J	0.00064 J
Vanadium	mg/L	7440-62-2	NE	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.0011 J	0.0016 J	< 0.005	0.0018 J	0.0045	--	0.0027	--	< 0.0050	--	0.0019 J
Zinc	mg/L	7440-66-6	5.0*	0.0094	0.0098	0.007	0.0074	0.0092 V	0.013	0.0081	0.009	0.007	0.0091 J	0.0099 J	--	0.014 J	--	0.0089 J	--	0.0057 J

Notes: See Page 1 for general notes, lab qualifiers, and data qualifiers.

Location Name				GWA-7																											
Sample Name				GWA-7																											
Sample Date				10/5/99	11/12/99	12/29/99	2/17/00	9/13/00	11/10/00	1/4/01	12/11/01	4/4/02	12/6/02	6/28/03	12/13/03	5/28/04	12/10/04	6/24/05	12/13/05	7/12/06	12/1/06	6/21/07	12/15/07	6/21/08	12/6/08	12/7/08	12/23/09	6/23/10	1/8/11	7/10/11	
Analyte	Units	CAS No.	MCLs																												
Appendix III Parameters																															
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
pH	SU	pH	NE	6.71	5.60	5.24	5.33	6.04	4.98	6.21	4.63	4.74	5.13	4.92	5.11	4.42	4.44	4.71	4.63	4.76	--	--	--	--	--	--	--	--	--	--	
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
State Compliance Parameters																															
Barium	mg/L	7440-39-3	2	0.26	0.16	0.13	0.12	0.01	0.27	0.93 o	0.27	0.043	0.26	0.093	0.28	0.04	0.035	0.031	0.027	0.3	0.011	0.024	0.026	0.032	0.11	0.031	0.028	0.028	0.024	0.022	
Beryllium	mg/L	7440-41-7	0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	0.016 o	< 0.004	< 0.002	0.0039	0.0013	0.0041	< 0.001	0.0025	< 0.001	< 0.001	0.005 o	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	
Chromium	mg/L	7440-47-3	0.1	0.097 o	0.056 o	0.05 o	0.058 o	0.043 o	0.011	0.33 o	0.095 o	0.015	0.07 o	0.016	0.038	0.004	0.0043	0.003	0.0037	0.071 o	0.0064	< 0.0013	0.0044	0.004	0.0032	0.004	0.0041	0.0048	0.0077	0.0058	
Cobalt	mg/L	7440-48-4	NE	0.013	< 0.01	< 0.01	< 0.01	< 0.01	0.017	0.054 o	0.014	< 0.01	< 0.01	< 0.005	0.0076	< 0.005	< 0.005	< 0.005	< 0.005	0.012	< 0.0025	0.0064	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	
Copper	mg/L	7440-50-8	1.0*	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.054 o	< 0.02	< 0.02	0.012	< 0.002	0.01	< 0.002	< 0.002	< 0.002	< 0.002	0.016	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	
Lead	mg/L	7439-92-1	0.015	0.024	0.012	0.012	< 0.013	0.044	0.024	0.094 o	0.024	< 0.005	0.023	0.0091	0.024	< 0.005	< 0.005	< 0.005	< 0.005	0.028	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Vanadium	mg/L	7440-62-2	NE	0.087	0.05	0.045	--	0.028	0.11	0.087	0.11	0.32 o	0.091	0.012	0.07	0.016	0.046	< 0.005	< 0.005	< 0.005	0.071	< 0.0025	< 0.0025	< 0.0025	0.0026	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	
Zinc	mg/L	7440-66-6	5.0*	0.091	0.057	0.047	0.048	0.062	0.11	0.39 o	0.096	< 0.02	0.084	0.026	0.054	< 0.01	< 0.01	< 0.01	< 0.01	0.15 o	0.047	0.003	< 0.0025	0.0034	0.041	0.0038	< 0.0025	< 0.0025	0.0031	< 0.0025	

Location Name				GWA-7 (continued)																			
Sample Name				GWA-7													GWC-7	GWA-7				GWA-7-FILTERED	GWA-7
Sample Date				1/19/12	7/12/12	1/21/13	7/19/13	1/16/14	7/12/14	1/15/15	7/15/15	1/16/16	6/22/16	7/19/17	9/20/17	Sept-17 FILT	1/10/18	3/28/18	7/10/18	Jul-18 FILT	10/08/18	10/08/18	01/30/19
Analyte	Units	CAS No.	MCLs																				
Appendix III Parameters																							
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	< 0.05	< 0.05	< 0.05	< 0.02	< 0.021	< 0.021	< 0.021	< 0.021	< 0.030	
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	0.95	1.0	1.0	1.2	1.2	1.4	1.1	0.91	1.3	2.0
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	6.1	6.7	6.6	6.5	6.6 J	6.7	6.7	4.9	6.9	6.5
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	< 0.2	< 0.2	< 0.2	< 0.08	< 0.082	< 0.082	< 0.082	< 0.082	< 0.082	< 0.026
pH	SU	pH	NE	--	--	--	--	--	5.63	--	5.20	5.09	--	--	--	5.26	5.13	5.23	5.23	5.25	--	4.96	
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 1	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.38
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	68	70	64	64	36 J	88	54	72	92	130
State Compliance Parameters																							
Barium	mg/L	7440-39-3	2	0.028	0.026	0.031	0.026	0.028	0.023	0.024	0.023	0.024	0.02	0.10	0.021	0.015	0.018	0.019	0.026	0.016	0.014	0.029	0.036
Beryllium	mg/L	7440-41-7	0.004	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013 J	< 0.0013 J	0.00027 J	0.00021 J	0.00016 J	0.0002 J	< 0.0025	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034	0.00047 J
Chromium	mg/L	7440-47-3	0.1	0.0059	0.0053	0.0059	0.0063	0.0083	0.0087	0.0077	0.0078	0.0084	0.0061 J	0.0062	0.0078	0.0077	0.0090	0.0081	0.0095	0.0065	0.0026	0.011	0.01
Cobalt	mg/L	7440-48-4	NE	< 0.0025	< 0.0013	< 0.0013	< 0.0013	< 0.0013 J	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.01	< 0.0025	0.00041 J	< 0.0025	< 0.00040	< 0.00040	0.00066 J	< 0.00040	< 0.00040	0.00080 J	0.0012 J
Copper	mg/L	7440-50-8	1.0*	< 0.013	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.025	< 0.0025	--	--	< 0.0021	--	< 0.0021	< 0.0021	--	--	0.0016 J	
Lead	mg/L	7439-92-1	0.015	< 0.013	< 0.0025	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	0.0002 J	< 0.0013	0.00054 J	< 0.0013	< 0.00035	< 0.00035	0.0013	< 0.00035	0.00040 J	0.00099 J	0.0021
Vanadium	mg/L	7440-62-2	NE	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005 J	0.002 J	0.0015 J	0.001 J	< 0.01	0.0025	--	--	0.0015 J	--	< 0.0032	< 0.0014	--	--	0.0043
Zinc	mg/L	7440-66-6	5.0*	0.0035	< 0.0025	< 0.0025	< 0.0025	0.0033 V	0.0028	0.0025	0.0021 J	0.0017 J	0.0087 J	< 0.02	--	--	< 0.0065	--	< 0.0065	< 0.0065	--	--	0.014 J

Notes: See Page 1 for general notes, lab qualifiers, and data qualifiers.

				Location Name	GWA-7A	
				Sample Name	GWA-7A	
				Sample Date	10/08/18	01/30/19
Analyte	Units	CAS No.	MCLs			
Appendix III Parameters						
Boron	mg/L	7440-42-8	NE	1.3	< 0.030	
Calcium	mg/L	7440-70-2	NE	17	2.0	
Chloride	mg/L	16887-00-6	250*	6.8	6.5	
Fluoride	mg/L	16984-48-8	4	< 0.082	< 0.026	
pH	SU	pH	NE	5.79	4.96	
Sulfate	mg/L	14808-79-8	250*	75	< 0.38	
TDS	mg/L	TDS	500*	180	130	
State Compliance Parameters						
Barium	mg/L	7440-39-3	2	0.14	0.036	
Beryllium	mg/L	7440-41-7	0.004	< 0.00034	0.00047 J	
Chromium	mg/L	7440-47-3	0.1	< 0.0011	0.01	
Cobalt	mg/L	7440-48-4	NE	0.0055	0.0012 J	
Copper	mg/L	7440-50-8	1.0*	--	0.0016 J	
Lead	mg/L	7439-92-1	0.015	< 0.00035	0.0021	
Vanadium	mg/L	7440-62-2	NE	--	0.0043	
Zinc	mg/L	7440-66-6	5.0*	--	0.014 J	

Notes: See Page 1 for general notes, lab qualifiers, and data qualifiers.
GWA-7A was installed as a proposed replacement well for GWA-7 in August 2018.

Appendix D. Groundwater Analytical Results - Historic
 Semiannual Groundwater Monitoring Report - January 2019
 Georgia Power Company
 Plant McIntosh Inactive CCR Landfill No. 3
 Effingham County, Georgia

Location Name				GWC-1																											
Sample Name				GWC-1																											
Sample Date				10/5/19	11/12/99	12/29/99	2/17/00	9/13/00	11/10/00	1/4/01	12/11/01	4/4/02	12/6/02	6/28/03	12/13/03	5/28/04	12/10/04	6/24/05	12/13/05	7/12/06	12/1/06	6/21/07	12/15/07	6/21/08	12/6/08	12/7/08	12/23/09	6/23/10	1/8/11	7/10/11	
Analyte	Units	CAS No.	MCLs																												
Appendix III Parameters																															
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
pH	SU	pH	NE	5.23	5.02	4.75	4.99	4.81	4.79	4.79	4.86	5.39	4.63	4.19	5.2	4.57	4.16	4.23	4.24	4.36	--	--	--	--	--	--	--	--	--	--	--
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
State Compliance Parameters																															
Barium	mg/L	7440-39-3	2	0.10	0.085	0.1	0.072	0.15	0.15	0.15	0.14	0.14	0.14	0.12	0.12	0.12	0.13	0.1	0.096	0.083	0.084	0.087	0.11	0.093	0.11	0.064	0.052	0.051	0.052	0.036	
Beryllium	mg/L	7440-41-7	0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.0025	< 0.001	< 0.001	0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013
Chromium	mg/L	7440-47-3	0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.002	0.007	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013
Cobalt	mg/L	7440-48-4	NE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	0.0048	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025
Copper	mg/L	7440-50-8	1.0*	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.0047	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025
Lead	mg/L	7439-92-1	0.015	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013
Vanadium	mg/L	7440-62-2	NE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025
Zinc	mg/L	7440-66-6	5.0*	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.011	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.015	0.0042	0.0047	0.0052	0.0046	0.0067	0.0054	0.0038	0.0029	< 0.0025	0.0032	0.004

Location Name				GWC-1 (continued)																		
Sample Name				GWC-1																		
Sample Date				1/20/12	7/12/12	1/21/13	7/20/13	1/17/14	7/12/14	1/16/15	7/15/15	1/16/16	6/22/16	7/19/17	9/21/17	1/9/18	3/28/18	Mar-18 DUP	7/11/18	10/09/18	1/30/19	DUP-Jan.19
Analyte	Units	CAS No.	MCLs																			
Appendix III Parameters																						
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	0.021 J	< 0.05	0.025 J	< 0.021	< 0.021	< 0.021	< 0.021	< 0.030	< 0.030
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	0.19 J	0.3	0.16 J	0.14 J	0.13 J	0.18 J	0.13 J	0.24 J	0.21 J
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	4.7	4.9	4.7	4.4 J	4.5 J	4.3	4.6	4.9	4.8
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	< 0.2	< 0.2	< 0.08	< 0.082	< 0.082	< 0.082	< 0.082	< 0.026	< 0.026
pH	SU	pH	NE	--	--	--	--	3.23	--	4.85	--	--	--	--	5	5.08	5.07	5.10	--	4.81	--	
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	0.58 J	0.74 J
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	52	38	4.0 J	4.0 J	76 J	32 J	22	24	34
State Compliance Parameters																						
Barium	mg/L	7440-39-3	2	0.065	0.074	0.066	0.035	0.036	0.037	0.027	0.031	0.032	0.0323	0.013	0.10	0.016	0.014	0.015	0.016	0.015	0.018 J	0.013 J
Beryllium	mg/L	7440-41-7	0.004	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013 J	< 0.0013	< 0.0013	< 0.0013	< 0.003	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034	0.000090 J	< 0.000057
Chromium	mg/L	7440-47-3	0.1	< 0.005	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	0.0008 J	< 0.0025	< 0.0025	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0025	0.00092 J
Cobalt	mg/L	7440-48-4	NE	< 0.0025	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.01	< 0.0025	< 0.0025	< 0.00040	< 0.00040	< 0.00040	< 0.00040	< 0.00040	0.00023 J	0.00013 J
Copper	mg/L	7440-50-8	1.0*	< 0.013	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.025	< 0.0025	--	< 0.0021	--	--	< 0.0021	--	< 0.0013	< 0.0013
Lead	mg/L	7439-92-1	0.015	< 0.013	< 0.0025	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.005	< 0.0013	0.004	< 0.00035	< 0.00035	< 0.00035	< 0.00035	< 0.00035	< 0.000094	< 0.000094
Vanadium	mg/L	7440-62-2	NE	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.0025	--	< 0.0014	--	--	< 0.0029	--	< 0.00090	< 0.00090
Zinc	mg/L	7440-66-6	5.0*	0.0067	0.0036	0.0031	< 0.0025	0.0031 V	< 0.0025 J	0.002 J	0.0015 J	0.0015 J	< 0.01	< 0.02	--	< 0.0065	--	--	< 0.0065	--	< 0.0024	< 0.0024

Notes: See Page 1 for general notes, lab qualifiers, and data qualifiers.

Appendix D. Groundwater Analytical Results - Historic
 Semiannual Groundwater Monitoring Report - January 2019
 Georgia Power Company
 Plant McIntosh Inactive CCR Landfill No. 3
 Effingham County, Georgia

Location Name				GWC-2																											
Sample Name				GWC-2																											
Sample Date				10/5/99	11/12/99	12/29/99	2/17/00	9/13/00	11/10/00	1/4/01	12/11/01	4/4/02	12/6/02	6/28/03	12/13/03	5/28/04	12/10/04	2/5/05	6/24/05	12/13/05	7/12/06	12/1/06	6/21/07	12/15/07	6/22/08	12/7/08	7/11/09	12/23/09	6/23/10	1/8/11	
Analyte	Units	CAS No.	MCLs																												
Appendix III Parameters																															
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
pH	SU	pH	NE	6.08	5.35	5.19	5.18	5.13	5.2	5.14	4.93	5.00	5.02	4.92	4.82	4.6	4.29	4.43	4.56	4.34	4.38	--	--	--	--	--	--	--	--		
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
State Compliance Parameters																															
Barium	mg/L	7440-39-3	2	0.10	0.057	0.084	0.079	0.06	0.062	0.064	0.057	0.06	0.072	0.066	0.063	0.067	0.075	--	0.071	0.068	0.058	0.063	0.071	0.068	0.057	0.058	0.05	0.05	0.083	0.057	
Beryllium	mg/L	7440-41-7	0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.0023	--	< 0.001	< 0.001	0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	
Chromium	mg/L	7440-47-3	0.1	0.017	< 0.01	0.011	0.013	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.002	0.0027	< 0.002	< 0.002	0.74	< 0.005	0.0023	0.0031	0.0016	0.0022	0.002	0.0029	0.0023	0.0023	0.0015	0.0014	0.0018	0.0033	
Cobalt	mg/L	7440-48-4	NE	< 0.01	< 0.01	< 0.01	< 0.01	0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	0.0062	--	< 0.005	< 0.005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025		
Copper	mg/L	7440-50-8	1.0*	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.002	< 0.002	< 0.002	< 0.002	0.11	--	< 0.002	< 0.002	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025		
Lead	mg/L	7439-92-1	0.015	0.0054	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.005	< 0.005	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013		
Vanadium	mg/L	7440-62-2	NE	0.015	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.005	< 0.005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025		
Zinc	mg/L	7440-66-6	5.0*	0.028	< 0.02	0.022	0.021	< 0.02	< 0.02	< 0.02	< 0.02	0.069	0.012	0.011	< 0.01	< 0.01	0.027	--	< 0.01	0.011	0.0064	0.0077	0.0082	0.0063	0.0074	0.0066	0.0054	0.0046	0.0041	0.019	

Location Name				GWC-2 (continued)																			
Sample Name				GWC-2																			
Sample Date				7/10/11	1/20/12	7/12/12	1/21/13	7/20/13	1/17/14	7/12/14	1/15/15	7/15/15	1/17/16	6/22/16	7/19/17	9/21/17	1/9/18	3/29/18	7/10/18	10/09/18	DUP-Oct.18	01/31/19	DUP-Jan.19
Analyte	Units	CAS No.	MCLs																				
Appendix III Parameters																							
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	0.026 J	0.025 J	0.023 J	0.035 J	0.044 J	0.043 J	0.043 J	0.040 J	0.038 J	
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	4.2	2.9	1.7	2.2	3.9	1.7	1.7	4.8	4.5	
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	5.6	5.5	5.6	5.3 J	5.2	5.4	5.6	5.2	5.2	
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	< 0.2	< 0.2	< 0.08	< 0.082	< 0.082	< 0.082	< 0.082	< 0.026	0.026 J	
pH	SU	pH	NE	--	--	--	--	--	5.68	--	5.22	6.07	--	--	--	4.97	5.15	5.37	5.04	--	5.38	--	
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	< 1	< 1	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	0.57 J	0.48 J
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	42	46	10	52 J	38	52	40	45	45	
State Compliance Parameters																							
Barium	mg/L	7440-39-3	2	0.046	0.055	0.045	0.045	0.079	0.084	0.065	0.067	0.049	0.09	0.0806	0.10	0.063	0.059	0.060	0.073	0.057	0.056	0.067	0.067
Beryllium	mg/L	7440-41-7	0.004	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013 J	< 0.0013 J	0.00019 J	0.00018 J	0.00011 J	0.0002 J	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034	0.00065 J	0.00087 J
Chromium	mg/L	7440-47-3	0.1	0.0028	< 0.005	0.0025	0.0022	0.0075	0.0039	0.0031	0.0026	0.0032	0.0029	0.0036 J	0.0028	0.0035	0.0030	0.0032	0.0033	0.0039	0.0039	0.0061 J	0.0057 J
Cobalt	mg/L	7440-48-4	NE	< 0.0025	< 0.0025	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	0.00096 J	0.0006 J	0.00069 J	0.0011 J	0.00079 J	0.00077 J	0.00092 J	0.00080 J	0.00097 J	0.00094 J	0.00095 J	0.00092 J	0.00088 J
Copper	mg/L	7440-50-8	1.0*	< 0.0025	< 0.013	< 0.005	< 0.005	< 0.005	0.0065	< 0.005	< 0.005	< 0.005	< 0.005	0.0005 J	< 0.0025	--	< 0.0021	--	--	--	< 0.0013	< 0.0013	
Lead	mg/L	7439-92-1	0.015	< 0.013	< 0.013	< 0.0025	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	0.0001 J	< 0.0013	0.0014	< 0.00035	< 0.00035	< 0.00035	< 0.00035	< 0.00035	< 0.0010	< 0.0010
Vanadium	mg/L	7440-62-2	NE	< 0.0025	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.0019 J	0.0015 J	--	< 0.0014	--	< 0.0025	--	< 0.0025	< 0.00090	
Zinc	mg/L	7440-66-6	5.0*	0.005	0.007	0.0045	0.0045	< 0.0025	0.0075 V	0.0051	0.0054	0.0049	0.0051	0.0087 J	< 0.02	--	0.0079 J	--	0.0067 J	--	< 0.020	< 0.020	

Notes: See Page 1 for general notes, lab qualifiers, and data qualifiers.

Appendix D. Groundwater Analytical Results - Historic
 Semiannual Groundwater Monitoring Report - January 2019
 Georgia Power Company
 Plant McIntosh Inactive CCR Landfill No. 3
 Effingham County, Georgia

Location Name				GWC-3																												
Sample Name				GWC-3																												
Sample Date				10/5/99	11/12/99	12/29/99	2/17/00	9/13/00	11/10/00	1/4/01	12/11/01	4/4/02	12/6/02	6/28/03	12/13/03	5/28/04	12/10/04	6/24/05	12/13/05	7/12/06	12/1/06	6/21/07	12/15/07	6/21/08	12/6/08	12/7/08	12/23/09	6/23/10	1/8/11	7/10/11		
Analyte	Units	CAS No.	MCLs																													
Appendix III Parameters																																
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
pH	SU	pH	NE	6.02	5.27	5.18	5.61	5.31	5.58	5.37	5.18	5.07	4.95	4.84	4.81	4.96	4.63	4.68	4.47	6.91	--	--	--	--	--	--	--	--	--	--		
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
State Compliance Parameters																																
Barium	mg/L	7440-39-3	2	0.10	0.085	0.093	0.096	0.058	0.059	0.057	0.052	0.052	0.059	0.046	0.045	0.045	0.048	0.048	0.047	0.045	< 0.0013 o	0.044	0.04	0.042	0.038	0.037	0.036	0.04	0.04	0.033		
Beryllium	mg/L	7440-41-7	0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.0031	< 0.001	< 0.001	0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013		
Chromium	mg/L	7440-47-3	0.1	0.019	0.011	0.022	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.0061	0.0032	< 0.002	0.0029	0.015	0.0031	0.0049	0.0024	0.0023	0.0026	0.0039	0.0032	0.0032	0.0026	0.0037	0.0031	0.0035	0.0041		
Cobalt	mg/L	7440-48-4	NE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025		
Copper	mg/L	7440-50-8	1.0*	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.0026	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025		
Lead	mg/L	7439-92-1	0.015	0.0074	< 0.005	0.0083	0.007	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	0.013	< 0.013	< 0.013	< 0.013	< 0.013		
Vanadium	mg/L	7440-62-2	NE	0.019	0.011	0.021	0.02	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025		
Zinc	mg/L	7440-66-6	5.0*	0.024	< 0.02	0.027	0.024	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.015	0.014	< 0.01	< 0.01	0.016	< 0.01	0.029	0.0043	0.013	0.005	0.0031	0.0061	0.0042	0.0031	0.0037	0.0034	0.0061	0.0034		

Location Name				GWC-3 (continued)																			
Sample Name				GWC-3																			
Sample Date				1/19/12	7/12/12	1/21/13	7/19/13	1/17/14	7/12/14	1/15/15	7/15/15	1/16/16	6/23/16	7/20/17	9/21/17	1/9/18	3/28/18	Mar-DUP	7/10/18	Jul-DUP	10/09/18	DUP-Oct.18	01/30/19
Analyte	Units	CAS No.	MCLs																				
Appendix III Parameters																							
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	< 0.05	< 0.05	< 0.02	< 0.021	< 0.021	< 0.021	< 0.021	< 0.021	< 0.021	< 0.030	
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	2.1	2.3	2.2	2.1	2.1	2.1 J	< 0.13 J	2.0	2.0	2.0	
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	10	11	10	10 J	9.9 J	9.9	9.8	10	10	10	
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	< 0.2	< 0.2	< 0.08	< 0.082	< 0.082	< 0.082	< 0.082	< 0.082	< 0.082	< 0.026	
pH	SU	pH	NE	--	--	--	--	--	4.83	--	5.12	5.58	--	--	5.13	5.16	5.17	5.23	--	--	4.91	--	
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	< 1	< 1	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.70	< 0.38	
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	64	96	18	54 J	100 J	56 J	78 J	30 J	52 J	33	
State Compliance Parameters																							
Barium	mg/L	7440-39-3	2	0.041	0.033	0.033	0.032	0.034	0.033	0.037	0.034	0.036	0.0388	0.044	0.10	0.038	0.039	0.041	0.040 J	< 0.00049 J	0.036	0.036	0.037
Beryllium	mg/L	7440-41-7	0.004	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013 J	0.00028 J	0.00022 J	0.00025 J	0.0002 J	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034	< 0.00034	0.00033 J
Chromium	mg/L	7440-47-3	0.1	< 0.005	0.0035	0.0037	0.0036	0.0037	0.0034	0.0036	0.0033	0.0036	0.0025 J	0.0036	0.0035	0.0035	0.0036	0.0035	0.0035	< 0.0011	0.0037	0.0036	0.0047 J
Cobalt	mg/L	7440-48-4	NE	< 0.0025	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	0.00052 J	< 0.0013	0.0005 J	0.0005 J	0.00047 J	0.00053 J	0.00050 J	0.00051 J	0.00053 J	< 0.00040	0.00051 J	0.00049 J	0.00051 J
Copper	mg/L	7440-50-8	1.0*	< 0.013	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.025	< 0.0025	--	< 0.0021	--	< 0.0021	< 0.0021	--	--	< 0.0013	
Lead	mg/L	7439-92-1	0.015	< 0.013	< 0.0025	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	0.00009 J	< 0.0013	0.00052 J	< 0.00035	< 0.00035	< 0.00035	< 0.00035	< 0.00035	< 0.00035	< 0.000094	
Vanadium	mg/L	7440-62-2	NE	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.0025	--	< 0.0014	--	< 0.0014	< 0.0014	--	--	< 0.0025	
Zinc	mg/L	7440-66-6	5.0*	0.0057	0.0031	0.0033	0.0027	0.0037 V	0.0032	0.0032	0.003	0.0032	0.0029 J	< 0.02	--	< 0.0065	--	--	< 0.0065	< 0.0065	--	--	0.0033 J

Notes: See Page 1 for general notes, lab qualifiers, and data qualifiers.

Location Name				GWC-4A																											
Sample Name				GWC-4A																											
Sample Date				10/5/99	11/12/99	12/29/99	2/17/00	9/13/00	11/10/00	1/4/01	12/11/01	4/4/02	12/6/02	6/28/03	12/13/03	5/28/04	12/10/04	6/24/05	12/13/05	7/12/06	12/1/06	6/21/07	12/15/07	6/21/08	12/6/08	12/7/08	12/23/09	6/23/10	1/8/11	7/10/11	
Analyte	Units	CAS No.	MCLs																												
Appendix III Parameters																															
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
pH	SU	pH	NE	5.33	4.6	4.8	4.98	4.75	4.65	4.83	4.73	5.05	4.65	4	4.97	4.51	4.09	4.27	4.54	4.57	--	--	--	--	--	--	--	--	--	--	
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
State Compliance Parameters																															
Barium	mg/L	7440-39-3	2	0.10	0.063	0.066	0.023	0.056	0.059	0.079	0.049	0.048	0.1	0.036	0.031	0.038	0.041	0.028	0.025	0.033	0.051	0.052	0.062	0.065	0.056	0.059	0.067	0.084	0.053	0.043	
Beryllium	mg/L	7440-41-7	0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	< 0.001	0.0023	< 0.001	< 0.001	0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	
Chromium	mg/L	7440-47-3	0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.002	0.061 o	< 0.002	< 0.002	0.0059	< 0.002	< 0.002	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	
Cobalt	mg/L	7440-48-4	NE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	0.0025 o	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	
Copper	mg/L	7440-50-8	1.0*	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	
Lead	mg/L	7439-92-1	0.015	< 0.005	< 0.005	< 0.005	< 0.005	0.0067	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	
Vanadium	mg/L	7440-62-2	NE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	
Zinc	mg/L	7440-66-6	5.0*	< 0.02	< 0.02	< 0.02	< 0.02	0.036	< 0.02	< 0.02	< 0.02	< 0.02	0.012	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.0025	0.098 o	0.0043	0.0057	0.0064	0.0052	0.0049	0.005	0.0044	0.0036	0.0046	

Location Name				GWC-4A (continued)																
Sample Name				GWC-4A																
Sample Date				1/20/12	7/12/12	1/21/13	7/20/13	1/17/14	7/11/14	1/16/15	7/15/15	1/17/16	6/22/16	7/20/17	9/21/17	1/9/18	3/28/18	7/10/18	10/09/18	01/30/19
Analyte	Units	CAS No.	MCLs																	
Appendix III Parameters																				
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	< 0.05	< 0.05	< 0.02	< 0.021	< 0.021	< 0.021	< 0.030
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	0.29	0.3	0.38	0.44	2.0	0.34	0.34
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	14	14	15	14 J	13	13	12
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	< 0.2	< 0.2	< 0.08	< 0.082	< 0.082	< 0.082	< 0.026
pH	SU	pH	NE	--	--	--	--	4.64	--	4.67	--	--	--	4.79	4.44	4.88	4.85	4.52	4.52	4.52
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	0.83 J	1.1	0.79 J	0.79 J	0.76 J	0.70	0.90 J	0.90 J
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	16	24	8.0	26 J	26	16	37	37
State Compliance Parameters																				
Barium	mg/L	7440-39-3	2	0.054	0.053	0.053	0.052	0.063	0.068	0.059	0.045	0.052	0.0528	0.028	0.10	0.033	0.037	0.065	0.029	0.027
Beryllium	mg/L	7440-41-7	0.004	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013 J	0.00012 J	< 0.0013	< 0.0013	< 0.003	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034	0.00070 J
Chromium	mg/L	7440-47-3	0.1	< 0.005	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.01	< 0.0025	< 0.0025	< 0.0011	0.0019 J	0.0029	< 0.0011	< 0.00063
Cobalt	mg/L	7440-48-4	NE	< 0.0025	< 0.0013	< 0.0013	< 0.0013	< 0.0013 J	< 0.0013 J	0.00071 J	0.00064 J	0.00066 J	0.0009 J	< 0.0025	< 0.0025	0.00048 J	0.00048 J	0.00042 J	0.00042 J	0.00038 J
Copper	mg/L	7440-50-8	1.0*	< 0.013	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005 J	< 0.005	< 0.005	< 0.005	< 0.025	< 0.0025	--	< 0.0021	--	< 0.0021	--	< 0.0013
Lead	mg/L	7439-92-1	0.015	< 0.013	< 0.0025	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.005	< 0.0013	< 0.0013	< 0.00035	< 0.00035	< 0.00035	< 0.00035	< 0.00094
Vanadium	mg/L	7440-62-2	NE	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	< 0.0025	--	< 0.0014	--	< 0.0025	--	< 0.00090
Zinc	mg/L	7440-66-6	5.0*	0.0045	0.0041	0.0038	0.0047	0.0051 V	0.0066	0.0046	0.0036	0.004	0.0053 J	< 0.02	--	< 0.0065	--	< 0.0065	--	0.0042 J

Notes: See Page 1 for general notes, lab qualifiers, and data qualifiers.

Location Name				GWC-4B									
Sample Name				GWC-4B									
Analyte	Units	CAS No.	MCLs	10/5/99	11/12/99	2/17/00	6/24/05	12/13/05	6/22/16	7/20/17	9/21/17	1/9/18	Jan-18 DUP
Appendix III Parameters													
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	< 0.05	0.024 J	< 0.02	< 0.02
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	0.17 J	0.49	0.17 J	0.26
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	32	38	19	18
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	< 0.2	< 0.2	< 0.08	< 0.08
pH	SU	pH	NE	6.25	4.79	4.78	4.48	4.05	--	--	--	4.65	
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	1.5	4.3	0.81 J	0.74 J
TDS	mg/L	TDS	500*	--	--	--	--	--	--	60	160	< 3.40	< 3.40 J
State Compliance Parameters													
Barium	mg/L	7440-39-3	2	0.021	0.021	0.032	0.031	0.035	0.0392	0.04	0.058	0.023	0.023
Beryllium	mg/L	7440-41-7	0.004	0.10	< 0.004	< 0.004	< 0.001	< 0.001	< 0.003	< 0.0025	< 0.0025	< 0.00034	< 0.00034
Chromium	mg/L	7440-47-3	0.1	< 0.01	< 0.01	< 0.01	< 0.002	< 0.002	< 0.01	< 0.0025	< 0.0025	< 0.0011	< 0.0011
Cobalt	mg/L	7440-48-4	NE	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.01	< 0.0025	0.00046 J	< 0.00040	< 0.00040
Copper	mg/L	7440-50-8	1.0**	< 0.02	< 0.02	< 0.02	< 0.002	< 0.002	< 0.025	< 0.0025	--	< 0.0021	< 0.0021
Lead	mg/L	7439-92-1	1.0*	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.0002 J	< 0.0013	0.0007 J	< 0.00035	< 0.00035
Vanadium	mg/L	7440-62-2	NE	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.01	0.0019 J	--	< 0.0014	< 0.0014
Zinc	mg/L	7440-66-6	5.0**	< 0.02	< 0.02	< 0.02	< 0.01	< 0.01	0.0013 J	< 0.02	--	< 0.0065	< 0.0065

Notes: See Page 1 for general notes, lab qualifiers, and data qualifiers.
GWC-4B was dry in March, July, and October 2018 and January 2019 and, therefore, was not sampled.

Appendix D. Groundwater Analytical Results - Historic
 Semiannual Groundwater Monitoring Report - January 2019
 Georgia Power Company
 Plant McIntosh Inactive CCR Landfill No. 3
 Effingham County, Georgia

Location Name				GWC-5																											
Sample Name				GWC-5																											
Sample Date				10/5/99	11/12/99	12/29/99	2/17/00	9/13/00	11/10/00	1/4/01	12/11/01	4/4/02	12/6/02	6/28/03	12/13/03	5/28/04	12/10/04	6/24/05	12/13/05	7/12/06	12/1/06	6/21/07	12/15/07	6/21/08	12/7/08	12/7/08	12/23/09	6/23/10	1/8/11		
Analyte	Units	CAS No.	MCLs																												
Appendix III Parameters																															
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--		
pH	SU	pH	NE	6.13	5.81	5.43	5.49	5.05	5.48	4.99	5.52	5.50	4.58	4.32	4.73	4.50	4.28	4.56	4.49	4.80	--	--	--	--	--	--	--	--			
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--			
State Compliance Parameters																															
Barium	mg/L	7440-39-3	2	0.47	0.27	0.19	0.28	0.29	0.24	0.24	0.21	0.21	0.28	0.27	0.38	0.28	0.25	0.23	0.28	0.24	0.019 o	0.19	0.18	0.19	0.25	0.23	0.17	0.22	0.17		
Beryllium	mg/L	7440-41-7	0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.002	0.0012	< 0.001	0.0014	< 0.001	0.0029	< 0.001	< 0.001	0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013		
Chromium	mg/L	7440-47-3	0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.008	0.021	0.011	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0013	< 0.0013	< 0.0013	0.002	0.0017	0.0025	< 0.0013	< 0.0013	< 0.0013			
Cobalt	mg/L	7440-48-4	NE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.0074	< 0.005	0.0086	0.0065	0.0052	< 0.005	< 0.005	0.0055	0.0056	0.0055	0.0051	0.0054	0.005	0.0049	0.0035	0.0039	0.0046		
Copper	mg/L	7440-50-8	1.0**	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	0.0026	< 0.002	0.0026	< 0.002	< 0.002	< 0.002	< 0.002	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025			
Lead	mg/L	7439-92-1	1.0*	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.007	< 0.005	0.018	< 0.005	< 0.005	< 0.005	< 0.005	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013			
Vanadium	mg/L	7440-62-2	NE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.0082	< 0.005	0.017	< 0.005	< 0.005	< 0.005	< 0.005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025			
Zinc	mg/L	7440-66-6	5.0**	0.037	0.022	0.036	< 0.02	0.027	< 0.02	< 0.02	< 0.02	0.028	0.028	0.012	0.026	0.018	0.029	0.016	0.017	0.013	0.03	0.017	0.013	0.016	0.05	0.013	0.01	0.011	0.012		

Location Name				GWC-5 (continued)																		
Sample Name				GWC-5																		
Sample Date				7/10/11	1/20/12	7/12/12	1/21/13	7/20/13	1/17/14	7/11/14	1/16/15	7/15/15	1/16/16	6/23/16	7/20/17	9/21/17	1/10/18	Jan-18 DUP	3/28/18	7/11/18	10/09/18	01/31/19
Analyte	Units	CAS No.	MCLs																			
Appendix III Parameters																						
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	--	< 0.05	< 0.05	< 0.02	< 0.02	< 0.021	< 0.021	< 0.021	< 0.030
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	--	8.1	8	11	11	9.5	9.6	8.0	7.5
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	--	6.9	6.4	< 0.89	< 0.89	< 0.89 J	7.4	6.8	8.0
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	--	0.62	0.71	0.81	0.81	0.45	0.37	0.098 J	0.063 J
pH	SU	pH	NE	--	--	--	--	--	--	4.83	--	4.66	5.05	--	--	7.39	--	7.31	7.09	6.68	5.69	
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	25	19	25	25	26	26	10	4.8	
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	210 H	280	94 J	130 J	60 J	290 J	44	180	
State Compliance Parameters																						
Barium	mg/L	7440-39-3	2	0.13	0.15	0.13	0.13	0.18	0.24	0.26	0.19	0.26	0.21	0.49	0.47	0.48	0.68	0.67	0.60	0.64	0.56	0.45
Beryllium	mg/L	7440-41-7	0.004	< 0.0013	< 0.0013	0.10	< 0.0013	< 0.0013	< 0.0013 J	< 0.0013 J	0.00067 J	0.00065 J	0.00065 J	0.0004 J	0.00049 J	0.00068 J	< 0.00034	< 0.00034	< 0.00034	0.00043 J	0.00054 J	0.0012 J
Chromium	mg/L	7440-47-3	0.1	0.0013	< 0.005	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.01	< 0.0025	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0025	
Cobalt	mg/L	7440-48-4	NE	0.0036	0.0042	0.0037	0.0038	0.003	0.0036	0.0056	0.0042	0.0052	0.0056	0.0073 J	0.0091	0.0093	0.0097	0.0097	0.010	0.011	0.012	0.013
Copper	mg/L	7440-50-8	1.0**	< 0.0025	< 0.013	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.0007 J	< 0.0025	--	< 0.0021	< 0.0021	--	< 0.0021	--	< 0.0013	
Lead	mg/L	7439-92-1	1.0*	< 0.013	< 0.013	< 0.0025	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	0.0001 J	< 0.0013	< 0.0013	< 0.00035	< 0.00035	< 0.00035	< 0.00035	< 0.00035	< 0.0010
Vanadium	mg/L	7440-62-2	NE	< 0.0025	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.0021 J	0.014	--	0.014	0.014	--	0.011 J	--	< 0.0025	
Zinc	mg/L	7440-66-6	5.0**	0.0096	0.014	0.01	0.011	0.0089	0.0098 V	0.014	0.011	0.012	0.014	0.0116	0.016 J	--	0.012 J	0.011 J	--	0.015 J	--	0.033 J

Notes: See Page 1 for general notes, lab qualifiers, and data qualifiers.

Appendix D. Groundwater Analytical Results - Historic
 Semiannual Groundwater Monitoring Report - January 2019
 Georgia Power Company
 Plant McIntosh Inactive CCR Landfill No. 3
 Effingham County, Georgia

Location Name				GWC-6																											
Sample Name				GWC-6																											
Sample Date				10/5/1999	11/12/99	12/29/99	2/17/00	9/13/00	11/10/00	1/4/01	12/11/01	4/4/02	12/6/02	6/28/03	12/13/03	5/28/04	12/10/04	2/5/05	6/24/05	12/13/05	7/12/06	12/1/06	6/21/07	12/15/07	6/22/08	12/7/08	7/11/09	12/23/09	6/24/10	1/9/11	
Analyte	Units	CAS No.	MCLs																												
Appendix III Parameters																															
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
pH	SU	pH	NE	5.84	5.34	5.01	5.04	5.29	5.99	5.31	5.18	5.31	4.90	4.82	4.80	5.18	4.43	4.60	4.93	4.36	5.50	--	--	--	--	--	--	--	--	--	--
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
State Compliance Parameters																															
Barium	mg/L	7440-39-3	2	0.10	0.031	0.039	0.031	0.043	0.044	0.071	0.042	0.043	0.046	0.038	0.035	0.037	0.043	--	0.044	0.045	0.037	0.044	0.037	0.042	0.04	0.12	0.038	0.04	0.035	--	
Beryllium	mg/L	7440-41-7	0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.004	< 0.002	< 0.001	< 0.001	< 0.001	0.0058 o	< 0.001	< 0.001	< 0.001	0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	--	
Chromium	mg/L	7440-47-3	0.1	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	0.016 o	< 0.01	< 0.01	< 0.002	0.0021	< 0.002	< 0.002	0.0046	--	< 0.002	< 0.002	< 0.0013	< 0.0013	< 0.0013	0.0016	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	--	
Cobalt	mg/L	7440-48-4	NE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.005	< 0.005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	
Copper	mg/L	7440-50-8	1.0*	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.02	< 0.002	< 0.002	< 0.002	< 0.002	0.0044	--	< 0.002	< 0.002	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	
Lead	mg/L	7439-92-1	0.015	< 0.005	< 0.005	< 0.005	< 0.005	0.079 o	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.0073	--	< 0.005	< 0.005	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	< 0.013	--	
Vanadium	mg/L	7440-62-2	NE	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.005	< 0.005	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	< 0.0025	--	
Zinc	mg/L	7440-66-6	5.0*	0.063 o	0.025	0.024	< 0.02	0.061 o	0.061 o	0.05 o	< 0.02	< 0.02	0.013	0.014	< 0.01	< 0.01	< 0.01	--	< 0.01	< 0.01	0.0057	0.0068	0.016	0.012	0.014	0.044 o	0.0062	0.007	0.0049	--	

Location Name				GWC-6 (continued)																		
Sample Name				GWC-6																		
Sample Date				7/11/11	1/20/12	7/13/12	1/21/13	7/20/13	1/17/14	7/11/14	7/12/14	1/16/15	7/15/15	1/16/16	6/23/16	7/20/17	9/22/17	1/10/18	3/29/18	7/11/18	10/09/18	01/31/19
Analyte	Units	CAS No.	MCLs																			
Appendix III Parameters																						
Boron	mg/L	7440-42-8	NE	--	--	--	--	--	--	--	--	--	--	--	--	< 0.05	< 0.05	< 0.02	< 0.021	< 0.021	< 0.021	< 0.030
Calcium	mg/L	7440-70-2	NE	--	--	--	--	--	--	--	--	--	--	--	--	1.5	1.3	1.0	1.5	1.6	1.5	1.9
Chloride	mg/L	16887-00-6	250*	--	--	--	--	--	--	--	--	--	--	--	7.2	6.8	6.9	7.4 J	7.2	7.6	8.5	
Fluoride	mg/L	16984-48-8	4	--	--	--	--	--	--	--	--	--	--	--	< 0.2	< 0.2	< 0.08	< 0.082	< 0.082	< 0.082	< 0.026	
pH	SU	pH	NE	--	--	--	--	--	--	5.54	--	--	5.22	4.90	--	--	--	5.25	5.14	5.13	4.93	4.52
Sulfate	mg/L	14808-79-8	250*	--	--	--	--	--	--	--	--	--	--	--	0.84 J	1.1	0.95 J	0.78 J	0.78 J	0.79 J	0.86 J	
TDS	mg/L	TDS	500*	--	--	--	--	--	--	--	--	--	--	--	64	66	54	78 J	78 J	70	84	
State Compliance Parameters																						
Barium	mg/L	7440-39-3	2	0.03	0.039	0.04	0.045	0.043	0.045	--	0.036	0.044	0.038	0.047	0.10	0.045	0.04	0.027	0.044	0.051	0.041	0.053
Beryllium	mg/L	7440-41-7	0.004	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.0013 J	--	< 0.0013 J	0.00021 J	0.00011 J	0.00019 J	0.0002 J	< 0.0025	< 0.0025	< 0.00034	< 0.00034	< 0.00034	< 0.00034	0.00012 J
Chromium	mg/L	7440-47-3	0.1	< 0.0013	< 0.005	< 0.0013	0.0025	< 0.0013	< 0.0013	--	< 0.0013	< 0.0013	< 0.0013	< 0.0013	< 0.01	< 0.0025	0.0015 J	< 0.0011	< 0.0011	0.0011 J	< 0.0011	< 0.0025
Cobalt	mg/L	7440-48-4	NE	< 0.0025	< 0.0025	< 0.0013	< 0.0013	< 0.0013	< 0.0013 J	--	< 0.0013	< 0.0013	< 0.0013	0.00055 J	0.0005 J	0.00062 J	0.00048 J	< 0.00040	0.00052 J	0.00064 J	0.00052 J	0.00076 J
Copper	mg/L	7440-50-8	1.0*	< 0.0025	< 0.013	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.005	< 0.005	< 0.005	< 0.005	< 0.025	< 0.0025	--	< 0.0021	--	< 0.0021	--	< 0.0013
Lead	mg/L	7439-92-1	0.015	< 0.013	< 0.013	< 0.0025	< 0.013	< 0.013	< 0.013	--	< 0.013	< 0.013	< 0.013	< 0.013	< 0.005	< 0.0013	0.00042 J	< 0.00035	< 0.00035	0.00037 J	< 0.00035	< 0.0010
Vanadium	mg/L	7440-62-2	NE	< 0.0025	< 0.01	< 0.005	< 0.005	< 0.005	< 0.005	--	< 0.005	< 0.005	< 0.005	< 0.005	< 0.01	0.0021 J	--	< 0.0014	--	< 0.0027	--	< 0.0025
Zinc	mg/L	7440-66-6	5.0*	0.0052	0.0081	0.004	0.0093	0.0054	0.0054 V	--	0.0057	0.0084	0.0046	0.0051	0.0041 J	< 0.02	--	< 0.0065	--	< 0.0065	--	< 0.020

Notes: See Page 1 for general notes, lab qualifiers, and data qualifiers.

Appendix E

Sanitas™ Outputs for Semiannual Groundwater Monitoring Report – January 2019

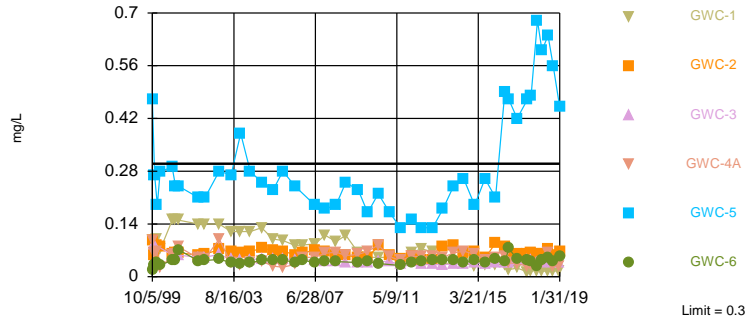
Interwell Prediction Limit

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 6/11/2019, 8:59 AM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Obsrv.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	Transform	Alpha	Method
Barium (mg/L)	GWC-1	0.3	n/a	1/30/2019	0.0155	No	305	n/a	n/a	0	n/a	0.0000492	NP (normality) 1 of 2
Barium (mg/L)	GWC-2	0.3	n/a	1/31/2019	0.067	No	305	n/a	n/a	0	n/a	0.0000492	NP (normality) 1 of 2
Barium (mg/L)	GWC-3	0.3	n/a	1/30/2019	0.037	No	305	n/a	n/a	0	n/a	0.0000492	NP (normality) 1 of 2
Barium (mg/L)	GWC-4A	0.3	n/a	1/30/2019	0.027	No	305	n/a	n/a	0	n/a	0.0000492	NP (normality) 1 of 2
Barium (mg/L)	GWC-5	0.3	n/a	1/31/2019	0.45	Yes	305	n/a	n/a	0	n/a	0.0000492	NP (normality) 1 of 2
Barium (mg/L)	GWC-6	0.3	n/a	1/31/2019	0.053	No	305	n/a	n/a	0	n/a	0.0000492	NP (normality) 1 of 2
Beryllium (mg/L)	GWC-1	0.0041	n/a	1/30/2019	0.001295	No	308	n/a	n/a	81.82	n/a	0.0000492	NP (NDs) 1 of 2
Beryllium (mg/L)	GWC-2	0.0041	n/a	1/31/2019	0.000076	No	308	n/a	n/a	81.82	n/a	0.0000492	NP (NDs) 1 of 2
Beryllium (mg/L)	GWC-3	0.0041	n/a	1/30/2019	0.00033	No	308	n/a	n/a	81.82	n/a	0.0000492	NP (NDs) 1 of 2
Beryllium (mg/L)	GWC-4A	0.0041	n/a	1/30/2019	0.00007	No	308	n/a	n/a	81.82	n/a	0.0000492	NP (NDs) 1 of 2
Beryllium (mg/L)	GWC-5	0.0041	n/a	1/31/2019	0.0012	No	308	n/a	n/a	81.82	n/a	0.0000492	NP (NDs) 1 of 2
Beryllium (mg/L)	GWC-6	0.0041	n/a	1/31/2019	0.00012	No	308	n/a	n/a	81.82	n/a	0.0000492	NP (NDs) 1 of 2
Chromium (mg/L)	GWC-1	0.097	n/a	1/30/2019	0.00171	No	304	n/a	n/a	44.08	n/a	0.0000492	NP (normality) 1 of 2
Chromium (mg/L)	GWC-2	0.097	n/a	1/31/2019	0.0059	No	304	n/a	n/a	44.08	n/a	0.0000492	NP (normality) 1 of 2
Chromium (mg/L)	GWC-3	0.097	n/a	1/30/2019	0.0047	No	304	n/a	n/a	44.08	n/a	0.0000492	NP (normality) 1 of 2
Chromium (mg/L)	GWC-4A	0.097	n/a	1/30/2019	0.0025ND	No	304	n/a	n/a	44.08	n/a	0.0000492	NP (normality) 1 of 2
Chromium (mg/L)	GWC-5	0.097	n/a	1/31/2019	0.0025ND	No	304	n/a	n/a	44.08	n/a	0.0000492	NP (normality) 1 of 2
Chromium (mg/L)	GWC-6	0.097	n/a	1/31/2019	0.0025ND	No	304	n/a	n/a	44.08	n/a	0.0000492	NP (normality) 1 of 2
Cobalt (mg/L)	GWC-1	0.017	n/a	1/30/2019	0.00018	No	304	n/a	n/a	69.08	n/a	0.0000492	NP (NDs) 1 of 2
Cobalt (mg/L)	GWC-2	0.017	n/a	1/31/2019	0.0009	No	304	n/a	n/a	69.08	n/a	0.0000492	NP (NDs) 1 of 2
Cobalt (mg/L)	GWC-3	0.017	n/a	1/30/2019	0.00051	No	304	n/a	n/a	69.08	n/a	0.0000492	NP (NDs) 1 of 2
Cobalt (mg/L)	GWC-4A	0.017	n/a	1/30/2019	0.00038	No	304	n/a	n/a	69.08	n/a	0.0000492	NP (NDs) 1 of 2
Cobalt (mg/L)	GWC-5	0.017	n/a	1/31/2019	0.013	No	304	n/a	n/a	69.08	n/a	0.0000492	NP (NDs) 1 of 2
Cobalt (mg/L)	GWC-6	0.017	n/a	1/31/2019	0.00076	No	304	n/a	n/a	69.08	n/a	0.0000492	NP (NDs) 1 of 2
Copper (mg/L)	GWC-1	0.019	n/a	1/30/2019	0.0025ND	No	263	n/a	n/a	89.35	n/a	0.0000492	NP (NDs) 1 of 2
Copper (mg/L)	GWC-2	0.019	n/a	1/31/2019	0.0025ND	No	263	n/a	n/a	89.35	n/a	0.0000492	NP (NDs) 1 of 2
Copper (mg/L)	GWC-3	0.019	n/a	1/30/2019	0.0025ND	No	263	n/a	n/a	89.35	n/a	0.0000492	NP (NDs) 1 of 2
Copper (mg/L)	GWC-4A	0.019	n/a	1/30/2019	0.0025ND	No	263	n/a	n/a	89.35	n/a	0.0000492	NP (NDs) 1 of 2
Copper (mg/L)	GWC-5	0.019	n/a	1/31/2019	0.0025ND	No	263	n/a	n/a	89.35	n/a	0.0000492	NP (NDs) 1 of 2
Copper (mg/L)	GWC-6	0.019	n/a	1/31/2019	0.0025ND	No	263	n/a	n/a	89.35	n/a	0.0000492	NP (NDs) 1 of 2
Lead (mg/L)	GWC-1	0.044	n/a	1/30/2019	0.001ND	No	307	n/a	n/a	83.06	n/a	0.0000492	NP (NDs) 1 of 2
Lead (mg/L)	GWC-2	0.044	n/a	1/31/2019	0.001ND	No	307	n/a	n/a	83.06	n/a	0.0000492	NP (NDs) 1 of 2
Lead (mg/L)	GWC-3	0.044	n/a	1/30/2019	0.001ND	No	307	n/a	n/a	83.06	n/a	0.0000492	NP (NDs) 1 of 2
Lead (mg/L)	GWC-4A	0.044	n/a	1/30/2019	0.001ND	No	307	n/a	n/a	83.06	n/a	0.0000492	NP (NDs) 1 of 2
Lead (mg/L)	GWC-5	0.044	n/a	1/31/2019	0.001ND	No	307	n/a	n/a	83.06	n/a	0.0000492	NP (NDs) 1 of 2
Lead (mg/L)	GWC-6	0.044	n/a	1/31/2019	0.001ND	No	307	n/a	n/a	83.06	n/a	0.0000492	NP (NDs) 1 of 2
Vanadium (mg/L)	GWC-1	0.11	n/a	1/30/2019	0.0025ND	No	260	n/a	n/a	69.62	n/a	0.0000492	NP (NDs) 1 of 2
Vanadium (mg/L)	GWC-2	0.11	n/a	1/31/2019	0.0025ND	No	260	n/a	n/a	69.62	n/a	0.0000492	NP (NDs) 1 of 2
Vanadium (mg/L)	GWC-3	0.11	n/a	1/30/2019	0.0025ND	No	260	n/a	n/a	69.62	n/a	0.0000492	NP (NDs) 1 of 2
Vanadium (mg/L)	GWC-4A	0.11	n/a	1/30/2019	0.0025ND	No	260	n/a	n/a	69.62	n/a	0.0000492	NP (NDs) 1 of 2
Vanadium (mg/L)	GWC-5	0.11	n/a	1/31/2019	0.0025ND	No	260	n/a	n/a	69.62	n/a	0.0000492	NP (NDs) 1 of 2
Vanadium (mg/L)	GWC-6	0.11	n/a	1/31/2019	0.0025ND	No	260	n/a	n/a	69.62	n/a	0.0000492	NP (NDs) 1 of 2
Zinc (mg/L)	GWC-1	0.15	n/a	1/30/2019	0.02ND	No	260	n/a	n/a	29.23	n/a	0.0000492	NP (normality) 1 of 2
Zinc (mg/L)	GWC-2	0.15	n/a	1/31/2019	0.02ND	No	260	n/a	n/a	29.23	n/a	0.0000492	NP (normality) 1 of 2
Zinc (mg/L)	GWC-3	0.15	n/a	1/30/2019	0.0033	No	260	n/a	n/a	29.23	n/a	0.0000492	NP (normality) 1 of 2
Zinc (mg/L)	GWC-4A	0.15	n/a	1/30/2019	0.0042	No	260	n/a	n/a	29.23	n/a	0.0000492	NP (normality) 1 of 2
Zinc (mg/L)	GWC-5	0.15	n/a	1/31/2019	0.033	No	260	n/a	n/a	29.23	n/a	0.0000492	NP (normality) 1 of 2
Zinc (mg/L)	GWC-6	0.15	n/a	1/31/2019	0.02ND	No	260	n/a	n/a	29.23	n/a	0.0000492	NP (normality) 1 of 2

Exceeds Limit: GWC-5

Prediction Limit
Interwell Non-parametric

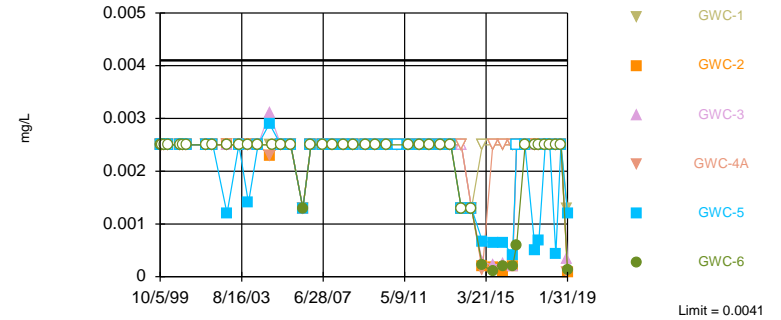


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 305 background values. Annual per-constituent alpha = 0.0005902. Individual comparison alpha = 0.0000492 (1 of 2). Comparing 6 points to limit.

Constituent: Barium Analysis Run 6/11/2019 8:58 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Interwell Non-parametric

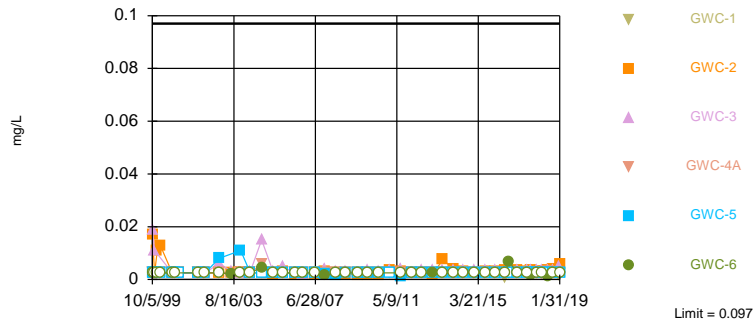


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 308 background values. 81.82% NDs. Annual per-constituent alpha = 0.0005902. Individual comparison alpha = 0.0000492 (1 of 2). Comparing 6 points to limit.

Constituent: Beryllium Analysis Run 6/11/2019 8:58 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Interwell Non-parametric

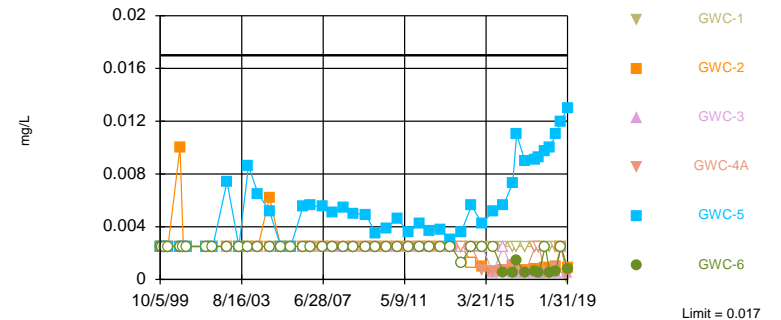


Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 304 background values. 44.08% NDs. Annual per-constituent alpha = 0.0005902. Individual comparison alpha = 0.0000492 (1 of 2). Comparing 6 points to limit.

Constituent: Chromium Analysis Run 6/11/2019 8:58 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Interwell Non-parametric

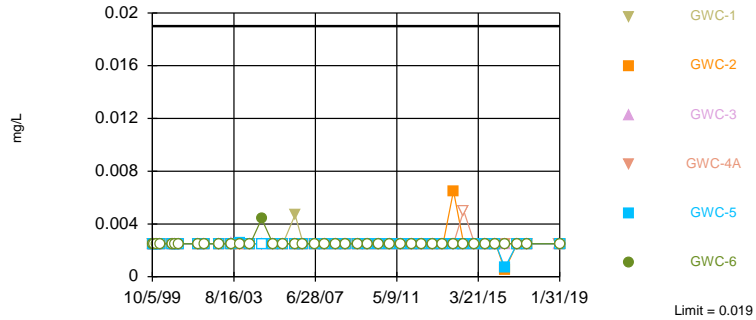


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 304 background values. 69.08% NDs. Annual per-constituent alpha = 0.0005902. Individual comparison alpha = 0.0000492 (1 of 2). Comparing 6 points to limit.

Constituent: Cobalt Analysis Run 6/11/2019 8:58 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Interwell Non-parametric

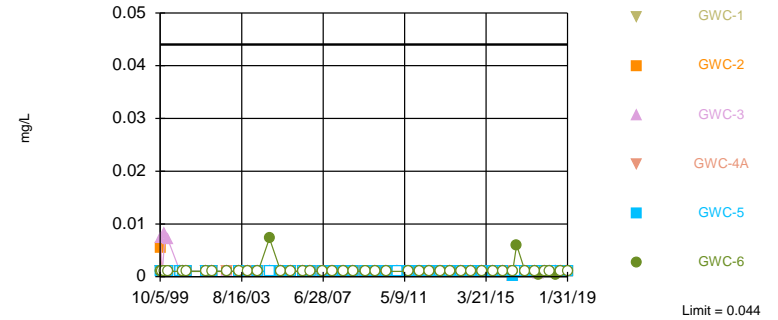


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 263 background values. 89.35% NDs. Annual per-constituent alpha = 0.0005902. Individual comparison alpha = 0.0000492 (1 of 2). Comparing 6 points to limit.

Constituent: Copper Analysis Run 6/11/2019 8:58 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Interwell Non-parametric

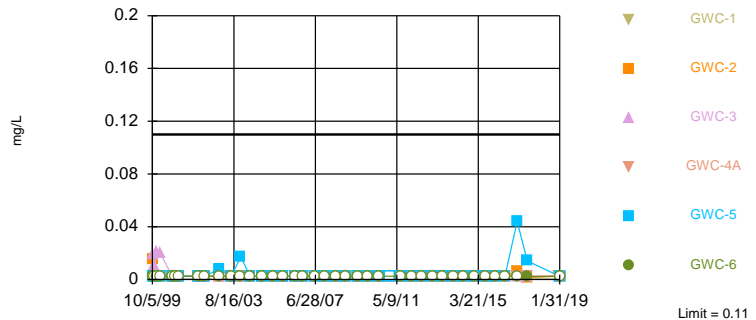


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 307 background values. 83.06% NDs. Annual per-constituent alpha = 0.0005902. Individual comparison alpha = 0.0000492 (1 of 2). Comparing 6 points to limit.

Constituent: Lead Analysis Run 6/11/2019 8:58 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

Prediction Limit
Interwell Non-parametric

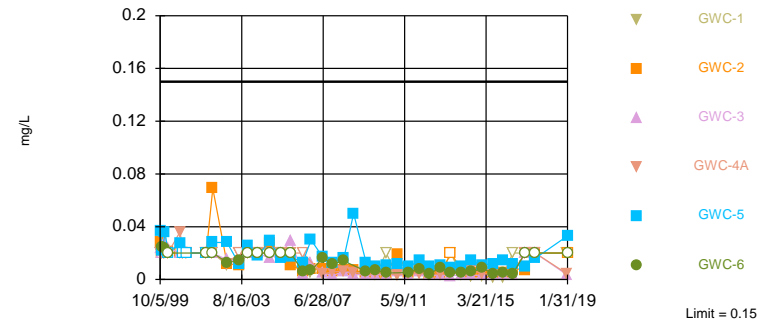


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 260 background values. 69.62% NDs. Annual per-constituent alpha = 0.0005902. Individual comparison alpha = 0.0000492 (1 of 2). Comparing 6 points to limit.

Constituent: Vanadium Analysis Run 6/11/2019 8:59 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Within Limit

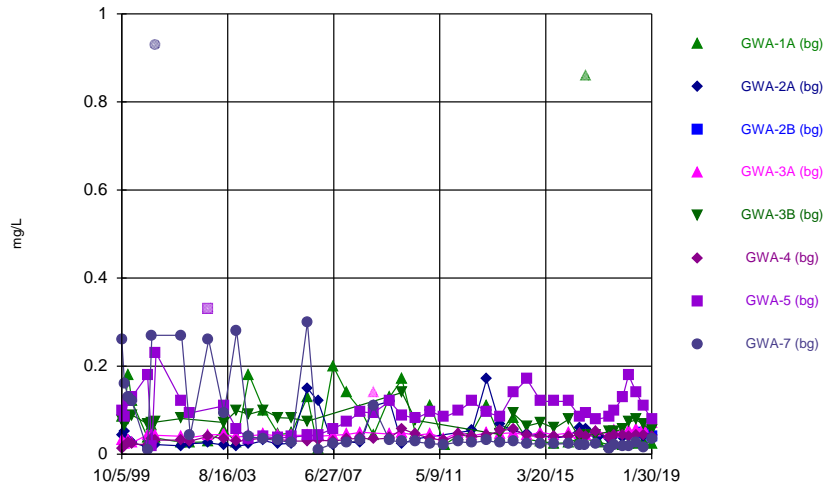
Prediction Limit
Interwell Non-parametric



Non-parametric test used in lieu of parametric prediction limit because the Chi Squared normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 260 background values. 29.23% NDs. Annual per-constituent alpha = 0.0005902. Individual comparison alpha = 0.0000492 (1 of 2). Comparing 6 points to limit.

Constituent: Zinc Analysis Run 6/11/2019 8:59 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

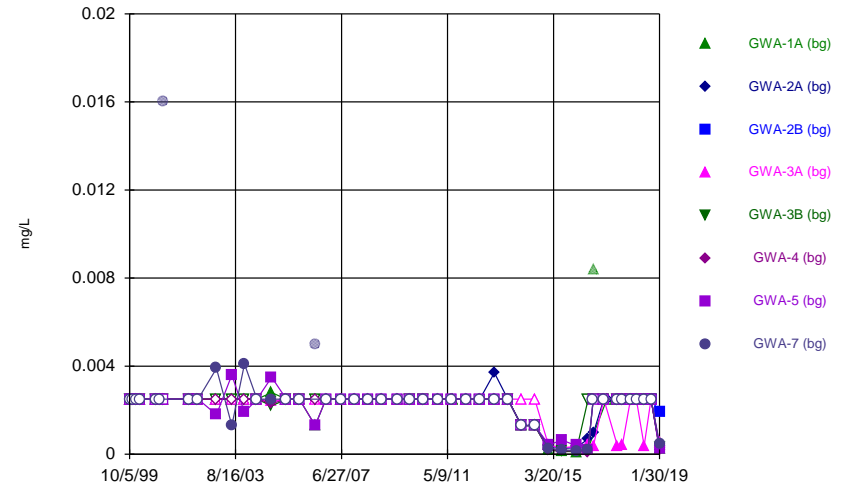
Time Series



Constituent: Barium Analysis Run 6/10/2019 10:33 AM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Hollow symbols indicate censored values.

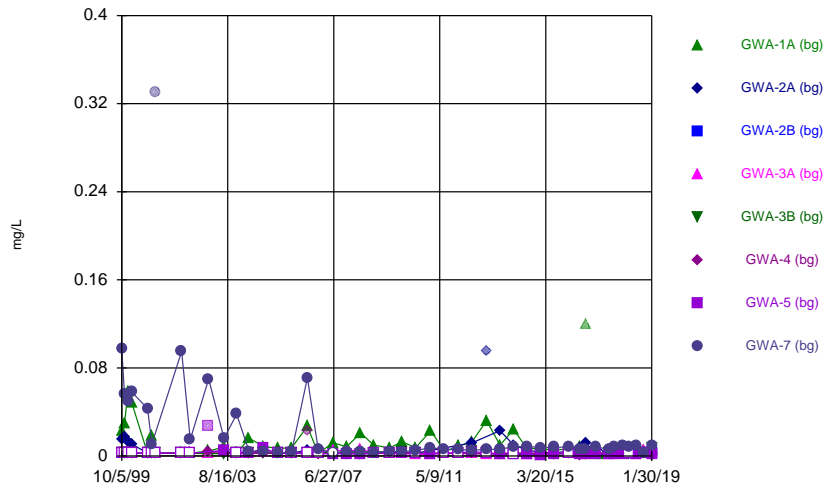
Time Series



Constituent: Beryllium Analysis Run 6/10/2019 10:33 AM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Hollow symbols indicate censored values.

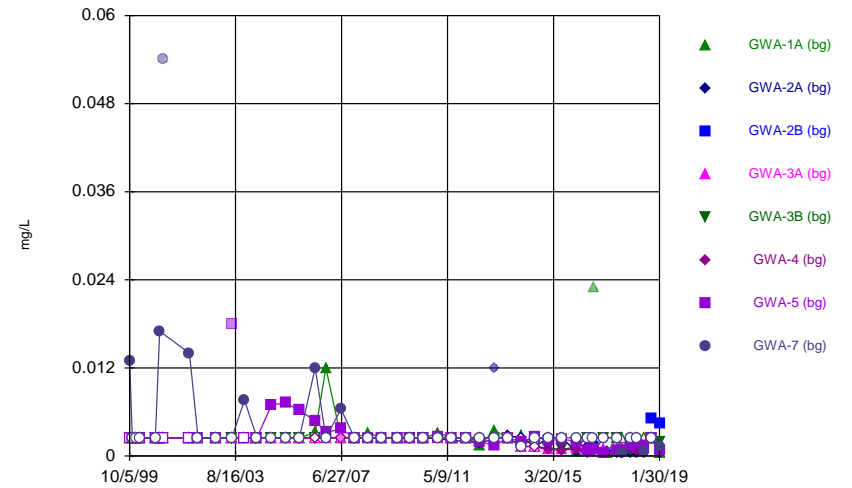
Time Series



Constituent: Chromium Analysis Run 6/10/2019 10:33 AM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

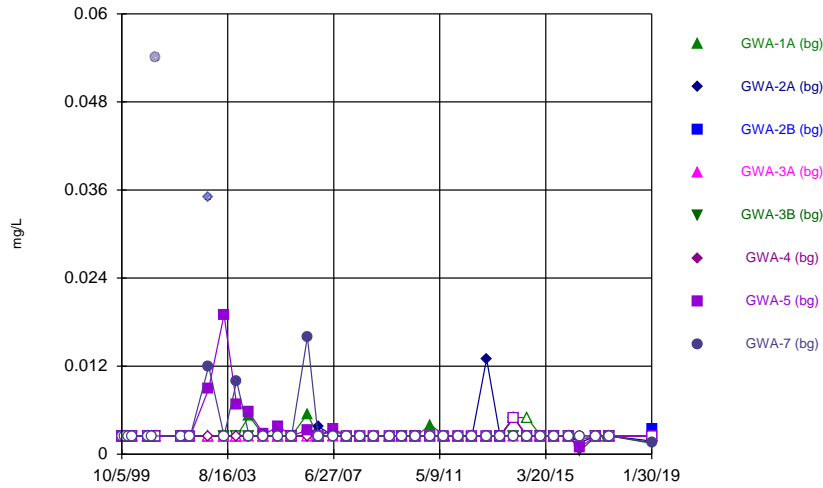
Hollow symbols indicate censored values.

Time Series



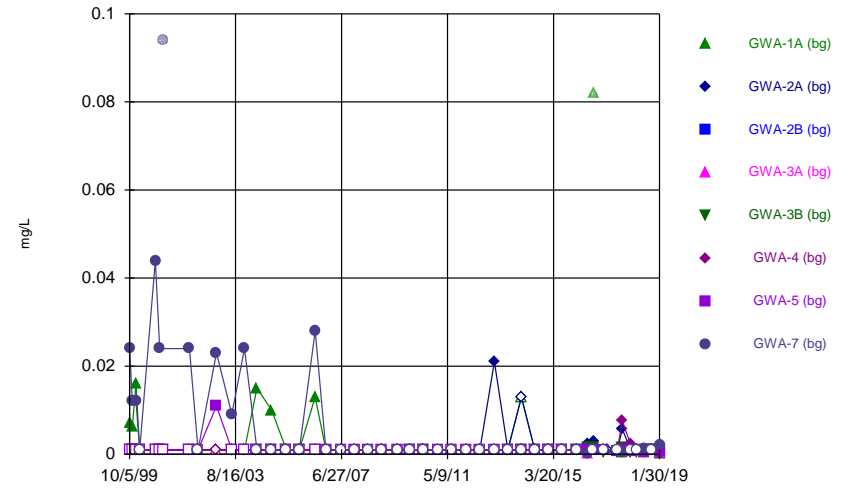
Constituent: Cobalt Analysis Run 6/10/2019 10:33 AM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



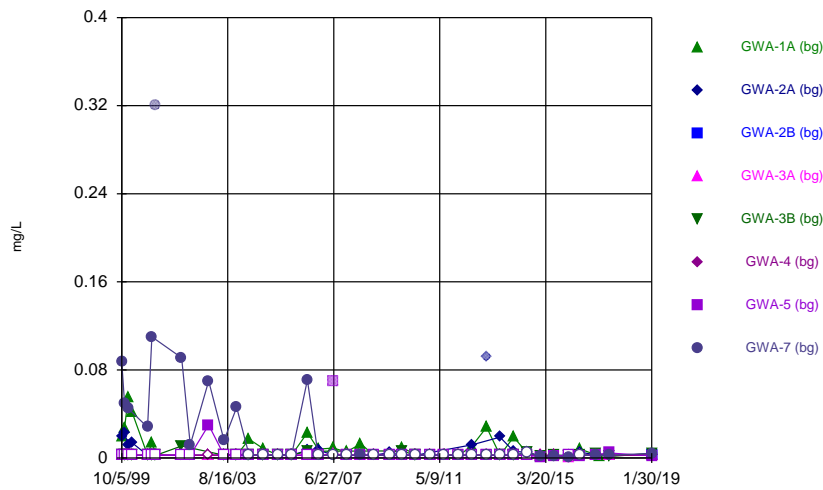
Constituent: Copper Analysis Run 6/10/2019 10:33 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



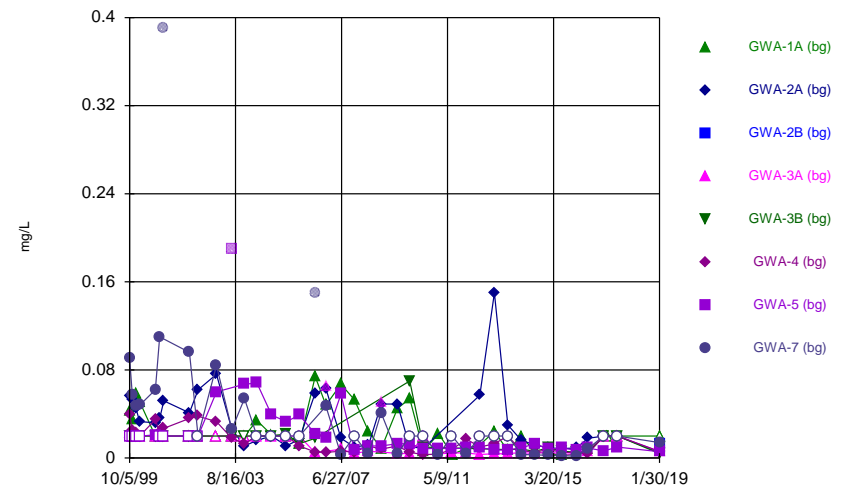
Constituent: Lead Analysis Run 6/10/2019 10:33 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



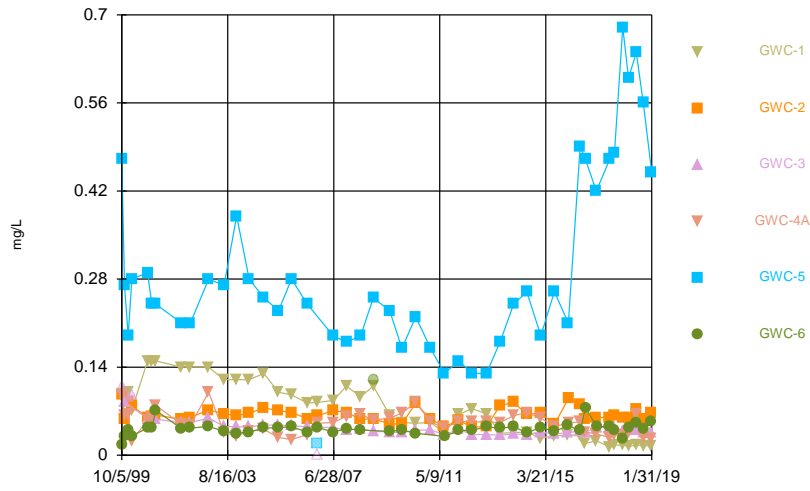
Constituent: Vanadium Analysis Run 6/10/2019 10:33 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



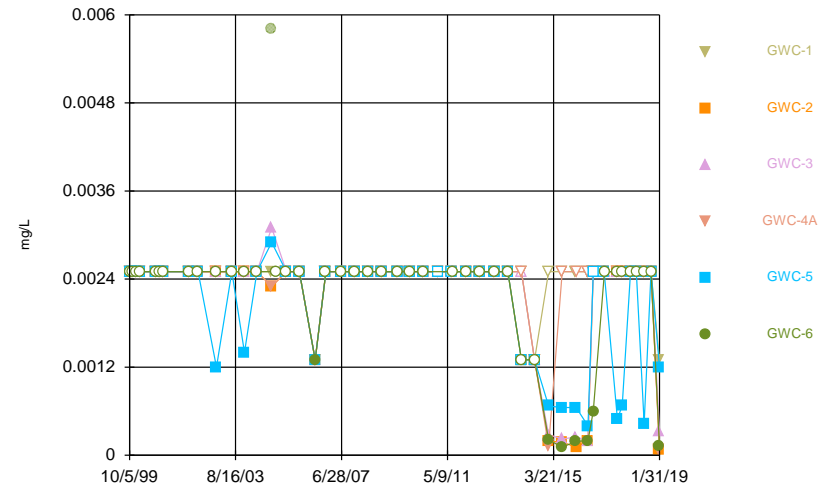
Constituent: Zinc Analysis Run 6/10/2019 10:33 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



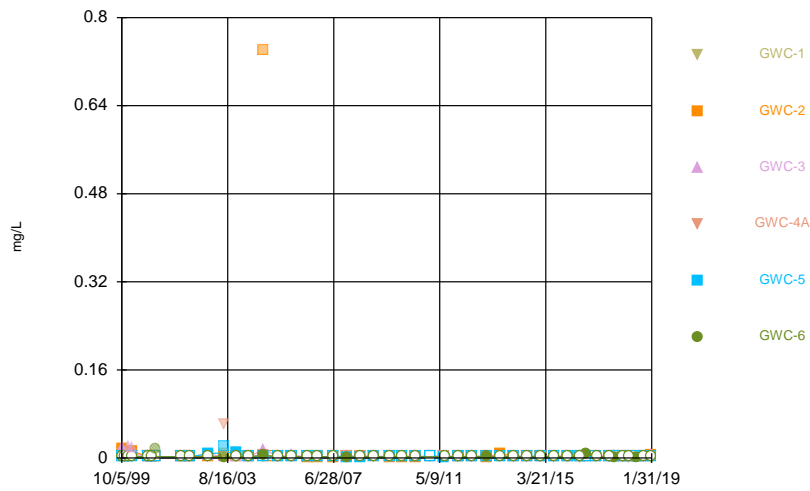
Constituent: Barium Analysis Run 6/10/2019 11:05 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



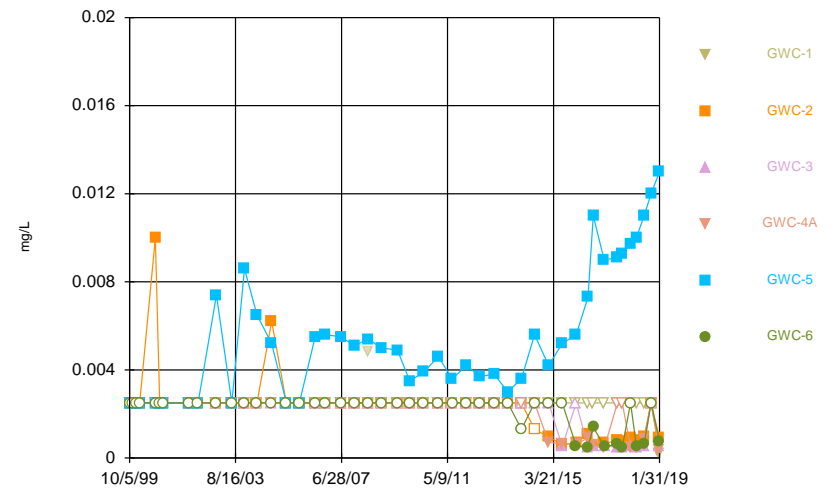
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Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



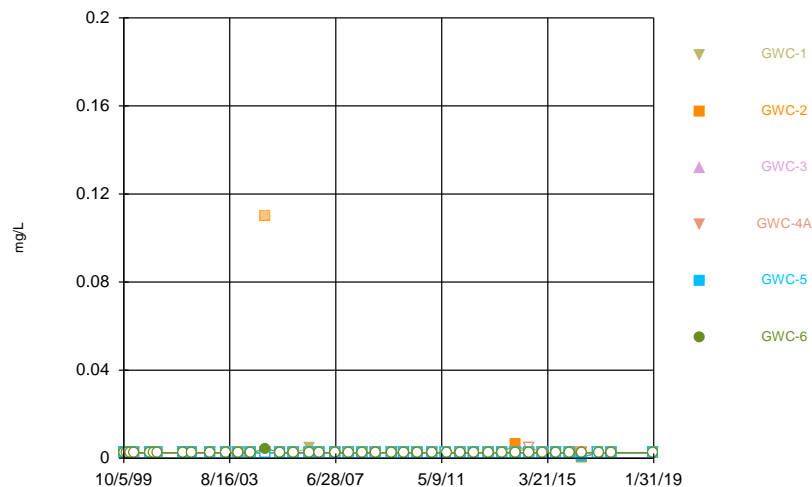
Constituent: Chromium Analysis Run 6/10/2019 11:05 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



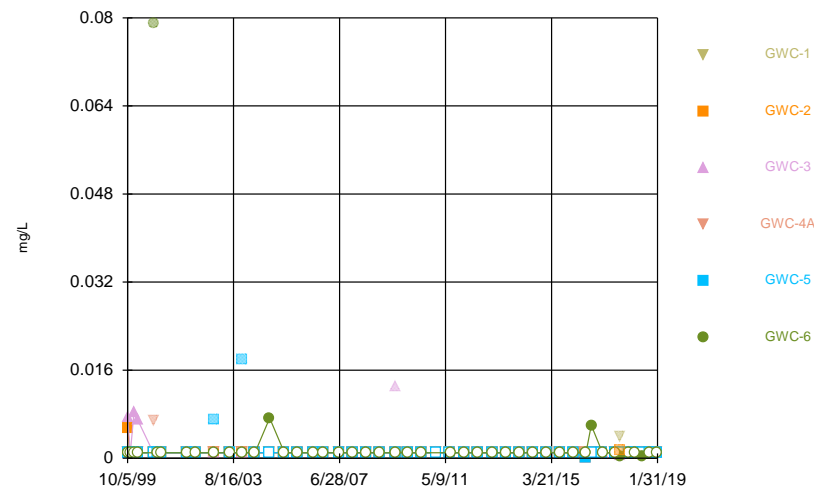
Constituent: Cobalt Analysis Run 6/10/2019 11:06 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



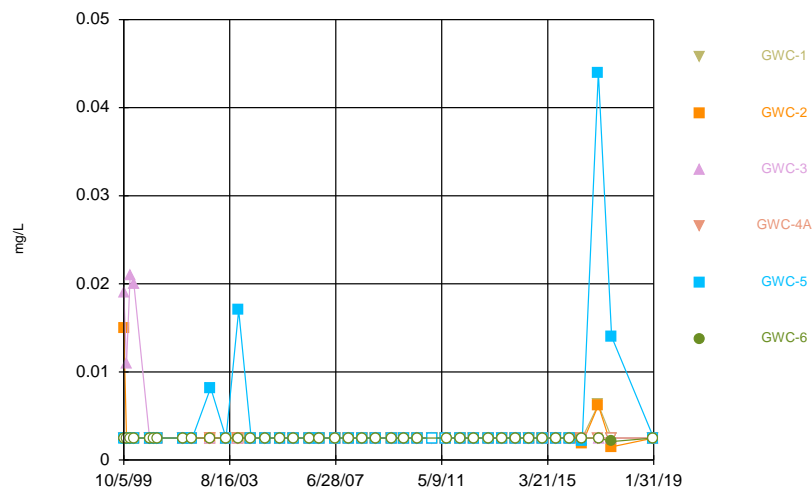
Constituent: Copper Analysis Run 6/10/2019 11:06 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



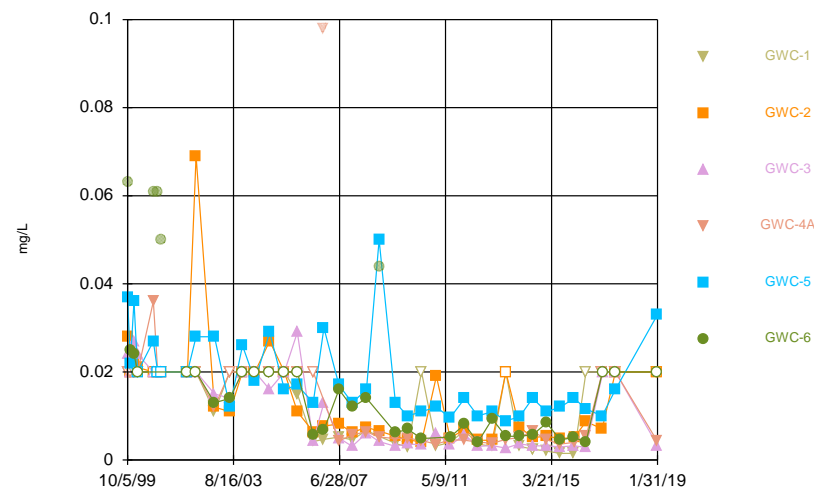
Constituent: Lead Analysis Run 6/10/2019 11:06 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



Constituent: Vanadium Analysis Run 6/10/2019 11:06 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Time Series



Constituent: Zinc Analysis Run 6/10/2019 11:06 AM
Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Trend Test

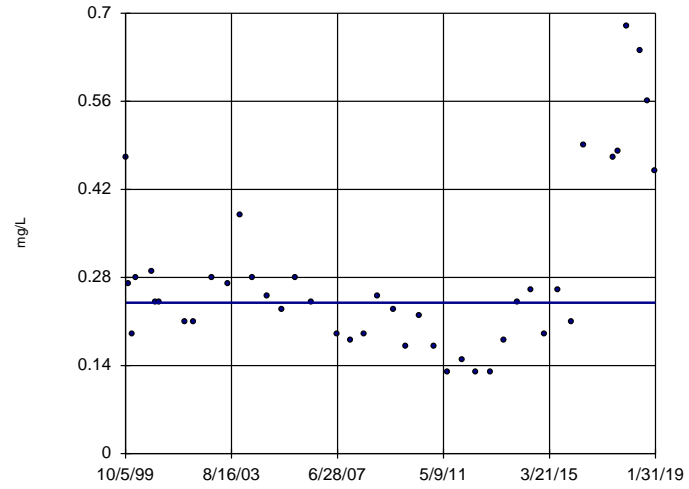
Plant McIntosh Client: GEI Data: McIntosh No 3 Printed 4/8/2019, 10:38 AM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Barium, Total (mg/L)	GWC-5	0	0.1629	2.33	No	42	0	n/a	n/a	0.02	NP

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Sen's Slope Estimator

GWC-5



n = 42

Slope = 0
units per year.

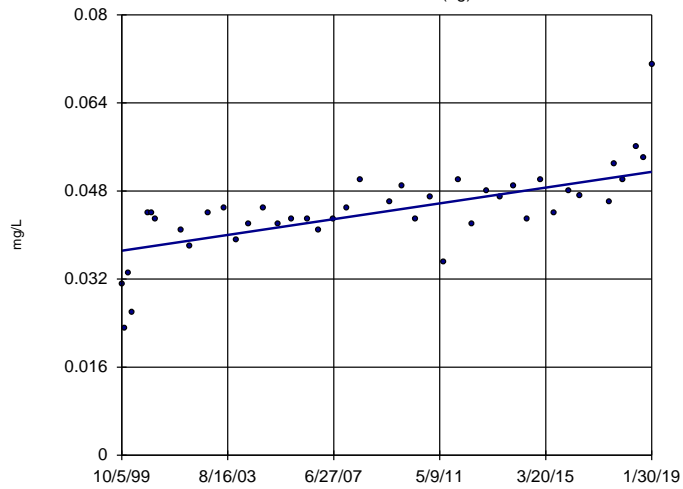
Mann-Kendall
normal approx. =
0.1629
critical = 2.33

Trend not sig-
nificant at 98%
confidence level
($\alpha = 0.01$ per
tail).

Constituent: Barium, Total Analysis Run 4/8/2019 10:36 AM

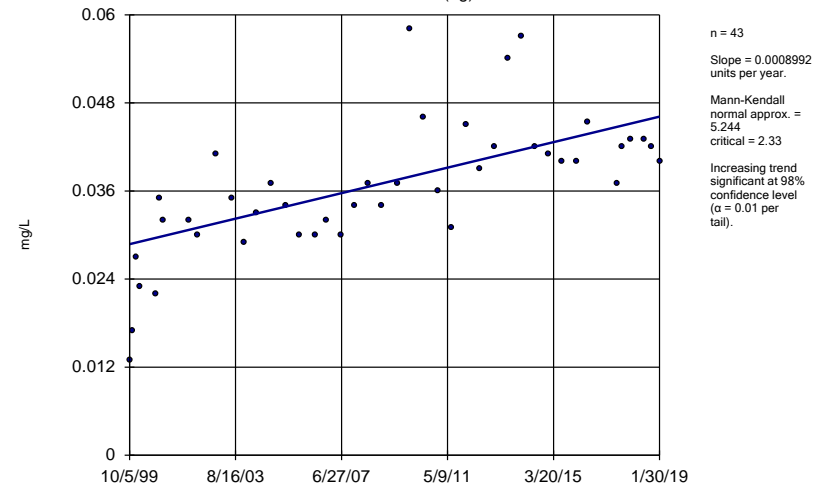
Plant McIntosh Client: GEI Data: McIntosh No 3

Sen's Slope Estimator GWA-3A (bg)



Constituent: Barium, Total Analysis Run 4/8/2019 10:47 AM
Plant McIntosh Client: GEI Data: McIntosh No 3

Sen's Slope Estimator GWA-4 (bg)



Constituent: Barium, Total Analysis Run 4/8/2019 10:47 AM
Plant McIntosh Client: GEI Data: McIntosh No 3

Box & Whiskers Plot

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 6/10/2019, 11:07 AM

Constituent	Well	N	Mean	Std. Dev.	Median	%NDs
Barium (mg/L)	GWA-1A (bg)	45	0.06516	0.05121	0.043	0
Barium (mg/L)	GWA-2A (bg)	44	0.04645	0.03478	0.0385	0
Barium (mg/L)	GWA-2B (bg)	2	0.045	0.005657	0.045	0
Barium (mg/L)	GWA-3A (bg)	45	0.04487	0.008079	0.044	0
Barium (mg/L)	GWA-3B (bg)	33	0.07239	0.02025	0.073	0
Barium (mg/L)	GWA-4 (bg)	46	0.03694	0.009121	0.037	0
Barium (mg/L)	GWA-5 (bg)	45	0.09831	0.04216	0.095	0
Barium (mg/L)	GWA-7 (bg)	45	0.06907	0.08735	0.028	0
Barium (mg/L)	GWC-1	46	0.07204	0.04484	0.069	0
Barium (mg/L)	GWC-2	46	0.06475	0.01181	0.063	0
Barium (mg/L)	GWC-3	42	0.043	0.009936	0.04	0
Barium (mg/L)	GWC-4A	46	0.05078	0.01784	0.052	0
Barium (mg/L)	GWC-5	45	0.2967	0.1432	0.25	0
Barium (mg/L)	GWC-6	44	0.0416	0.009372	0.0415	0
Beryllium (mg/L)	GWA-1A (bg)	45	0.002171	0.0007694	0.0025	84.44
Beryllium (mg/L)	GWA-2A (bg)	44	0.002197	0.0007589	0.0025	81.82
Beryllium (mg/L)	GWA-2B (bg)	2	0.0022	0.0004243	0.0022	50
Beryllium (mg/L)	GWA-3A (bg)	46	0.002084	0.0008483	0.0025	78.26
Beryllium (mg/L)	GWA-3B (bg)	35	0.002158	0.0007735	0.0025	85.71
Beryllium (mg/L)	GWA-4 (bg)	46	0.002189	0.0007581	0.0025	86.96
Beryllium (mg/L)	GWA-5 (bg)	46	0.002209	0.0007612	0.0025	78.26
Beryllium (mg/L)	GWA-7 (bg)	44	0.002232	0.0008461	0.0025	79.55
Beryllium (mg/L)	GWC-1	46	0.002422	0.0003	0.0025	93.48
Beryllium (mg/L)	GWC-2	46	0.002162	0.0007703	0.0025	84.78
Beryllium (mg/L)	GWC-3	46	0.002217	0.0007415	0.0025	84.78
Beryllium (mg/L)	GWC-4A	46	0.002339	0.0005436	0.0025	91.3
Beryllium (mg/L)	GWC-5	46	0.002056	0.0007636	0.0025	73.91
Beryllium (mg/L)	GWC-6	45	0.002118	0.0008066	0.0025	84.44
Chromium (mg/L)	GWA-1A (bg)	45	0.01179	0.01213	0.0075	13.33
Chromium (mg/L)	GWA-2A (bg)	43	0.005023	0.004855	0.0025	55.81
Chromium (mg/L)	GWA-2B (bg)	2	0.00275	0.0003536	0.00275	50
Chromium (mg/L)	GWA-3A (bg)	46	0.002947	0.001067	0.0025	36.96
Chromium (mg/L)	GWA-3B (bg)	33	0.002591	0.0008966	0.0025	75.76
Chromium (mg/L)	GWA-4 (bg)	45	0.002595	0.001054	0.0025	80
Chromium (mg/L)	GWA-5 (bg)	45	0.002433	0.0009594	0.0025	53.33
Chromium (mg/L)	GWA-7 (bg)	45	0.01822	0.02509	0.0077	2.222
Chromium (mg/L)	GWC-1	45	0.002445	0.000277	0.0025	95.56
Chromium (mg/L)	GWC-2	46	0.003563	0.002952	0.00265	23.91
Chromium (mg/L)	GWC-3	44	0.004109	0.003187	0.00345	15.91
Chromium (mg/L)	GWC-4A	45	0.002571	0.000519	0.0025	93.33
Chromium (mg/L)	GWC-5	45	0.002756	0.001522	0.0025	86.67
Chromium (mg/L)	GWC-6	44	0.002564	0.0008	0.0025	84.09
Cobalt (mg/L)	GWA-1A (bg)	45	0.00256	0.001579	0.0025	75.56
Cobalt (mg/L)	GWA-2A (bg)	43	0.001994	0.0008395	0.0025	69.77
Cobalt (mg/L)	GWA-2B (bg)	2	0.00475	0.000495	0.00475	0
Cobalt (mg/L)	GWA-3A (bg)	45	0.002057	0.0006741	0.0025	73.33
Cobalt (mg/L)	GWA-3B (bg)	33	0.002013	0.0007382	0.0025	72.73
Cobalt (mg/L)	GWA-4 (bg)	46	0.001997	0.0007827	0.0025	73.91
Cobalt (mg/L)	GWA-5 (bg)	45	0.002514	0.001408	0.0025	42.22
Cobalt (mg/L)	GWA-7 (bg)	45	0.003579	0.003512	0.0025	80

Box & Whiskers Plot

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 6/10/2019, 11:07 AM

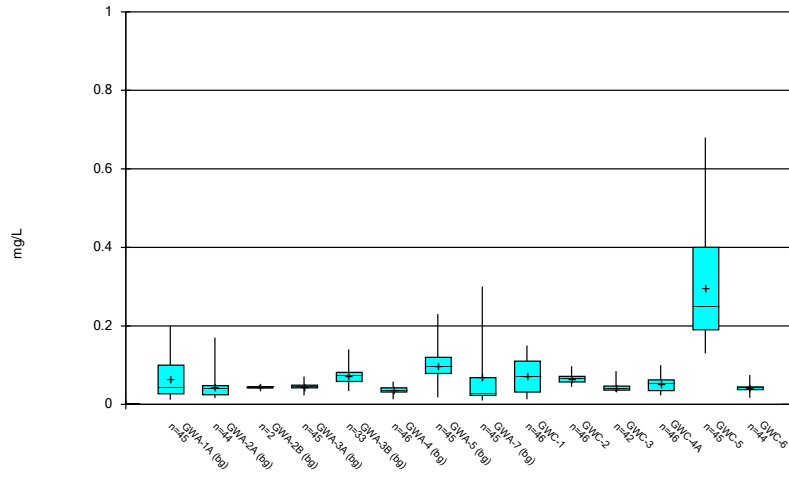
Constituent	Well	N	Mean	Std. Dev.	Median	%NDs
Cobalt (mg/L)	GWC-1	45	0.002448	0.0003458	0.0025	97.78
Cobalt (mg/L)	GWC-2	46	0.002278	0.001516	0.0025	69.57
Cobalt (mg/L)	GWC-3	46	0.002068	0.0008291	0.0025	78.26
Cobalt (mg/L)	GWC-4A	46	0.00209	0.0007893	0.0025	76.09
Cobalt (mg/L)	GWC-5	46	0.005448	0.002956	0.00495	26.09
Cobalt (mg/L)	GWC-6	46	0.002115	0.0007539	0.0025	80.43
Copper (mg/L)	GWA-1A (bg)	40	0.00281	0.0008463	0.0025	85
Copper (mg/L)	GWA-2A (bg)	36	0.002853	0.001813	0.0025	88.89
Copper (mg/L)	GWA-2B (bg)	1	0.0035	0	0.0035	0
Copper (mg/L)	GWA-3A (bg)	40	0.002489	0.00007115	0.0025	97.5
Copper (mg/L)	GWA-3B (bg)	27	0.002389	0.0004237	0.0025	92.59
Copper (mg/L)	GWA-4 (bg)	40	0.002562	0.0003953	0.0025	100
Copper (mg/L)	GWA-5 (bg)	40	0.003365	0.002878	0.0025	75
Copper (mg/L)	GWA-7 (bg)	39	0.003259	0.002843	0.0025	89.74
Copper (mg/L)	GWC-1	40	0.002555	0.0003479	0.0025	97.5
Copper (mg/L)	GWC-2	39	0.002551	0.0007236	0.0025	94.87
Copper (mg/L)	GWC-3	40	0.002502	0.00001581	0.0025	97.5
Copper (mg/L)	GWC-4A	40	0.002562	0.0003953	0.0025	100
Copper (mg/L)	GWC-5	40	0.002457	0.0002854	0.0025	95
Copper (mg/L)	GWC-6	40	0.002547	0.0003004	0.0025	97.5
Lead (mg/L)	GWA-1A (bg)	45	0.002602	0.0041	0.001	80
Lead (mg/L)	GWA-2A (bg)	44	0.001911	0.003531	0.001	90.91
Lead (mg/L)	GWA-2B (bg)	2	0.00064	0.0005091	0.00064	50
Lead (mg/L)	GWA-3A (bg)	46	0.0009693	0.0001457	0.001	95.65
Lead (mg/L)	GWA-3B (bg)	33	0.0009803	0.0002609	0.001	72.73
Lead (mg/L)	GWA-4 (bg)	46	0.001138	0.001007	0.001	91.3
Lead (mg/L)	GWA-5 (bg)	46	0.001181	0.001484	0.001	80.43
Lead (mg/L)	GWA-7 (bg)	45	0.005761	0.01008	0.001	68.89
Lead (mg/L)	GWC-1	45	0.001	0	0.001	100
Lead (mg/L)	GWC-2	45	0.001078	0.0006725	0.001	95.56
Lead (mg/L)	GWC-3	45	0.001407	0.001678	0.001	88.89
Lead (mg/L)	GWC-4A	45	0.001	0	0.001	100
Lead (mg/L)	GWC-5	44	0.0009795	0.0001357	0.001	97.73
Lead (mg/L)	GWC-6	44	0.001229	0.001211	0.001	90.91
Vanadium (mg/L)	GWA-1A (bg)	40	0.009402	0.01175	0.00295	42.5
Vanadium (mg/L)	GWA-2A (bg)	35	0.005486	0.005548	0.0025	54.29
Vanadium (mg/L)	GWA-2B (bg)	1	0.0025	0	0.0025	100
Vanadium (mg/L)	GWA-3A (bg)	40	0.002497	0.0003059	0.0025	95
Vanadium (mg/L)	GWA-3B (bg)	27	0.003193	0.001967	0.0025	62.96
Vanadium (mg/L)	GWA-4 (bg)	40	0.002458	0.0002656	0.0025	95
Vanadium (mg/L)	GWA-5 (bg)	39	0.003187	0.004431	0.0025	79.49
Vanadium (mg/L)	GWA-7 (bg)	38	0.01829	0.02995	0.0025	52.63
Vanadium (mg/L)	GWC-1	40	0.002595	0.0006008	0.0025	97.5
Vanadium (mg/L)	GWC-2	40	0.002865	0.002063	0.0025	90
Vanadium (mg/L)	GWC-3	40	0.004025	0.004804	0.0025	90
Vanadium (mg/L)	GWC-4A	40	0.0025	0	0.0025	100
Vanadium (mg/L)	GWC-5	40	0.00432	0.007098	0.0025	87.5
Vanadium (mg/L)	GWC-6	39	0.00249	0.00006405	0.0025	97.44
Zinc (mg/L)	GWA-1A (bg)	40	0.0249	0.01853	0.02	30
Zinc (mg/L)	GWA-2A (bg)	37	0.03299	0.02809	0.02	8.108

Box & Whiskers Plot

Plant McIntosh Client: GEI Data: McIntosh No 3 CCR Printed 6/10/2019, 11:07 AM

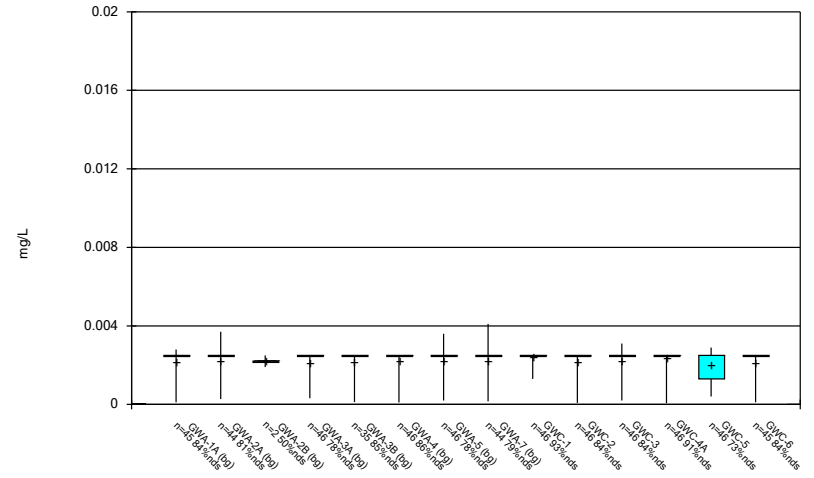
<u>Constituent</u>	<u>Well</u>	<u>N</u>	<u>Mean</u>	<u>Std. Dev.</u>	<u>Median</u>	<u>%NDs</u>
Zinc (mg/L)	GWA-2B (bg)	1	0.013	0	0.013	0
Zinc (mg/L)	GWA-3A (bg)	38	0.01241	0.007904	0.014	47.37
Zinc (mg/L)	GWA-3B (bg)	27	0.01721	0.0123	0.02	51.85
Zinc (mg/L)	GWA-4 (bg)	40	0.01532	0.01056	0.012	17.5
Zinc (mg/L)	GWA-5 (bg)	39	0.01992	0.01703	0.013	20.51
Zinc (mg/L)	GWA-7 (bg)	38	0.02881	0.02855	0.02	36.84
Zinc (mg/L)	GWC-1	40	0.01237	0.008055	0.0175	52.5
Zinc (mg/L)	GWC-2	40	0.01404	0.01159	0.00985	27.5
Zinc (mg/L)	GWC-3	40	0.01154	0.008717	0.0061	27.5
Zinc (mg/L)	GWC-4A	39	0.01237	0.008474	0.0066	43.59
Zinc (mg/L)	GWC-5	40	0.01865	0.009344	0.016	10
Zinc (mg/L)	GWC-6	34	0.01276	0.00704	0.0125	32.35

Box & Whiskers Plot



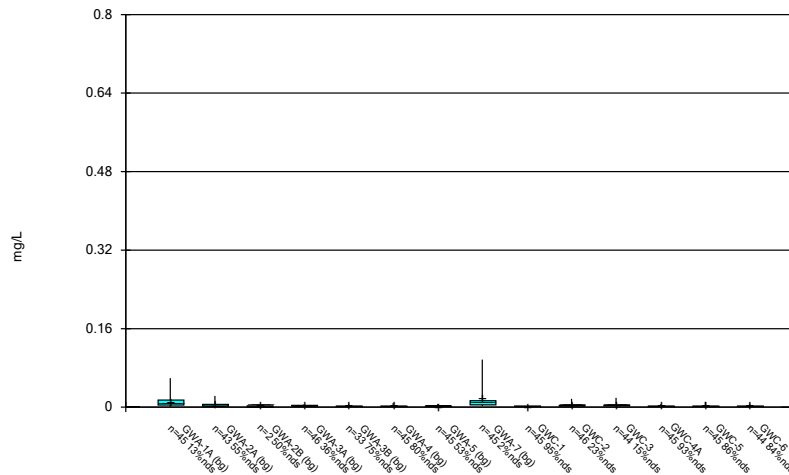
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 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



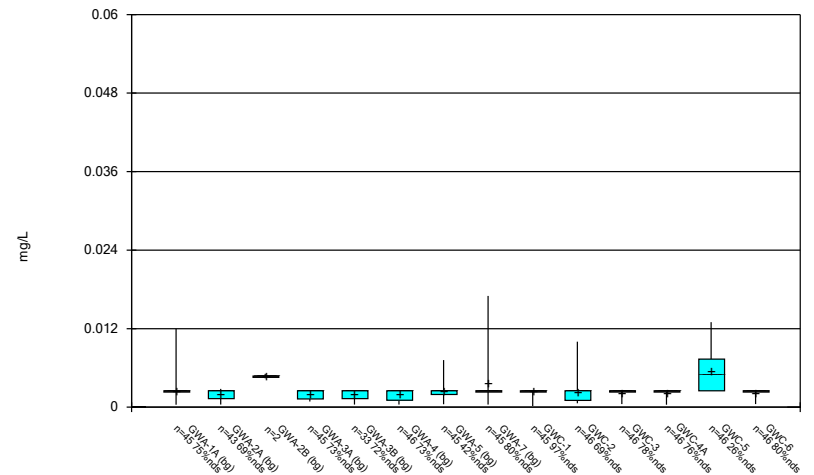
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 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



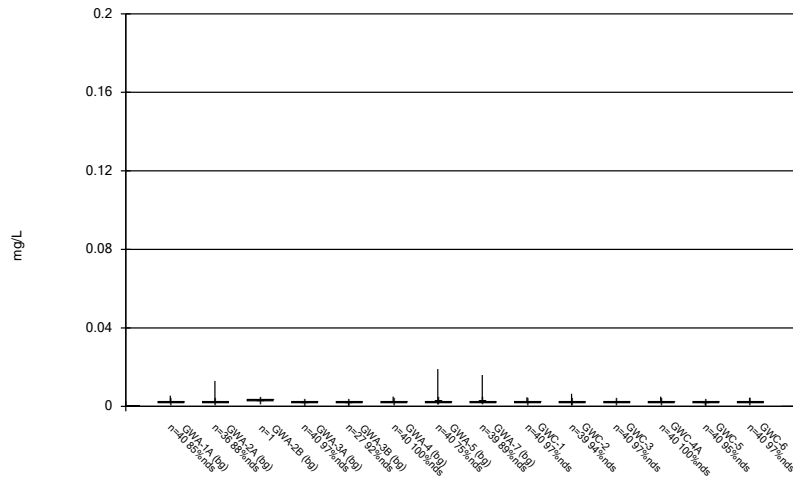
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Box & Whiskers Plot



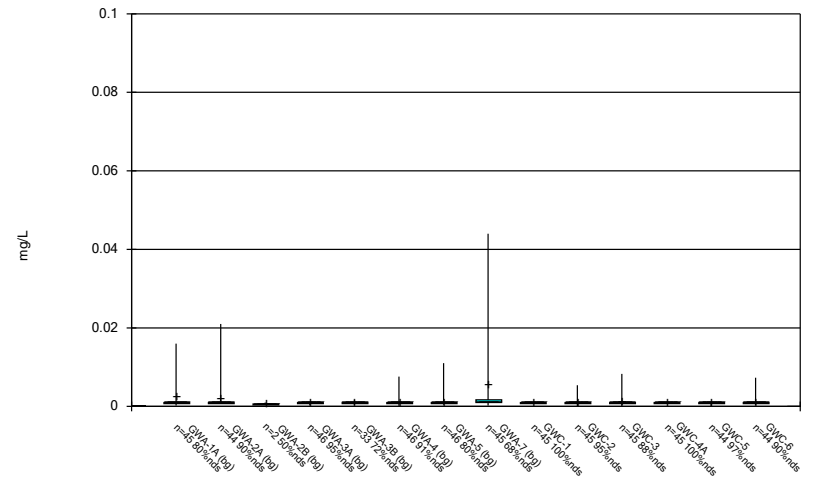
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 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



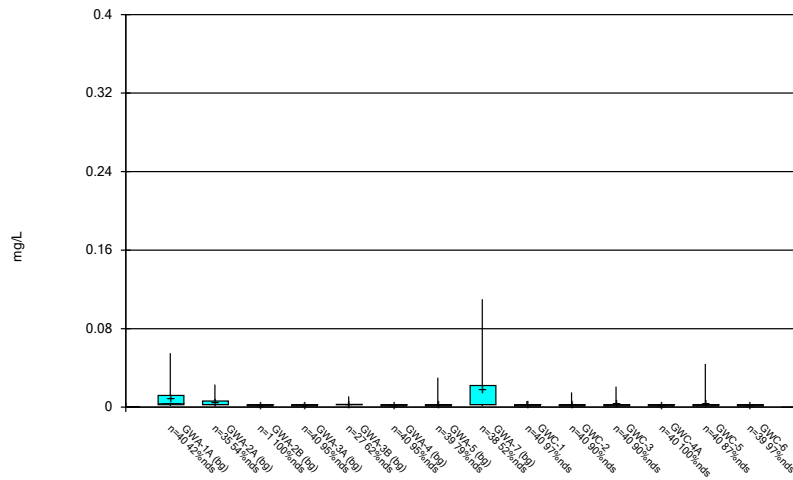
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Box & Whiskers Plot



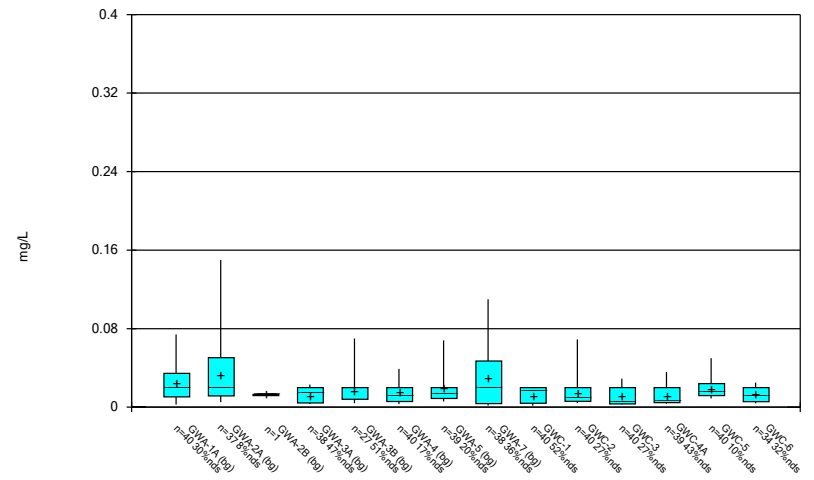
Constituent: Lead Analysis Run 6/10/2019 11:07 AM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



Constituent: Vanadium Analysis Run 6/10/2019 11:07 AM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR

Box & Whiskers Plot



Constituent: Zinc Analysis Run 6/10/2019 11:07 AM
 Plant McIntosh Client: GEI Data: McIntosh No 3 CCR