



REPORT

2022 Semi-Annual Groundwater Monitoring and Corrective Action Report

Georgia Power Company - Plant McDonough-Atkinson Ash Pond 1

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February 28, 2023



Certification

This 2022 *Semi-Annual Groundwater Monitoring and Corrective Action Report*, Georgia Power Company - Plant McDonough - Atkinson-Ash Pond 1 (AP-1) has been prepared in compliance with the United States Environmental Protection Agency coal combustion residual rule [40 Code of Federal Regulations (CFR) 257 Subpart D] and the Georgia Environmental Protection Division Rules for Solid Waste Management 391-3-4-.10 (6)(a-c) by a qualified groundwater scientist or engineer with WSP USA Inc.

I hereby certify that I am a qualified groundwater scientist, in accordance with the Georgia Rules of Solid Waste Management, and 40 CFR Part 258.50(g) and that this 2022 *Semi-Annual Groundwater Monitoring and Corrective Action Report*, Georgia Power Company - Plant McDonough-Atkinson Ash Pond 1 has been prepared to meet the requirements of 40 CFR § 257.90(e).

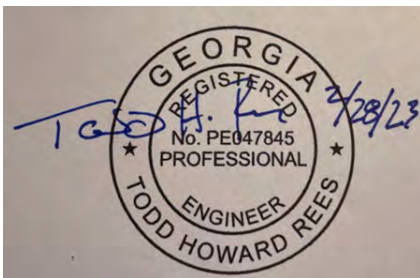
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Executive Summary

This summary of the *2022 Semi-Annual Groundwater Monitoring and Corrective Action Report* provides the status of the groundwater monitoring and corrective program from July through December 2022 at Georgia Power Company (Georgia Power)'s Plant McDonough-Atkinson Ash Pond 1 (AP-1). Groundwater monitoring and reporting for AP-1 is performed by WSP USA Inc., in accordance with the United States Environmental Protection Agency (US EPA) Coal Combustion Residuals (CCR) Rule published in the Code of Federal Regulations (CFR) Title 40 Part 257 (40 CFR Part 257, Subpart D) dated April 17, 2015, and revised July 2018, 40 CFR § 257.90 through § 257.98. As required in 40 CFR § 257.90(e), this Semi-Annual Report describes the status of the groundwater monitoring program, summarizes key actions completed, and presents projected key activities for the upcoming reporting period at AP-1. Other CCR units (AP-2 and 3/4) at Plant McDonough-Atkinson (Plant McDonough, Site) are reported separately.

Plant McDonough, formerly a coal-fired power generating facility, was converted to a natural gas combined-cycle power generating facility in 2011. Located approximately 7 miles northwest of Atlanta in southeast Cobb County (5551 South Cobb Drive SE, Atlanta, Georgia 30339), the property occupies approximately 390 acres and is bounded on the southeast by the Chattahoochee River.

Groundwater at AP-1 is monitored using a comprehensive network of upgradient and downgradient wells that meet federal and state monitoring requirements. Routine sampling and reporting for AP-1 began after the background groundwater conditions were established between 2016 and 2018. Based on groundwater quality, an assessment monitoring program and assessment of corrective measures were established on November 13, 2019, and July 9, 2020, respectively.

During the 2022 semi-annual reporting period, the Site remained in assessment monitoring as corrective measures are evaluated. Groundwater elevation measurements were recorded from the Site monitoring wells prior to each sampling event to confirm the groundwater flow direction. The AP-1 groundwater monitoring well network remains sufficient to monitor groundwater downgradient of the unit. There were no changes to the AP-1 certified monitoring network in the July through December 2022 monitoring period. The second 2022 semi-annual



Plant McDonough

AP-1 groundwater monitoring event was conducted in September 2022. Groundwater samples were collected and analyzed for Appendix III¹ and Appendix IV² required monitoring parameters.

The statistical analysis of the September 2022 semi-annual monitoring data indicates statistically significant increases (SSIs) for Appendix III constituents and statistically significant levels (SSLs) of Appendix IV constituents above the GWPS as summarized below.

Appendix III Constituent	September 2022 SSIs ^[1]
Boron	DGWC-37, DGWC-38, DGWC-39, DGWC-40, DGWC-67, DGWC-68A, DGWC-69
Calcium	DGWC-37, DGWC-38, DGWC-39, DGWC-40, DGWC-67, DGWC-68A
Chloride	DGWC-38, DGWC-40, DGWC-67
pH	DGWC-40, DGWC-68A
Sulfate	DGWC-37, DGWC-38, DGWC-39, DGWC-40, DGWC-67
TDS	DGWC-37, DGWC-38, DGWC-39, DGWC-40, DGWC-68A
Appendix IV Constituent	September 2022 SSLs ^[2]
Arsenic	DGWC-69
Cobalt	DGWC-40
Molybdenum	DGWC-68A

Note:

[1] An SSI is determined by an exceedance of the calculated prediction limit.

[2] An SSL is determined by comparing the confidence interval to the GWPS. On February 22, 2022 GA EPD defined the GWPS as: (i) the MCL or RSL or (ii) background levels for constituents where the background level is higher than the MCL or RSL.

The Appendix IV SSLs are horizontally delineated by surface water adjacent to the wells that exhibit SSLs. Surface water samples were collected during the September 2022 sampling event, and arsenic, cobalt, and molybdenum were not detected in the surface water bodies downgradient of AP-1. Arsenic, and cobalt are vertically delineated by on-Site wells. An alternate source demonstration for molybdenum has been prepared to document the natural presence of molybdenum in site soils/rock. Based on review of the Appendix III and Appendix IV results noted above, the Site will remain in assessment monitoring. Georgia Power will continue routine groundwater monitoring and evaluation of corrective action alternatives at the Site. Reports will be posted to the website and provided to the GA EPD semi-annually.

¹ Appendix III: boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids

² Appendix IV: antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, fluoride, lead, lithium, mercury, molybdenum, combined radium (226 + 228), selenium, and thallium.

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1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (US EPA) coal combustion residuals (CCR) Rule [40 Code of Federal Regulations (CFR) 257 Subpart D] and the Georgia (GA) Environmental Protection Division (EPD) Rules for Solid Waste Management 391-3-4-.10, this *2022 Semi-Annual Groundwater Monitoring and Corrective Action Report* was prepared to document groundwater monitoring activities conducted at Georgia Power Company (Georgia Power)'s Plant McDonough-Atkinson Ash Pond 1 (AP-1) and satisfies the requirements of § 257.90(e). To specify groundwater monitoring requirements, GA EPD Rule 391-3-4-.10(6)(a) incorporates by reference the US EPA CCR rule (40 CFR 257 Subpart D). For ease of reference, the US EPA CCR rules are cited within this report.

This semi-annual report documents groundwater monitoring activity for the AP-1 semi-annual monitoring event conducted during the second half of 2022. Activities completed at Plant McDonough's Ash Ponds 2, and 3/4 are reported under separate cover.

1.1 Site Description and Background

Plant McDonough-Atkinson (Plant McDonough, Site), formerly a coal-fired power generating facility, was converted to a natural gas combined-cycle power generating facility in 2011. Located approximately 7 miles northwest of Atlanta in southeast Cobb County (5551 South Cobb Dr SE, Atlanta, GA 30339), the property comprises approximately 390 acres and is bounded on the southeast by the Chattahoochee River. A Site location map is included as Figure 1.

Four CCR surface impoundments are located on Site: Ash Pond 1 (AP-1), Ash Pond 2 (AP-2), Ash Pond 3 (AP-3) and Ash Pond 4 (AP-4). AP-3 and AP-4 have historically operated together and are being closed as a Combined Unit (AP-3/4). AP-2 and 3/4 are reported separately from AP-1. A notification of intent to initiate closure of the inactive CCR surface impoundment for AP-1 was certified on December 7, 2015 and posted to Georgia Power's website. A permit application package was submitted to GA EPD in November 2018 and is pending approval. Groundwater monitoring and reporting for AP-1 are being performed to meet the alternate schedule in § 257.100(e)(5) of the revised US EPA CCR rule (August 5, 2016). CCR removal and consolidation at Plant McDonough AP-2, and 3/4 has been completed and final capping and closure is underway. Areas of certified CCR removal are shown on Figure 2.

1.2 Regional Geology and Hydrogeologic Setting

The following section and subsections include a general description of regional geologic and hydrogeologic characteristics of formations that occur beneath the Site (Golder, 2022a). The Site is located in the Piedmont/Blue Ridge geologic province, which contains some of the oldest rock formations in the southeastern United States. These late Precambrian to late Paleozoic rocks have undergone repeated cycles of igneous intrusions and extrusions, metamorphism, folding, faulting, shearing, and silicification. Rock outcrops near the Site consist of biotite gneiss, porphyritic gneiss, mica schist, and quartzite.

Residual soils, primarily clayey/sandy silt, sandy silt with clay, and silty sand, occur as a variably thick blanket overlying bedrock across most of the Site. These residual saprolitic soils along with saprolitic transitionally or partially weathered rock, collectively referred to as the overburden, range between approximately 9 to 61 feet in thickness across the Site, with an average thickness of approximately 38 feet. Saprolitic rock is considered to be

transitionally weathered rock (TWR) or partially weathered rock (PWR). Where TWR is a qualitative description, PWR is defined by Standard Penetration Test (SPT) blow counts that exceed 50 blows/six inches.

A regional, unconfined surficial aquifer system is present at the Site, existing within the overburden and weathered and fractured upper bedrock, depending on topographic location. Recharge primarily occurs through precipitation and subsequent infiltration. Generally, groundwater flow occurs through intergranular pore spaces in the overburden and is controlled by topography and top of rock variations. However, a relatively higher transmissive zone is interpreted to occur at the base of the overburden in the interface of weathered bedrock (i.e., TWR/PWR) to competent bedrock, and is the primary groundwater flow path. The overburden has an average horizontal hydraulic conductivity of 10^{-4} centimeters per second (cm/s) and groundwater flow is interpreted to flow south-southeast.

A limited and localized bedrock aquifer system also occurs beneath the Site. The upper bedrock is fractured and weathered, connected hydraulically with the overburden groundwater, and considered part of the upper aquifer. The overlying silt/clay-rich overburden may act to retard recharge into the bedrock aquifer system. In addition, deeper bedrock is unweathered with few discontinuities (e.g., fractures) available to store or transmit groundwater.

1.3 Groundwater Monitoring Network

Pursuant to § 257.91, a groundwater monitoring system was installed within the uppermost aquifer at AP-1 to monitor groundwater passing the waste boundary. Wells were located to monitor upgradient and downgradient groundwater conditions based on groundwater flow direction. The monitoring well network was certified by a Professional Engineer in Georgia on April 17, 2019, and the certification is maintained in the Operating Record pursuant to § 257.90(f). AP-1 monitoring well and piezometer locations are shown on Figure 3.

A comprehensive network of monitoring wells was installed for groundwater monitoring around AP-1. A separate well network for AP-2 and 3/4 as well as a series of piezometers are also installed at the Site. Construction details are presented in Table 1 for each well in the current Site groundwater monitoring network, including detection monitoring wells, assessment monitoring wells and piezometers for AP-1 and the separate multi-unit monitoring network wells for AP-2 and 3/4.

2.0 GROUNDWATER MONITORING ACTIVITIES

The following section describes monitoring-related activities for sampling performed at the Site from July 2022 through December 2022. Routine groundwater sampling was performed in September 2022 in accordance with 40 CFR § 257.93. Field sampling forms for these monitoring events are provided in Appendix A and the laboratory analytical results are provided in Appendix B.

2.1 Monitoring Well Installation and Maintenance

There were no changes to the detection groundwater monitoring system during this reporting period. September 2022 field activities included visual inspection of well conditions prior to sampling, recording conditions around each well, and performing exterior maintenance to provide safe access for sampling. The well condition inspection forms are included in Appendix C.

Monitoring wells are inspected semi-annually to determine if any repairs or corrective actions are necessary to meet the requirements of the Georgia Water Well Standards Act (O.C.G.A. § 12-5-134(5)(d)(vii)). Monitoring wells

were inspected, necessary corrective actions were identified and subsequently completed, as documented in Appendix C. This documentation was performed under the direction of a professional geologist or engineer registered in the State of Georgia.

2.2 Assessment Monitoring

Pursuant to §257.94(e), an assessment monitoring program has been established for AP-1 based on the statistically significant increases (SSIs). A notice of assessment monitoring was placed in the operating record on November 13, 2019.

Groundwater sampling was conducted for AP-1 in September 2022 in accordance with § 257.93 and GA EPD rule 391-3-4-.10(6)(a). Samples were collected from each well in the certified detection monitoring network and the established assessment monitoring network for AP-1 (Table 1). The location of each of these monitoring wells is shown on Figure 3. Table 2 presents a summary of groundwater sampling events completed for AP-1 and the status of the monitoring network.

During the September 2022 semi-annual sampling event, groundwater samples were collected and analyzed for Appendix III and Appendix IV constituents. Results of sampling activities conducted in September 2022 are presented in Appendix B.

2.3 Additional Sampling

Additional sampling (i.e., non-routine) was conducted during the reporting period in support of the assessment of corrective measures and in continuing to define the nature and extent of groundwater impacts from AP-1. Additional sampling included sampling of upgradient monitoring wells B-116D, B-117D, B-118 and B-119D to characterize background conditions at the Site and evaluate updating the statistical background evaluation. Additional analyses were also performed to characterize the groundwater chemistry as part of ongoing remedy selection activities as well as ongoing risk evaluation. Results of these analyses are presented in Appendix B.

Installation of additional wells to characterize groundwater downgradient of the existing AP-1 network wells exhibiting SSLs of arsenic, cobalt and molybdenum is infeasible due to the proximity of the engineered stream channel [also referred to as the unnamed tributary (UT)] to the west and the Chattahoochee River to the southeast. Georgia Power therefore collected surface water samples from the engineered stream channel and the Chattahoochee River. The surface water samples were collected October 27, 2022 at the locations shown on Figure 3 and analyzed for Appendix III parameters, selected Appendix IV parameters (i.e., arsenic, cobalt, and molybdenum), and major ions (i.e., magnesium, potassium, sodium, and total and bicarbonate alkalinity). Samples from the engineered stream channel are used for horizontal delineation (i.e., location UT02 for arsenic and location UT03 for molybdenum). Surface water samples were collected in accordance with *Region 4 U.S. Environmental Protection Agency Science and Ecosystem Support Division Operating Procedures for Surface Water Sampling* SESDPROC-201-R4 (US EPA, 2016). The laboratory reports associated with the October 2022 surface water sampling event are provided in Appendix B. Georgia Power will continue collecting the surface water samples semi-annually.

3.0 SAMPLE METHODOLOGY AND ANALYSIS

The following sections describe methods used to conduct the September 2022 semi-annual AP-1 groundwater assessment monitoring. Groundwater analytical data and chain of custody records are presented in Appendix B.

3.1 Groundwater Elevation Measurement

Site-wide groundwater levels were measured at the start of the September 2022 sampling event. Measured groundwater level data are listed in Table 3. These data were used to calculate water level elevations and develop the Site groundwater potentiometric surface map (Figure 4). The potentiometric surface map indicates that groundwater generally flows west/southwest across the Site, consistent with historical observations.

3.2 Groundwater Gradient and Flow Velocity

Hydraulic gradient is calculated as the difference in groundwater elevation (in feet) divided by the distance between two piezometers or wells (in feet). Groundwater elevation data for three piezometer/well pairings were used to calculate hydraulic gradients for AP-1. These pairings (B-29/DGWC-68A, B-28/DGWC-37, and B-50/DGWC-39) were used to calculate the gradients along inferred groundwater flow paths (i.e., perpendicular to the potentiometric contours).

Average groundwater flow velocities at the Site were calculated using hydraulic gradient data, hydraulic conductivity data generated from slug testing results (Golder, 2022a), and an estimated effective porosity of the screened portion of the uppermost aquifer. Based on slug test data, the average hydraulic conductivity of the overburden is 7.70×10^{-4} centimeters/second (cm/s). An effective porosity of 0.2 (20%) was used based on the default values for effective porosity recommended by US EPA for a silty sand-type soil (US EPA, 1996).

The horizontal flow velocities were calculated using the commonly used derivative of Darcy's Law:

$$V = \frac{K * i}{n_e} \quad \text{Where:}$$

V = Groundwater flow velocity $\left(\frac{\text{feet}}{\text{day}}\right)$
 K = Average hydraulic conductivity of the aquifer $\left(\frac{\text{feet}}{\text{day}}\right)$
 i = Horizontal hydraulic gradient $\left(\frac{\text{feet}}{\text{feet}}\right)$
 n_e = Effective porosity

The AP-1 groundwater horizontal flow velocities calculated for September 2022 ranged from approximately 76 feet per year (ft/yr) to 138 ft/yr (Table 4). These estimated flow velocities are consistent with past results and are also generally consistent with other published velocities for regolith-upper bedrock aquifers of the Piedmont (Heath, R.C., 1982).

3.3 Groundwater Sampling

Groundwater samples were collected in accordance with § 257.93(a) and using *US EPA Region 4 Field Quality and Technical Procedures* as a guide (US EPA, 2001). Monitoring wells were purged and sampled using low-flow sampling procedures. Non-dedicated, low-flow pneumatic bladder pumps and peristaltic pumps were used to purge and sample the wells. Field equipment was decontaminated prior to use and between wells using the *US EPA Laboratory Services and Applied Science Division, Operating Procedure, Field Equipment Cleaning and Decontamination* (US EPA, 2020). In-Situ SmarTroll® and Aqua TROLL® 400 meters were used to monitor and record field water quality parameters [temperature, specific conductance, dissolved oxygen (DO), pH, and oxidation-reduction potential (ORP)] during purging. Turbidity was monitored using LaMotte and Hach

turbidimeters. Groundwater samples were collected when the following stabilization criteria were met for a minimum of three consecutive readings:

- pH within ± 0.1 standard units (S.U.)
- specific conductance within $\pm 5\%$
- DO within $\pm 10\%$ or ± 0.2 mg/L (whichever is greater) where $DO > 0.5$ mg/L; if $DO < 0.5$ mg/L, no stabilization criteria apply
- Turbidity less than 5 nephelometric turbidity units (NTU)

Upon achieving stabilization, unfiltered samples were collected directly in appropriately preserved laboratory-supplied sample containers, placed in ice-packed coolers, and submitted to the laboratory following standard chain-of-custody protocol.

Field data and sampling notes for each monitoring well are recorded on field information forms generated by the SmarTroll®/Aqua TROLL® 400. These forms include a description of the sampling equipment, sampling method, test notes, field observations, and purge logs (purge rate, stabilization parameters, and depth to water measurements) at each monitoring location. Deviations from the sample plan and stabilization criteria are noted on the field information forms. Field data sheets and daily field instrument calibration forms are included in Appendix A.

3.4 Laboratory Analysis

The groundwater samples were analyzed for Appendix III and Appendix IV monitoring parameters per 40 CFR § 257.93 and § 257.95(d)(2). Tables 5A and 5B present a tabulated summary of the September 2022 detection, assessment, and supplemental sample results. Results for the surface water samples collected in October 2022 are presented on Table 6. Analytical methods used for monitoring parameters are listed in the analytical data reports in Appendix B.

Laboratory analyses were performed by Pace Analytical Services, LLC (Pace) in Peachtree Corners, Georgia [Pace subcontracted some analyses to Analytical Environmental Services, Inc. (AES) of Atlanta, Georgia]. Pace is accredited by the National Environmental Laboratory Accreditation Program (NELAP) and maintains NELAP certification for the parameters analyzed for this project. Analytical data reports including chain-of-custody records for the monitoring events and laboratory NELAP certifications are presented in Appendix B.

3.5 Quality Assurance and Quality Control

Quality assurance/quality control (QA/QC) samples were collected at a minimum rate of one sample per every 10 samples during the semi-annual sampling event. QA/QC samples included equipment blanks (where non-dedicated sampling equipment was used), field blanks, and duplicate samples. QA/QC sample data were evaluated during data validation as described below.

Groundwater quality data in this report were independently validated in accordance with *US EPA Region IV Data Validation Standard Operating Procedures* (US EPA, 2011), *National Functional Guidelines for Inorganic Superfund Methods Data Review* (November 2020) and the analytical methods. Data validation generally consisted of reviewing sample integrity, holding times, laboratory method blanks, laboratory control samples, matrix spikes/matrix spike duplicate recoveries, relative percent differences (RPDs), laboratory and field duplicate

RPDs, field and equipment blanks, and reporting limits. Where appropriate, validation qualifiers and flags are applied to the data per US EPA procedures and guidance. Data validation summaries are provided in Appendix B. The September and October 2022 data are considered usable for meeting project objectives and the results are considered valid.

A value followed by a "J" flag in tables and laboratory reports indicate that the value is an estimated analyte concentration detected between the method detection limit (MDL) and the laboratory reporting limit (RL). The estimated value is positively identified but is below the lowest level that can be reliably achieved within specified limits of precision and accuracy under routine laboratory operating conditions. Total radium concentration (Radium 226+228) is a combination of isotopes 226 and 228. When radium data are reported below the Minimum Detectable Concentration (MDC), the values are followed by a "U" flag in tables.

4.0 STATISTICAL ANALYSIS

Statistical analysis of Appendix III and Appendix IV groundwater monitoring data was performed pursuant to §257.93-95 following the established statistical method for AP-1 (Groundwater Stats Consulting, 2019). The statistical analysis reports prepared by Groundwater Stats Consulting, LLC. are presented in Appendix D.

4.1 Statistical Method

The selected statistical method for AP-1 was developed in accordance with 40 CFR § 257.93(f), using methodology presented in *Statistical Analysis of Groundwater Data at Resource Conservation and Recovery Act (RCRA) Facilities, Unified Guidance*, March 2009, US EPA 530/R-09-007 (Unified Guidance; US EPA, 2009). Sanitas groundwater statistical software was used to perform statistical analyses. Sanitas is a decision-support software package that incorporates the statistical tests required of Subtitle C and D facilities by US EPA regulations and guidance as recommended in the US EPA Unified Guidance document (US EPA, 2009).

4.1.1 Appendix III Detection Monitoring Statistical Methods

Groundwater monitoring data for Appendix III parameters were statistically analyzed for comparison against background concentrations and to identify trends. Upgradient well data were pooled to establish background statistical limits. Data from the September 2022 assessment monitoring event were analyzed using interwell prediction limits applying an optional 1-of-2 verification resample plan and compared to the background statistical limits to evaluate whether concentrations exceed background levels. The Sen's Slope/Mann Kendall trend test was performed to evaluate whether concentrations in individual wells are statistically increasing, decreasing, or stabilizing over time. The results of the background comparisons and trend analyses are presented in Appendix D.

4.1.2 Appendix IV Assessment Monitoring Statistical Methods

Statistical analysis for assessment monitoring is performed by comparing confidence intervals against groundwater protection standards (GWPS). Parametric tolerance limits are used to calculate Site specific background limits from pooled upgradient well data for Appendix IV parameters with a target of 95% confidence and 95% coverage. The confidence and coverage levels for nonparametric tolerance limits are dependent upon the number of background samples. The background limits were then used when determining the GWPS under 40 CFR § 257.95(h) and GA EPD Rule 391-3-4-.10(6)(a). As described in 40 CFR § 257.95(h)(1-3), the GWPS is:

- The maximum contaminant level (MCL) established under §§ 141.62 and 141.66 of this title

- Where an MCL has not been established, Federal and State CCR rules specified levels for cobalt (0.006 mg/L), lead (0.015 mg/L), lithium (0.040 mg/L), or molybdenum (0.100 mg/L)
- The respective background level for a constituent when the background level is higher than the MCL or Rule-identified GWPS.

Following the rule requirements, background concentrations were evaluated to establish site-specific GWPS for statistical comparison of Appendix IV constituents. Table 7 summarizes the background limit established at each monitoring well and the applicable GWPS established under State and Federal rules.

Confidence intervals were calculated for each of the Appendix IV parameters in each downgradient well for comparison to the GWPS. Only when the entire confidence interval is above a GWPS is the well/constituent pair considered to exceed its respective standard, and thus an SSL exceedance identified.

A summary table of the statistical results accompanies the prediction limits for Appendix III and confidence intervals for Appendix IV in Appendix D. The data included for statistical analyses of background concentrations includes historical results through the current event. Tolerance limits for confidence interval calculations have been updated to include current data. Due to varying reporting limits for background samples over time, the most recent reporting limit is used when analytes are reported as non-detects. This process results in a more appropriate statistical test of the data set.

4.2 Statistical Analysis Results

Analytical data from September 2022 at AP-1 have been statistically analyzed in accordance with the Site's certified Statistical Analysis Plan (Groundwater Stats Consulting, 2019). The statistical results are included in Appendix D.

4.2.1 September 2022 Appendix III Statistical Results

The statistical analysis of the Appendix III parameters identified SSIs of boron, calcium, chloride, fluoride, pH, sulfate, and total dissolved solids (TDS) for the September 2022 assessment monitoring event. A detailed list of the noted exceedances is presented in Appendix D.

4.2.2 September 2022 Appendix IV Statistical Results

The statistical analysis of the Appendix IV analytes identified SSLs of the following parameters for the September 2022 monitoring event using the GWPS established according to both 40 CFR § 257.95(h) and 391-3-4-.10(6)(a):

AP-1 Confidence Interval Statistically Significant Level Exceedances, September 2022	
Appendix IV Parameter	AP-1 Detection Monitoring Well
Arsenic	DGWC-69
Cobalt	DGWC-40
Molybdenum	DGWC-68A

5.0 ASSESSMENT MONITORING AND DELINEATION STATUS

A network of piezometers has been installed at the Site (Golder, 2021), and several of these piezometers have been sampled to characterize the nature and extent of arsenic, cobalt, and molybdenum SSLs. In addition, Georgia Power conservatively elected to sample surface water at multiple locations to complete horizontal delineation where proximity to surface water prevented installation of additional wells downgradient of the detection monitoring wells exhibiting SSLs (Section 2.3). The table below summarizes the delineation status for each SSL. The delineation status at AP-1 is discussed in the *Semi-Annual Remedy Selection and Design Progress Report* (Appendix E) and includes isoconcentration contours for each of the constituents with an exceedance of the GWPS. Based on review of the analytical results, statistical analyses and the isoconcentration contours, horizontal and vertical delineation is complete.

Constituent of Concern	Detection Monitoring Well with SSL	Vertical Delineation Well	Horizontal Delineation Well/ Surface Water Monitoring Location
Arsenic	DGWC-69	B-112D	UT02
Molybdenum ^[1]	DGWC-68A	B-113D	UT03
Cobalt	DGWC-40	B-105D	B-100 / B-62 / CR-0.1

Note:

[1] An ASD has been submitted for the occurrence of Molybdenum at DGWC-68A.

The evidence for a natural source of molybdenum to groundwater includes:

- Pure molybdenite crystals were identified in gneissic/pegmatitic bedrock within the screened interval of DGWC-68A.
- Molybdenum concentrations in bedrock samples were substantially higher (>800 times) than average values for various rock types (i.e., crustal, felsic, or mafic).
- Molybdenum is known to be present in regional aquifer materials based on previous studies.

Based on information presented in the ASD, the molybdenum concentrations at DGWC-68A are attributed to a natural source, i.e., the molybdenum-rich bedrock in which DGWC-68A is screened, and not due to a release from the Ash Pond.

6.0 ASSESSMENT OF CORRECTIVE MEASURES

Following the requirements of 40 CFR § 257.96, Plant McDonough documented an Assessment of Corrective Measures (ACM) on December 4, 2020 for arsenic, cobalt, and molybdenum (Golder, 2020).

In accordance with 40 CFR § 257.97(a), a remedy selection progress report is prepared and submitted concurrent with each semi-annual groundwater monitoring report to document results associated with additional data collection, and present progress toward selection and design of a groundwater remedy. A copy of the report is included as Appendix E. At least 30 days prior to the selection of remedy or remedies, a public meeting to discuss the results of the corrective measures assessment will be held pursuant to 40 CFR 257.96(e).

The *Semi-Annual Remedy Selection and Design Progress Report* that is included as Appendix E includes the following information:

- i) A summary of the closure status for AP-1 as it relates to source control
- ii) A summary of work completed to achieve delineation of constituents exceeding GWPS and a summary of data collected to date towards remedy selection
- iii) A summary of remedial alternatives and progress towards remedy selection

7.0 MONITORING PROGRAM STATUS

Statistical evaluations of the groundwater monitoring data for AP-1 confirm (1) SSIs of Appendix III groundwater monitoring parameters above background and (2) SSLs of Appendix IV groundwater monitoring parameters above the established GWPS. AP-1 will continue to be monitored in accordance with the assessment monitoring program pursuant to 40 CFR § 257.95. An ACM was documented on December 4, 2020 following the provisions of 40 CFR § 257.96. Pursuant to 40 CFR 257.95(g)(1)(iv), the additional delineation wells and surface water monitoring locations may continue to be sampled as part of the ongoing semi-annual assessment monitoring program.

8.0 CONCLUSIONS AND FUTURE ACTIONS

This *2022 Semi-Annual Groundwater Monitoring and Corrective Action Report, Georgia Power Plant McDonough-Atkinson - Ash Pond 1* was prepared to fulfill the requirements of US EPA CCR Rule 40 CFR 257 Subpart D and GA EPD Rule 391-3-4-.10.

The groundwater flow directions interpreted during the most recent sampling events are consistent with historical evaluations, and based on our review, the monitoring well network continues to effectively monitor the uppermost aquifer in the vicinity of AP-1.

Review of analytical results and statistical analyses developed for the Site indicates confirmed SSIs of Appendix III above background and SSLs of Appendix IV above the established GWPS. In accordance with 40 CFR § 257.96, Georgia Power has initiated an ACM study for the identified SSLs. Data collected to date have delineated the horizontal and vertical extent of arsenic, cobalt, and molybdenum for AP-1. An ASD for the occurrence of molybdenum in groundwater, was submitted to GA EPD in July 2022 and is pending approval. Results from rock analyses completed near DGWC-68A indicate naturally occurring molybdenum is present in the rock in the form of molybdenite.

Based on the findings presented herein, Plant McDonough will continue with assessment groundwater monitoring and reporting. The next sampling event is tentatively scheduled for February 2023.

9.0 REFERENCES

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TABLES

TABLE 1
SUMMARY OF MONITORING WELL, ASSESSMENT WELL AND PIEZOMETER CONSTRUCTION DATA
 Georgia Power Company - Plant McDonough
 Atlanta, Georgia

Well-ID	Hydraulic Location	Screened Media	NAD 83 Northing	NAD 83 Easting	Top of Casing Elevation (feet NAVD 88)	Ground Surface Elevation (feet NAVD 88)	Total Well Depth (feet bgs)	Top of Screen Elevation (feet NAVD 88)	Bottom of Screen Elevation (feet NAVD 88)	Screen Length (feet)	Date of Installation
ASH POND 1 (AP-1) DETECTION MONITORING WELL NETWORK											
DGWA-53	Upgradient	Upper Bedrock	1393472.8	2201668.8	844.26	841.3	28.9	823.7	813.7	10	9/24/2016
DGWA-70A	Upgradient	Overburden	1390481.4	2200591.6	808.52	805.8	59.3	756.9	746.9	10	5/10/2017
DGWA-71	Upgradient	Overburden	1393963.3	2201714.8	863.84	861.2	43.8	827.8	817.8	10	2/28/2017
DGWC-37	Downgradient	Overburden	1390482.2	2200919.8	766.21	763.7	39.7	734.4	724.4	10	11/28/2012
DGWC-38	Downgradient	Overburden	1390362.7	2201148.6	757.43	754.7	25.0	740.0	730.0	10	11/29/2012
DGWC-39	Downgradient	Overburden	1390303.6	2201540.1	759.89	757.0	21.2	746.2	736.2	10	11/6/2012
DGWC-40	Downgradient	Overburden	1390625.7	2201825.9	779.06	776.2	34.9	751.7	741.7	10	11/5/2012
DGWC-67	Downgradient	Overburden	1390953.8	2200830.7	766.70	767.0	56.3	720.7	710.7	10	3/14/2017
DGWC-68A	Downgradient	Overburden	1391301.2	2200734.9	765.33	765.4	29.8	746.0	736.0	10	4/20/2017
DGWC-69	Downgradient	Overburden	1391585.0	2200657.1	763.75	764.0	24.3	749.7	739.7	10	3/16/2017
DGWC-121	Downgradient	Overburden	1390739.7	2200849.4	764.16	764.5	50.0	724.8	714.8	10	3/22/2022
ASH POND 1 (AP-1) ASSESSMENT MONITORING WELL NETWORK											
B-62	Downgradient	Upper Bedrock	1389828.1	2201811.2	760.08	760.4	39.9	730.7	720.7	10	10/4/2016
B-100	Downgradient	Overburden	1390254.8	2202242.1	777.95	775.3	44.8	740.5	730.5	10	7/8/2020
B-105D	Downgradient	Upper Bedrock	1390634.5	2201831.9	779.01	776.0	70.0	716.0	706.0	10	10/19/2020
B-112D	Downgradient	Upper Bedrock	1391564.2	2200664.1	765.58	766.1	55.0	721.4	711.4	10	3/22/2021
B-113D	Downgradient	Upper Bedrock	1391264.6	2200719.2	758.22	758.8	85.0	684.4	674.4	10	3/30/2021

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ASH POND 2 and ASH PONDS 3/4 (AP-2, 3/4) DETECTION MONITORING WELL NETWORK											
DGWA-53	Upgradient	Upper Bedrock	1393472.8	2201668.8	844.26	841.3	28.9	823.7	813.7	10	9/24/2016
DGWA-70A	Upgradient	Overburden	1390481.4	2200591.6	808.52	805.8	59.3	756.9	746.9	10	5/10/2017
DGWA-71	Upgradient	Overburden	1393963.3	2201714.8	863.84	861.2	43.8	827.8	817.8	10	2/28/2017
DGWC-2	Downgradient	Overburden/Upper Bedrock	1393958.0	2202119.5	850.88	848.3	49.0	809.6	799.6	10	10/2/2012
DGWC-4	Downgradient	Overburden	1394171.5	2202662.4	814.85	812.1	45.0	777.4	767.4	10	10/3/2012
DGWC-5	Downgradient	Overburden/Upper Bedrock	1394306.3	2202965.1	791.75	788.7	30.0	769.0	759.0	10	10/4/2012
DGWC-8	Downgradient	Overburden	1394322.2	2203882.1	826.38	824.1	49.1	785.4	775.4	10	10/10/2012
DGWC-9	Downgradient	Overburden	1394055.9	2204170.0	824.35	821.8	30.0	802.2	792.2	10	10/10/2012
DGWC-10	Downgradient	Overburden	1393818.3	2204201.1	823.55	820.9	45.4	785.9	775.9	10	10/11/2012
DGWC-11	Downgradient	Overburden	1393547.1	2204166.2	800.57	798.1	49.1	759.3	749.3	10	10/15/2012
DGWC-12	Downgradient	Overburden	1393149.4	2204128.3	773.86	771.2	25.1	756.5	746.5	10	10/15/2012
DGWC-13	Downgradient	Overburden	1392881.1	2204084.6	794.10	791.3	43.8	757.9	747.9	10	11/29/2012
DGWC-14	Downgradient	Overburden/Upper Bedrock	1392574.2	2204013.3	792.40	789.8	34.3	765.9	755.9	10	12/18/2012
DGWC-15	Downgradient	Overburden	1392544.1	2203679.0	824.50	821.5	67.1	764.8	754.8	10	11/29/2012
DGWC-17	Downgradient	Overburden	1392645.6	2203051.0	837.05	834.2	44.5	800.0	790.0	10	1/9/2013
DGWC-19	Downgradient	Overburden	1392342.6	2202601.0	825.46	822.9	39.8	793.5	783.5	10	3/12/2013
DGWC-20	Downgradient	Overburden	1392164.5	2202315.6	822.14	819.8	39.7	790.7	780.7	10	3/5/2013
DGWC-21	Downgradient	Overburden/Upper Bedrock	1392067.5	2202063.5	816.28	813.5	69.0	754.9	744.9	10	10/31/2012
DGWC-22	Downgradient	Upper Bedrock	1392126.3	2201791.9	816.59	813.7	60.0	764.0	754.0	10	10/25/2012
DGWC-23	Downgradient	Upper Bedrock	1392239.7	2201582.0	818.37	815.7	60.1	765.9	755.9	10	10/25/2012
DGWC-42	Downgradient	Overburden	1391327.8	2201870.2	804.68	802.0	50.4	762.1	752.1	10	11/12/2012
DGWC-47	Downgradient	Overburden/Upper Bedrock	1391553.8	2202610.5	797.45	794.3	28.8	775.9	765.9	10	6/23/2016
DGWC-48	Downgradient	Overburden/Upper Bedrock	1391314.6	2202290.2	788.33	785.2	30.0	765.6	755.6	10	6/22/2016

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ASH POND 2 and ASH PONDS 3/4 (AP-2, 3/4) ASSESSMENT MONITORING WELL NETWORK											
B-56	Downgradient	Overburden	1393957.9	2204187.8	823.59	821.0	45.0	786.4	776.4	10	10/3/2016
B-62	Downgradient	Upper Bedrock	1389828.1	2201811.2	760.08	760.4	39.9	730.7	720.7	10	10/4/2016
B-63	Downgradient	Overburden	1390999.1	2202978.1	777.10	777.3	46.0	741.8	731.8	10	10/6/2016
B-66	Downgradient	Overburden	1393858.2	2204277.5	815.90	813.3	55.3	768.3	758.3	10	11/16/2016
B-77	Downgradient	Overburden	1390948.7	2202942.0	776.86	777.1	42.0	745.1	735.1	10	9/17/2019
B-82	Downgradient	Overburden	1393750.0	2204258.1	810.07	807.5	45.0	773.0	763.0	10	9/21/2019
B-83	Downgradient	Overburden	1390735.5	2202695.6	776.98	777.1	48.6	738.5	728.5	10	9/30/2019
B-88	Downgradient	Overburden	1394401.1	2203738.3	820.07	817.0	72.0	755.0	745.0	10	11/15/2019
B-92	Downgradient	Overburden	1394392.7	2203026.7	785.08	785.3	24.6	770.7	760.7	10	12/11/2019
B-93	Downgradient	Overburden	1394348.7	2202946.7	789.07	789.2	28.9	770.3	760.3	10	12/12/2019
B-97	Downgradient	Overburden/Upper Bedrock	1394430.0	2203008.3	786.29	786.6	31.0	765.3	755.3	10	2/11/2020
B-98	Downgradient	Overburden	1394392.5	2202934.0	789.67	789.8	19.4	780.8	770.8	10	2/10/2020
B-100	Downgradient	Overburden	1390254.8	2202242.1	777.95	775.3	44.8	740.5	730.5	10	7/8/2020
B-101D	Downgradient	Overburden/Upper Bedrock	1394063.6	2204168.2	824.29	821.2	75.0	756.3	746.3	10	11/12/2020
B-102D	Downgradient	Upper Bedrock	1393828.4	2204200.4	823.42	820.6	85.0	746.2	736.2	10	11/10/2020
B-104D	Downgradient	Upper Bedrock	1391318.3	2202298.5	787.90	785.3	60.0	735.3	725.3	10	10/20/2020
B-106D	Downgradient	Upper Bedrock	1394327.1	2203869.2	826.21	823.5	80.0	754.1	744.1	10	11/13/2020
B-107D	Downgradient	Upper Bedrock	1392334.5	2202596.4	823.38	820.6	85.8	745.5	735.5	10	10/28/2020
B-108D	Downgradient	Upper Bedrock	1392156.1	2202312.5	821.13	818.4	80.0	749.4	739.4	10	10/27/2020
B-109D	Downgradient	Upper Bedrock	1393957.5	2202127.0	850.73	847.8	100.0	758.4	748.4	10	10/31/2020
B-111D	Downgradient	Upper Bedrock	1394303.4	2202956.4	791.87	789.1	85.0	714.9	704.9	10	11/3/2020
B-115D	Downgradient	Upper Bedrock	1391265.3	2202580.7	789.17	786.4	80.0	717.2	707.2	10	3/20/2021
B-120D	Downgradient	Upper Bedrock	1394047.2	2202436.4	836.42	834.0	70.0	775.0	765.0	10	3/6/2021
B-122D	Downgradient	Bedrock	1390992.8	2202975.4	777.03	777.3	85.0	707.5	697.5	10	3/24/2022

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PIEZOMETERS											
B-3	Downgradient	Overburden/Upper Bedrock	1394045.1	2202411.5	837.78	835.0	37.0	808.3	798.3	10	10/3/2012
B-6	Downgradient	Overburden	1394419.5	2203266.5	789.47	786.5	35.4	761.5	751.5	10	10/9/2012
B-7	Downgradient	Overburden	1394374.6	2203596.1	809.16	806.1	25.2	791.3	781.3	10	10/9/2012
B-16	Downgradient	Overburden	1392595.1	2203315.4	826.47	823.6	43.7	790.2	780.2	10	12/19/2012
B-18	Downgradient	Overburden	1392521.0	2202875.5	826.56	823.9	32.6	801.5	791.5	10	1/10/2013
B-24	Downgradient	Upper Bedrock	1392479.9	2201450.0	822.11	819.3	79.1	751.0	741.0	10	10/24/2012
B-25	Downgradient	Upper Bedrock	1392813.3	2201502.7	836.54	833.5	54.8	789.1	779.1	10	10/24/2012
B-26	Downgradient	Upper Bedrock	1393105.6	2201550.4	853.60	850.6	49.3	811.7	801.7	10	10/23/2012
B-28	Downgradient	Overburden/Upper Bedrock	1391967.4	2201679.2	816.08	813.3	69.4	754.3	744.3	10	10/31/2012
B-29	Downgradient	Overburden	1391890.0	2201422.0	816.43	813.5	54.4	769.4	759.4	10	1/11/2013
B-31	Downgradient	Upper Bedrock	1392034.3	2200928.5	797.47	794.9	45.1	760.2	750.2	10	1/22/2013
B-41	Downgradient	Overburden	1390920.8	2201751.9	795.20	792.4	60.0	743.0	733.0	10	11/14/2012
B-50	Downgradient	Overburden	1391657.1	2201841.0	809.67	809.2	36.0	784.4	774.4	10	6/24/2016
B-51	Downgradient	Overburden	1390501.2	2200906.5	765.92	763.3	65.0	708.3	698.3	10	6/27/2016
B-52	Downgradient	Overburden	1392308.3	2201314.8	822.89	820.3	50.0	781.4	771.4	10	9/28/2016
B-54	Downgradient	Overburden/Upper Bedrock	1394423.5	2203140.7	785.46	782.6	34.2	758.8	748.8	10	9/26/2016
B-55	Downgradient	Overburden	1394142.6	2204147.9	825.12	822.9	52.0	781.9	771.9	10	9/22/2016
B-57	Downgradient	Upper Bedrock	1391396.3	2202736.9	789.04	786.0	50.5	746.0	736.0	10	9/24/2016
B-58	Downgradient	Overburden	1391125.7	2202426.5	788.17	785.2	45.0	750.7	740.7	10	9/23/2016
B-59	Downgradient	Overburden/Upper Bedrock	1394349.1	2203001.1	788.00	785.5	30.3	765.3	755.3	10	9/23/2016
B-60	Downgradient	Overburden	1391100.7	2202881.6	782.13	779.2	49.8	739.9	729.9	10	9/29/2016
B-61	Downgradient	Overburden	1390957.8	2202505.8	782.09	779.0	51.9	737.5	727.5	10	9/29/2016
B-64	Downgradient	Overburden	1394381.9	2203031.3	785.83	786.1	30.4	766.1	756.1	10	11/2/2016
B-65	Downgradient	Overburden/Upper Bedrock	1394381.2	2204050.8	821.95	822.3	45.4	787.9	777.9	10	11/15/2016

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PIEZOMETERS											
B-68	Downgradient	Overburden	1391298.2	2200714.2	758.68	759.0	18.0	751.0	741.0	10	3/16/2017
B-72	Downgradient	Overburden	1391242.2	2200723.9	758.85	758.09	21.9	746.6	736.6	10	4/19/2017
B-73	Downgradient	Overburden	1391352.4	2200697.5	759.46	758.85	15.8	753.5	743.5	10	4/19/2017
B-74	Downgradient	Overburden	1391279.8	2200665.3	759.44	758.96	16.5	748.2	743.2	5	4/25/2017
B-76	Downgradient	Overburden	1390716.9	2202756.0	760.31	760.54	38.5	732.0	722.0	10	9/18/2019
B-78	Downgradient	Overburden/Upper Bedrock	1394328.2	2202958.2	790.75	788.0	30.0	768.0	758.5	10	9/22/2019
B-79	Downgradient	Overburden	1394458.6	2203223.0	788.66	785.9	34.9	761.0	751.5	10	9/21/2019
B-80	Downgradient	Overburden	1394372.6	2203533.9	804.47	801.8	30.0	782.0	772.5	10	9/20/2019
B-81	Downgradient	Overburden	1394364.9	2203741.1	820.56	817.7	50.0	778.5	768.5	10	9/22/2019
B-84	Downgradient	Overburden	1390411.9	2202241.9	776.24	776.3	49.1	737.5	727.5	10	10/1/2019
B-85	Downgradient	Overburden/Upper Bedrock	1394433.4	2203134.5	782.54	782.7	34.5	758.5	748.5	10	11/18/2019
B-86	Downgradient	Overburden/Upper Bedrock	1394480.0	2203206.6	784.29	784.6	34.1	760.5	750.5	10	11/18/2019
B-87	Downgradient	Overburden	1394401.9	2203531.3	803.37	800.4	42.0	768.7	758.7	10	11/17/2019
B-89	Downgradient	Upper Bedrock	1394398.4	2204049.4	822.36	822.6	49.5	783.1	773.1	10	11/19/2019
B-90	Downgradient	Overburden	1394501.0	2203212.6	784.00	784.2	33.4	760.8	750.8	10	12/10/2019
B-91	Downgradient	Overburden	1394447.1	2203123.9	782.98	783.1	34.6	758.5	748.5	10	12/11/2019
B-94	Downgradient	Overburden	1394402.0	2203513.7	801.74	799.2	45.2	764.6	754.6	10	1/23/2020
B-95	Downgradient	Overburden	1394518.6	2203167.7	784.00	784.3	33.3	761.3	751.3	10	2/11/2020
B-96	Downgradient	Overburden	1394478.7	2203099.3	784.92	785.3	33.1	762.2	752.2	10	2/10/2020
B-99	Downgradient	Overburden	1394524.2	2203084.5	782.39	782.6	12.3	775.3	770.3	5	7/7/2020

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PIEZOMETERS											
B-103D	Downgradient	Upper Bedrock	1391543.5	2202614.4	795.96	793.8	70.0	733.8	723.8	10	10/15/2020
B-110D	Downgradient	Upper Bedrock	1391294.4	2200736.0	764.61	764.7	65.0	711.7	701.7	10	11/17/2020
B-116D	Upgradient	Upper Bedrock	1390483.7	2200611.0	807.82	805.3	90.0	726.1	716.1	10	3/8/2021
B-117D	Upgradient	Upper Bedrock	1393963.8	2201727.3	863.82	861.2	75.0	796.5	786.5	10	3/17/2021
B-118	Upgradient	Upper Bedrock	1391219.3	2200449.7	807.70	805.0	75.0	740.2	730.2	10	3/9/2021
B-119D	Upgradient	Upper Bedrock	1391236.4	2200446.6	807.15	804.5	105	709.8	699.8	10	3/16/2021
B-123D	Downgradient	Bedrock	1391234.4	2202608.4	781.80	778.9	160.0	668.9	618.9	50	4/4/2022

Notes:

1. Coordinate System: NAD 1983 State Plane Georgia West (U.S. feet)
2. bgs - Below Ground Surface; NAD - North American Datum; NAVD - North American Vertical Datum

TABLE 2
GROUNDWATER SAMPLING EVENT SUMMARY
 Georgia Power Company - Plant McDonough Ash Pond 1
 Atlanta, Georgia

Well ID	Hydraulic Location	Summary of Sample Events		Status of Monitoring Well
		September 2022		
Purpose of Sampling Event		Detection/ Assessment		
ASH POND 1 (AP-1) MONITORING WELL NETWORK				
DGWA-53	Upgradient	X		Assessment
DGWA-70A	Upgradient	X		Assessment
DGWA-71	Upgradient	X		Assessment
DGWC-37	Downgradient	X		Assessment
DGWC-38	Downgradient	X		Assessment
DGWC-39	Downgradient	X		Assessment
DGWC-40	Downgradient	X		Assessment
DGWC-67	Downgradient	X		Assessment
DGWC-68A	Downgradient	X		Assessment
DGWC-69	Downgradient	X		Assessment
DGWC-121	Downgradient	X		Assessment
ASH POND 1 (AP-1) ASSESSMENT MONITORING WELL NETWORK				
B-62	Downgradient	X		Assessment
B-100	Downgradient	X		Assessment
B-105D	Downgradient	X		Assessment
B-112D	Downgradient	X		Assessment
B-113D	Downgradient	X		Assessment
ASH POND 1 (AP-1) SUPPLEMENTAL SAMPLING				
B-90	Upgradient	X		Supplemental
B-91	Upgradient	X		Supplemental
B-95	Upgradient	X		Supplemental
B-96	Upgradient	X		Supplemental
B-99	Upgradient	X		Supplemental
B-116D	Upgradient	X		Supplemental
B-117D	Upgradient	X		Supplemental
B-118	Upgradient	X		Supplemental
B-119D	Upgradient	X		Supplemental

Notes:

1. X - indicates well sampled during event

TABLE 3
SUMMARY OF GROUNDWATER ELEVATIONS
 Georgia Power Company - Plant McDonough
 Atlanta, Georgia

Well ID	Top of Casing Elevation (feet NAVD 88)	Groundwater Elevation (feet NAVD 88)
		9/6/2022
ASH POND 1 (AP-1) DETECTION MONITORING WELL NETWORK		
DGWA-53	844.26	830.21
DGWA-70A	808.52	765.56
DGWA-71	863.84	834.48
DGWC-37	766.21	752.23
DGWC-38	757.43	750.93
DGWC-39	759.89	752.24
DGWC-40	779.06	760.17
DGWC-67	766.70	756.15
DGWC-68A	765.33	754.83
DGWC-69	763.75	757.45
DGWC-121	764.16	754.49
ASH POND 1 (AP-1) ASSESSMENT MONITORING WELL NETWORK		
B-62	760.08	743.73
B-100	777.95	743.66
B-105D	779.01	760.68
B-112D	765.58	757.70
B-113D	758.22	756.18

TABLE 3
SUMMARY OF GROUNDWATER ELEVATIONS
 Georgia Power Company - Plant McDonough
 Atlanta, Georgia

Well ID	Top of Casing Elevation (feet NAVD 88)	Groundwater Elevation (feet NAVD 88)
		9/6/2022
ASH POND 2 and ASH PONDS 3/4 (AP-2, 3/4) DETECTION MONITORING WELL NETWORK		
DGWA-53	844.26	830.21
DGWA-70A	808.52	765.56
DGWA-71	863.84	834.48
DGWC-2	850.88	820.72
DGWC-4	814.85	789.10
DGWC-5	791.75	780.26
DGWC-8	826.38	786.86
DGWC-9	824.35	795.82
DGWC-10	823.55	791.80
DGWC-11	800.57	784.41
DGWC-12	773.86	763.28
DGWC-13	794.10	760.03
DGWC-14	792.40	770.85
DGWC-15	824.50	783.46
DGWC-17	837.05	800.32
DGWC-19	825.46	799.23
DGWC-20	822.14	797.91
DGWC-21	816.28	797.85
DGWC-22	816.59	794.02
DGWC-23	818.37	795.43
DGWC-42	804.68	774.48
DGWC-47	797.45	780.54
DGWC-48	788.33	773.65

TABLE 3
SUMMARY OF GROUNDWATER ELEVATIONS
 Georgia Power Company - Plant McDonough
 Atlanta, Georgia

Well ID	Top of Casing Elevation (feet NAVD 88)	Groundwater Elevation (feet NAVD 88)
		9/6/2022
ASH POND 2 and ASH PONDS 3/4 (AP-2, 3/4) ASSESSMENT MONITORING WELL NETWORK		
B-56	823.59	793.37
B-62	760.08	743.73
B-63	777.10	746.63
B-66	815.90	794.45
B-77	776.86	745.99
B-82	810.07	792.13
B-83	776.98	745.44
B-88	820.07	782.33
B-92	785.08	779.00
B-93	789.07	779.87
B-97	786.29	779.27
B-98	789.67	779.46
B-100	777.95	743.66
B-101D	824.29	792.29
B-102D	823.42	789.27
B-104D	787.90	780.82
B-106D	826.21	785.96
B-107D	823.38	799.55
B-108D	821.13	798.40
B-109D	850.73	811.56
B-111D	791.87	779.43
B-115D	789.17	767.79
B-120D	836.42	801.03
B-122D	777.03	746.21
PIEZOMETERS		
B-3	837.78	800.94
B-6	789.47	782.06
B-7	809.16	782.92
B-16	826.47	790.16
B-18	826.56	802.04
B-24	822.11	799.68
B-25	836.54	816.07
B-26	853.60	824.89
B-28	816.08	784.54
B-29	816.43	786.02
B-31	797.47	763.12
B-41	795.20	769.93
B-50	809.67	786.10
B-51	765.92	752.64
B-52	822.89	793.02
B-54	785.46	779.07
B-55	825.12	797.89
B-57	789.04	769.63

TABLE 3
SUMMARY OF GROUNDWATER ELEVATIONS
 Georgia Power Company - Plant McDonough
 Atlanta, Georgia

Well ID	Top of Casing Elevation (feet NAVD 88)	Groundwater Elevation (feet NAVD 88)
		9/6/2022
PIEZOMETERS		
B-58	788.17	768.27
B-59	788.00	779.44
B-60	782.13	750.08
B-61	782.09	762.50
B-64	785.83	779.03
B-65	821.95	804.03
B-68	758.68	754.58
B-72	758.46	754.86
B-73	759.21	754.48
B-74	759.06	754.61
B-76	760.53	744.63
B-78	790.75	779.19
B-79	788.66	781.01
B-80	804.47	783.21
B-81	820.56	782.91
B-85	782.54	779.10
B-86	784.29	781.56
B-87	803.37	783.35
B-89	822.36	797.69
B-90	784.00	781.48
B-91	782.98	778.93
B-94	801.74	783.27
B-95	784.00	781.30
B-96	784.92	778.77
B-99	782.39	778.27
B-103D	795.96	782.74
B-110D	764.61	755.43
B-116D	807.82	763.52
B-117D	863.82	833.87
B-118	807.70	755.79
B-119D	807.15	759.05
B-123D	781.80	769.00

Notes:

1. Elevation data recorded in feet referenced to the North American Vertical Datum 1988 (NAVD 88)
2. Survey data for monitoring wells and piezometers provided by Metro Engineering.

TABLE 4
GROUNDWATER VELOCITY CALCULATIONS - SEPTEMBER 2022
 Georgia Power Company - Plant McDonough Ash Pond 1
 Atlanta, Georgia

Flow Paths	Groundwater Elevation (feet NAVD 88) ¹	Δh (feet) ²	Δl (feet) ³	Hydraulic Gradient ($\Delta h/\Delta l$) ⁴	Average Hydraulic Conductivity, K (centimeter per second) ⁶	Assumed Effective Porosity (n_e) ⁷	Average Linear Groundwater Velocity	
							(feet per day) ⁵	(feet per year) ⁵
ASH POND 1 (AP-1)								
B-29/DGWC-68A	786.02	31.19	900	0.035	0.00077	0.2	0.38	138
	754.83							
B-28/DGWC-37	784.54	32.31	1700	0.019	0.00077	0.2	0.21	76
	752.23							
B-50/DGWC-39	786.10	33.86	1400	0.024	0.00077	0.2	0.26	96
	752.24							

Notes:

1. Elevation data recorded in feet referenced to the North American Vertical Datum 1988 (NAVD 88)
2. Δh = Change in groundwater elevation
3. Δl = Distance along flow path
4. $i = \Delta h / \Delta l$ gradient in feet
5. Velocity = $(i * K)/n_e$
6. Hydraulic conductivity based on historic aquifer performance tests
7. Assumed effective porosities for overburden was based on the default values recommended by USEPA for a silty sand-type soil (1996). Assumed effective porosity for upper bedrock was derived from Daniel and Dahlen (2002) and Dowd and Marshall (1995).

**TABLE 5A
ANALYTICAL DATA SUMMARY
September 2022**

Georgia Power Company - Plant McDonough Ash Pond 1
Atlanta, Georgia

Analyte	Units	DETECTION MONITORING WELLS										
		DGWA-53	DGWA-70A	DGWA-71	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67	DGWC-68A	DGWC-69	DGWC-121
		9/8/2022	9/7/2022	9/7/2022	9/9/2022	9/12/2022	9/7/2022	9/7/2022	9/8/2022	9/7/2022	9/7/2022	9/8/2022
Appendix III												
BORON, TOTAL	mg/L	0.054	< 0.0086	< 0.0086	2.0	2.8	3.3	0.84	4.3	2.0	0.23	2.1
CALCIUM, TOTAL	mg/L	17.2	5.9	6.4	66.2	87.6	92.5	44.8	47.4	53.5	13.1	45.0
CHLORIDE, TOTAL	mg/L	1.6	2.1	8.2	5.4	8.5	8.2	15.0	8.9	4.1	4.9	4.5
FLUORIDE, TOTAL	mg/L	0.11	0.061 J	0.056 J	0.082 J	0.12	0.11	0.14	0.096 J	0.11	0.11	0.093 J
pH	S.U.	6.32	5.60	5.65	6.30	6.05	6.43	4.54	6.21	6.62	6.20	6.32
SULFATE, TOTAL	mg/L	12.0	< 0.50	7.0	96.6	234	146	203	117	36.5	11.6	84.8
TOTAL DISSOLVED SOLIDS	mg/L	129	34.0	82.0	300	468	449	339	252	256	102	261
Appendix IV												
ANTIMONY, TOTAL	mg/L	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078
ARSENIC, TOTAL	mg/L	0.0029 J	0.0024 J	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.0022	0.024	< 0.0022
BARIUM, TOTAL	mg/L	0.077	0.039	0.025	0.079	0.027	0.099	0.016	0.082	0.098	0.065	0.042
BERYLLIUM, TOTAL	mg/L	< 0.000054	0.000084 J	0.000075 J	0.000057 J	< 0.000054	< 0.000054	0.0031	< 0.000054	< 0.000054	< 0.000054	< 0.000054
CADMIUM, TOTAL	mg/L	< 0.00011	< 0.00011	< 0.00011	< 0.00011	0.00013 J	< 0.00011	0.00081	< 0.00011	0.00020 J	< 0.00011	< 0.00011
CHROMIUM, TOTAL	mg/L	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011
COBALT, TOTAL	mg/L	0.012	< 0.00039	< 0.00039	< 0.00039	0.0014 J	0.0065	0.037	0.0010 J	< 0.00039	< 0.00039	0.0019 J
FLUORIDE, TOTAL	mg/L	0.11	0.061 J	0.056 J	0.082 J	0.12	0.11	0.14	0.096 J	0.11	0.11	0.093 J
LEAD, TOTAL	mg/L	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.00089
LITHIUM, TOTAL	mg/L	0.0083 J	< 0.00073	0.0012 J	0.0019 J	0.0030 J	< 0.00073	0.0023 J	0.0048 J	< 0.00073	0.0025 J	0.010 J
MERCURY, TOTAL	mg/L	< 0.00013	< 0.00013	0.00013 J	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013
MOLYBDENUM, TOTAL	mg/L	0.027	< 0.00074	< 0.00074	< 0.00074	0.0012 J	< 0.00074	< 0.00074	< 0.00074	0.20	0.0067 J	< 0.00074
RADIUM (226 + 228)	pCi/L	1.69	0.504 U	0.588 U	0.719 U	0.479 U	0.637 U	0.772 U	0.699 U	0.174 U	1.82	2.00
SELENIUM, TOTAL	mg/L	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0014	0.0018 J	< 0.0014	< 0.0014	< 0.0014	< 0.0014
THALLIUM, TOTAL	mg/L	< 0.00018	< 0.00018	< 0.00018	< 0.00018	< 0.00018	< 0.00018	< 0.00018	< 0.00018	< 0.00018	< 0.00018	< 0.00018
Additional Parameters												
ALKALINITY , BICARBONATE	mg/L	78.6	27.6	16.0	134	87.1	256	< 5.0	99.1	201	54.2	111
ALKALINITY , CARBONATE	mg/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
ALKALINITY , TOTAL	mg/L	78.6	27.6	16.0	134	87.1	256	< 5.0	99.1	201	54.2	111
MAGNESIUM	mg/L	5.8	2.3	0.87	14.7	26.4	22.4	19.4	18.5	17.6	3.4	12.7
POTASSIUM	mg/L	3.6	1.6	0.76	4.4	4.1	2.9	5.9	3.8	3.8	2.8	3.7
SODIUM	mg/L	7.3	3.4	8.1	11.0	12.0	13.6	19.2	10.8	9.60	9.6	10.8
IRON, TOTAL	mg/L	5.4	< 0.025	< 0.025	0.093	0.040	12.3	< 0.025	< 0.025	0.097	0.075	3.3
FERROUS (II)	mg/L	3.0	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0	0.0	2.75
FERRIC (III)	mg/L	2.4	< 0.025	< 0.025	0.093	0.040	6.3	< 0.025	< 0.025	0.097	0.075	0.55

Notes:

1. mg/L - milligrams per Liter
2. pCi/L - picocuries per Liter
3. S.U. - Standard Units
4. < indicates the substance was not detected above the analytical method detection limit (MDL). The value displayed is the method detection limit.
5. J indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed is qualified by the laboratory as an estimated number.
6. Radium data are a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.

**TABLE 5A
ANALYTICAL DATA SUMMARY
September 2022**

Georgia Power Company - Plant McDonough Ash Pond 1
Atlanta, Georgia

Analyte	Units	ASSESSMENT MONITORING WELLS				
		B-62	B-100	B-105D	B-112D	B-113D
		9/9/2022	9/8/2022	9/7/2022	9/7/2022	9/12/2022
Appendix III						
BORON, TOTAL	mg/L	0.064	0.24	0.87	0.26	0.048
CALCIUM, TOTAL	mg/L	31.4	46.0	73.2	26.5	36.5
CHLORIDE, TOTAL	mg/L	5.3	10.2	16.4	2.9	7.6
FLUORIDE, TOTAL	mg/L	0.13	0.072 J	0.11	0.27	1.0
pH	S.U.	6.22	5.24	6.44	6.72	7.95
SULFATE, TOTAL	mg/L	45.8	399	263	18.2	35.0
TOTAL DISSOLVED SOLIDS	mg/L	160	606	479	153	197
Appendix IV						
ANTIMONY, TOTAL	mg/L	< 0.00078	< 0.00078	< 0.00078	< 0.00078	< 0.00078
ARSENIC, TOTAL	mg/L	< 0.0022	< 0.0022	0.0026 J	< 0.0022	< 0.0022
BARIUM, TOTAL	mg/L	0.018	0.021	0.035	0.0026 J	0.0051
BERYLLIUM, TOTAL	mg/L	0.00013 J	0.00058	< 0.000054	< 0.000054	< 0.000054
CADMIUM, TOTAL	mg/L	< 0.00011	0.00027 J	< 0.00011	< 0.00011	< 0.00011
CHROMIUM, TOTAL	mg/L	< 0.0011	< 0.0011	< 0.0011	< 0.0011	< 0.0011
COBALT, TOTAL	mg/L	< 0.00039	0.028	0.0040 J	< 0.00039	< 0.00039
FLUORIDE, TOTAL	mg/L	0.13	0.072 J	0.11	0.27	1.0
LEAD, TOTAL	mg/L	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.00089
LITHIUM, TOTAL	mg/L	0.0085 J	0.0023 J	0.013 J	0.0039 J	0.0084 J
MERCURY, TOTAL	mg/L	< 0.00013	< 0.00013	0.00014 J	< 0.00013	< 0.00013
MOLYBDENUM, TOTAL	mg/L	< 0.00074	< 0.00074	< 0.00074	0.028	0.052
RADIUM (226 + 228)	pCi/L	1.96	0.643 U	3.05	0.755 U	0.440 U
SELENIUM, TOTAL	mg/L	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0014
THALLIUM, TOTAL	mg/L	< 0.00018	< 0.00018	< 0.00018	< 0.00018	< 0.00018
Additional Parameters						
ALKALINITY , BICARBONATE	mg/L	70.3	31.5	42.0	106	125
ALKALINITY , CARBONATE	mg/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
ALKALINITY , TOTAL	mg/L	70.3	31.5	42.0	106	125
MAGNESIUM	mg/L	5.1	46.3	25.2	8.0	4.80
POTASSIUM	mg/L	2.4	1.2	8.2	3.1	4.8
SODIUM	mg/L	10.2	27.0	19.9	15.0	22.2
IRON, TOTAL	mg/L	6.5	25.0	1.9	0.026 J	0.25
FERROUS (II)	mg/L	1.5	7.0	0.0	0.0	0.0
FERRIC (III)	mg/L	5.0	18	1.9	0.026 J	0.25

Notes:

1. mg/L - milligrams per Liter
2. pCi/L - picocuries per Liter
3. S.U. - Standard Units
4. < indicates the substance was not detected above the analytical method detection limit (MDL). The value c
5. J indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed is qualified by the laboratory as an
6. Radium data are a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample

TABLE 5B
ASSESSMENT MONITORING ANALYTICAL DATA SUMMARY
Additional Sampling - September 2022
Georgia Power Company - Plant McDonough
Atlanta, Georgia

Analyte	Units	ADDITIONAL SAMPLING					
		B-116D	B-117D	B-118	B-119D	B-122D	B-123D
		9/8/2022	9/15/2022	9/9/2022	9/12/2022	9/14/2022	9/20/2022
Appendix III							
BORON, TOTAL	mg/L	< 0.0086	0.011 J	< 0.0086	0.048	0.25	0.49
CALCIUM, TOTAL	mg/L	10.1	9.50	5.20	10.4	51.0	90.8
CHLORIDE, TOTAL	mg/L	2.4	4.6	3.1	1.8	15.5	8.6
FLUORIDE, TOTAL	mg/L	0.065 J	0.090 J	0.080 J	0.084 J	0.17	0.57
pH	S.U.	5.97	5.86	6.49	6.57	6.07	7.13
SULFATE, TOTAL	mg/L	0.54 J	14.4	2.8	2.8	121	292
TOTAL DISSOLVED SOLIDS	mg/L	82.0	106	78.0	87.0	315	533
Appendix IV							
ANTIMONY, TOTAL	mg/L	< 0.00078	< 0.00078	< 0.00078	0.0015 J	< 0.00078	< 0.00078
ARSENIC, TOTAL	mg/L	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.0022	< 0.0022
BARIUM, TOTAL	mg/L	0.017	0.043	0.022	0.0029 J	0.046	0.023
BERYLLIUM, TOTAL	mg/L	< 0.000054	< 0.000054	< 0.000054	< 0.000054	0.00028 J	0.00022 J
CADMIUM, TOTAL	mg/L	< 0.00011	< 0.00011	< 0.00011	< 0.00011	< 0.00011	< 0.00011
CHROMIUM, TOTAL	mg/L	< 0.0011	< 0.0011	0.0017 J	< 0.0011	< 0.0011	< 0.0011
COBALT, TOTAL	mg/L	< 0.00039	< 0.00039	< 0.00039	0.0031 J	0.0033 J	0.056
FLUORIDE, TOTAL	mg/L	0.065 J	0.090 J	0.080 J	0.084 J	0.17	0.57
LEAD, TOTAL	mg/L	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.00089	< 0.00089
LITHIUM, TOTAL	mg/L	0.0054 J	0.0094 J	0.0024 J	0.0045 J	0.013 J	0.034
MERCURY, TOTAL	mg/L	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013	< 0.00013
MOLYBDENUM, TOTAL	mg/L	< 0.00074	< 0.00074	0.0047 J	0.015	0.0011 J	0.0015 J
RADIUM (226 + 228)	pCi/L	0.686 U	0.875 U	0.787 U	0.328 U	7.94	2.95
SELENIUM, TOTAL	mg/L	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0014	< 0.0014
THALLIUM, TOTAL	mg/L	< 0.00018	< 0.00018	< 0.00018	< 0.00018	< 0.00018	< 0.00018
Additional Parameters							
ALKALINITY , BICARBONATE	mg/L	50.3	42.0	35.2	60.6	123	38.5
ALKALINITY , CARBONATE	mg/L	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0	< 5.0
ALKALINITY , TOTAL	mg/L	50.3	42.0	35.2	60.6	123	38.5
MAGNESIUM	mg/L	3.4	1.5	2.0	3.2	9.9	13.0
POTASSIUM	mg/L	2.2	2.6	2.3	2.0	4.0	7.6
SODIUM	mg/L	7.7	16.6	10.0	10.2	31.3	29.0
IRON, TOTAL	mg/L	0.087	< 0.025	0.14	1.5	13.8	5.4
FERROUS (II)	mg/L	0.0	0.0	0.0	0.0	4.0	4.5
FERRIC (III)	mg/L	0.087	< 0.025	0.14	1.5	9.8	0.9

Notes:

1. mg/L - milligrams per liter; pCi/L - picocuries per liter; S.U. - standard units.
- 2.-- -Substance Not analyzed
3. < indicates the substance was not detected above the analytical method detection limit (MDL). The value displayed is the method detection limit.
4. J indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce a reliable value. Therefore, the value displayed is qualified by the laboratory as an estimated number.
5. Radium data are a combination of radium isotopes 226 and 228. When results are reported below the MDC (Minimum Detectable Concentration), data is displayed with an accompanying U. The MDC varies depending upon the sample amount and elapsed time of the measurement.



TABLE 6
SURFACE WATER ANALYTICAL DATA SUMMARY
October 2022
Georgia Power Company - Plant McDonough Ash Pond 1
Atlanta, Georgia

Analyte	Units	SURFACE WATER SAMPLES						
		UT01_DS	UT01_US	UT02	UT03	CR+0.4	CR+0.2	CR-0.1
		10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022	10/27/2022
Appendix III								
Boron	mg/L	0.16	0.059	0.092	0.21	< 0.040	< 0.040	0.041
Calcium	mg/L	15.1	14.2	15.2	16.6	7.7	7.8	8.1
Chloride	mg/L	10.9	11.8	11.6	11.0	11.7	11.9	12.7
Fluoride	mg/L	0.26	0.30	0.28	0.27	0.18	0.18	0.19
Sulfate	mg/L	15.3	11.9	13.6	16.7	7.6	7.7	9.1
Total Dissolved Solids	mg/L	167	51.0	116	92.0	55.0	36.0	42.0
Appendix IV								
Arsenic	mg/L	< 0.0050	< 0.0050	< 0.0050	< 0.0050	< 0.0050	--	--
Cobalt	mg/L	--	--	--	--	< 0.0050	< 0.0050	< 0.0050
Lithium	mg/L	--	--	--	--	<0.030	<0.030	<0.030
Molybdenum	mg/L	< 0.010	< 0.010	--	< 0.010	< 0.010	--	--
Major Ions								
Alkalinity, Total as CaCO3	mg/L	46.6	40.5	42.7	43.5	27.3	27.0	27.4
Alkalinity, Bicarbonate (CaCO3)	mg/L	46.6	40.5	42.7	43.5	27.3	27.0	27.4
Magnesium	mg/L	3.0	2.7	2.8	3.4	2.3	2.3	2.4
Potassium	mg/L	3.4	3.6	3.6	3.6	4.3	4.3	4.3
Sodium	mg/L	11.1	11.9	12.2	12.1	12.8	12.9	13.8

Notes:

1. mg/L = milligrams per liter
2. < indicates the substance was not detected above the analytical reporting limit (RL). The value displayed is the RL.
3. "--" = Analyte not analyzed

TABLE 7
SUMMARY OF BACKGROUND LEVELS AND GWPS
Georgia Power Company - Plant McDonough Ash Pond 1
Atlanta, Georgia

Analyte	Units	Maximum Contaminant Level (MCL)	Rule Specified Limit (RSL)	Site Specific Background September 2022 ^[1]	GWPS ^[2] September 2022
Antimony	mg/L	0.006	--	0.003 ^[3]	0.006
Arsenic	mg/L	0.01	--	0.0054 ^[3]	0.01
Barium	mg/L	2.0	--	0.19	2.0
Beryllium	mg/L	0.004	--	0.0009	0.004
Cadmium	mg/L	0.005	--	0.0005 ^[3]	0.005
Chromium	mg/L	0.1	--	0.005 ^[3]	0.1
Cobalt	mg/L	not established	0.006	0.032	0.032
Fluoride	mg/L	4.0	--	0.42	4.0
Lead	mg/L	not established	0.015	0.001 ^[3]	0.015
Lithium	mg/L	not established	0.04	0.03 ^[3]	0.04
Mercury	mg/L	0.002	--	0.0002 ^[3]	0.002
Molybdenum	mg/L	not established	0.1	0.041	0.1
Radium (226 + 228)	pCi/L	5.0	--	4.8	5.0
Selenium	mg/L	0.05	--	0.005 ^[3]	0.05
Thallium	mg/L	0.002	--	0.001 ^[3]	0.002

Notes:

mg/L = milligrams per liter; pCi/L = picocuries per liter

[1] The background limits are used when determining the groundwater protection standard (GWPS) under 40 CFR § 257.95(h) and 391-3-4-.10(6)(a).

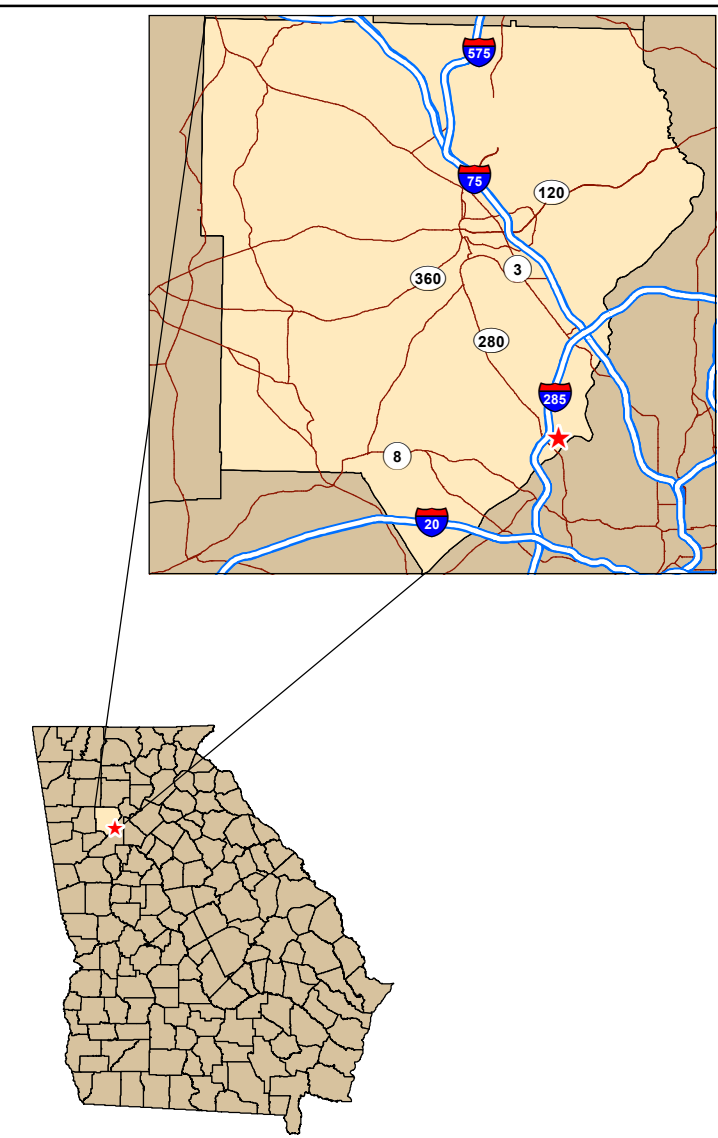
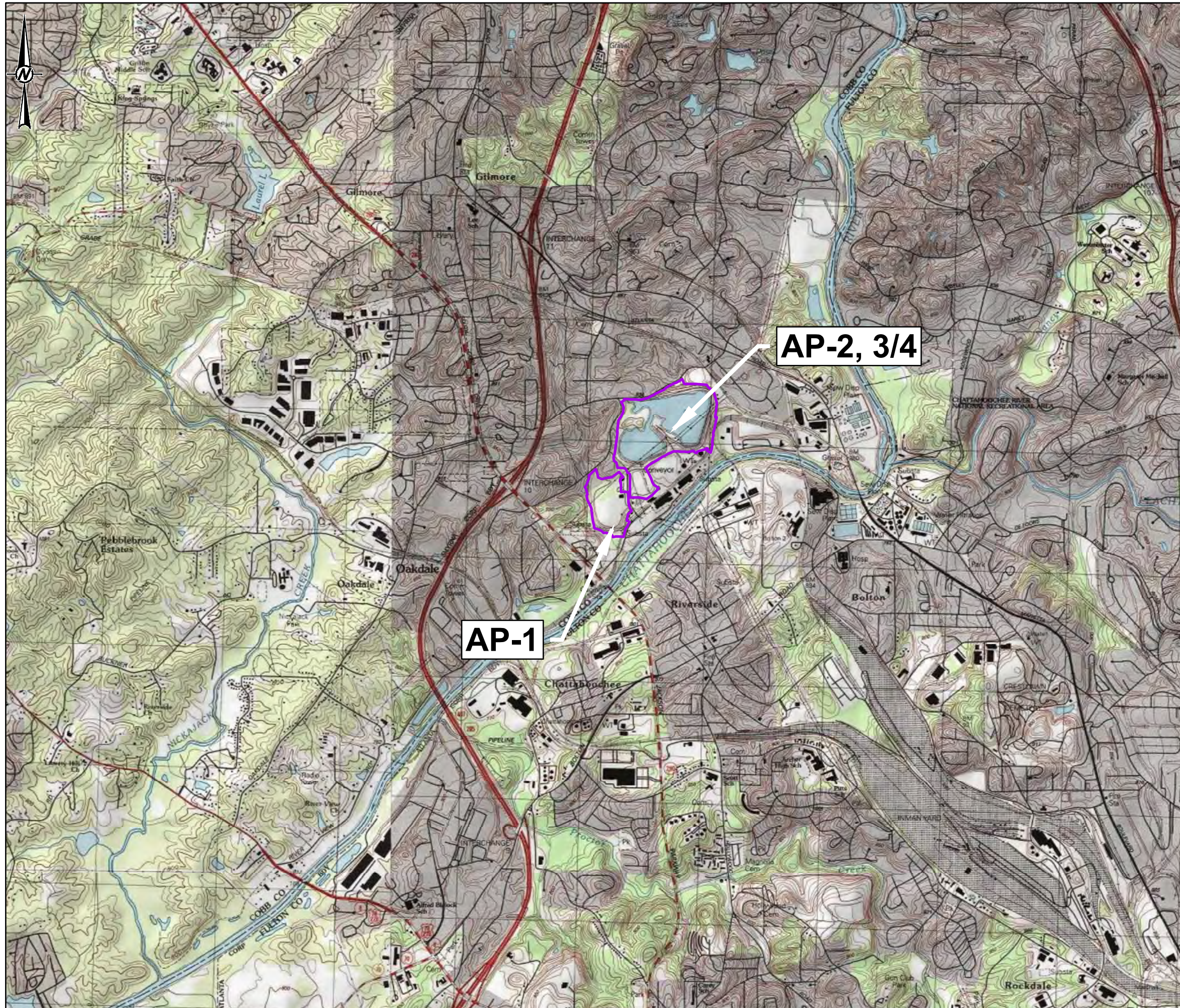
[2] Effective on February 22, 2022 the Georgia EPD has incorporated the updated GWPS into the current GA EPD Rules for Solid Waste Management 391-3-4-.10(6)(a). As described in the updated Rules, the GWPS is:

- (i) the MCL
- (ii) where an MCL has not been established for a constituent, Federal and State CCR Rules specify levels for cobalt (0.006 mg/L), lead (0.015 mg/L), lithium (0.040 mg/L), and molybdenum (0.100 mg/L)
- (iii) the respective background level for a constituent when the background level is higher than the MCL or Federal CCR Rule specified GWPS

[3] The background tolerance limit (TL) used to evaluate GWPS for this analyte equals the laboratory specified reporting limit (RL). Per the Statistical Analysis Plan, and in accordance with the Unified Guidance, a non-parametric limit approach was used when the data set contains greater than 50% non-detect results for this analyte. Under this approach, the TL equals the highest value reported, for which is the laboratory RL.

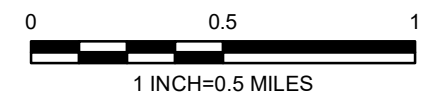


FIGURES



REFERENCE

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CLIENT
 GEORGIA POWER COMPANY PLANT
 MCDONOUGH-ATKINSON



PROJECT
 2022 SEMI-ANNUAL GROUNDWATER MONITORING
 AND CORRECTIVE ACTION REPORT-ASH POND 1

TITLE
SITE LOCATION MAP

CONSULTANT	YYYY-MM-DD	2022-4-26
	PREPARED	SEB
	DESIGN	SEB
	CHECKED	DP
	REVIEWED/APPROVED	RPK



LEGEND

- EXISTING CONTOURS (SEE REFERENCE 2)
- PROPERTY BOUNDARY (SEE REFERENCE 1)
- APPROXIMATE PRE-CLOSURE CCR LIMITS
- FINAL CLOSURE CCR LIMITS
- PERMIT BOUNDARY
- UPGRADIENT WELL
- AP-1 MONITORING WELL
- AP-2, 3/4 MONITORING WELL
- PIEZOMETER
- GOLDER 2017 BORINGS
- GOLDER 2021 PIEZOMETERS (SEE REFERENCE 3)
- AREA WHERE ASH HAS BEEN CERTIFIED REMOVED AS OF 2/28/2022

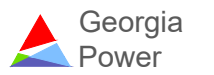
NOTES

- EXISTING TOPOGRAPHIC CONTOUR INTERVAL = 1 FOOT.
- CLOSURE ACTIVITIES FOR AP-1 WERE INITIATED IN JANUARY 2016 AND FINAL COVER CONSTRUCTION ACTIVITIES WERE COMPLETED IN Q1 2017. COMPLETION OF FINAL POST COVER CONSTRUCTION ACTIVITIES AND IMPROVEMENTS INCLUDING A PLANNED BARRIER WALL AT AP-1 ARE EXPECTED BY 2023. CLOSURE ACTIVITIES FOR AP-2 WERE INITIATED IN JANUARY 2016. AP-2 CLOSURE ACTIVITIES CONSISTED OF CLOSURE BY REMOVAL OF CCR, WHERE CCR REMOVED FROM AP-2 WAS PLACED IN THE ADJACENT UNITS AP-1 AND AP-3. CLOSURE CONSTRUCTION ACTIVITIES AT AP-2 WERE COMPLETED IN Q1 OF 2017, AND BACKFILL DEVELOPMENT OF AP-2 WAS STARTED IN 2020 AND IS EXPECTED TO BE COMPLETE IN 2021. CLOSURE ACTIVITIES FOR AP-3 AND AP-4 WERE INITIATED IN JANUARY 2016. AP-3 AND AP-4 ARE CURRENTLY UNDERGOING CLOSURE AS COMBINED UNIT AP-3/4, AND CLOSURE CONSTRUCTION ACTIVITIES ARE EXPECTED TO BE COMPLETE IN 2022.

REFERENCES

- APPROXIMATE PROPERTY BOUNDARY PROVIDED BY SOUTHERN COMPANY SERVICES (2017).
- THE EXISTING TOPOGRAPHY, CONTOUR ELEVATIONS AND AERIAL IMAGERY FOR THE ASH PONDS 1 THROUGH 4 AREAS PROVIDED BY GEORGIA POWER COMPANY ON FEBRUARY 2023. THE DATE OF THE AERIAL IMAGERY PROVIDED AND SHOWN ON THIS PLAN, FOR AP- 1 THROUGH 4 IS AUGUST 31, 2022.
- SELECT BORING/PIEZOMETER LOCATIONS AND ELEVATIONS RESURVEYED BY METRO ENGINEERING & SURVEYING CO., INC., 2020 / 2021.
- COORDINATES SYSTEM: NAD 1983 STATE PLANE GEORGIA WEST (U.S. FEET); ELEVATIONS DISPLAY IN FEET REFERENCED TO NORTH AMERICAN VERTICAL DATUM 1988 (FEET NAVD88).
- AERIAL IMAGERY FOR THE SURROUNDING AREAS OF ASH PONDS 1 THROUGH 4 SOURCE: GOOGLE EARTH © PRO 2010, IMAGE DATED 09/5/2019. IMAGE GEORECTIFIED BY GOLDER AND INTENDED FOR INDICATIVE PURPOSES ONLY.

CLIENT
GEORGIA POWER COMPANY
 PLANT MCDONOUGH - ATKINSON

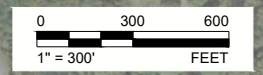


PROJECT
 2022 SEMI-ANNUAL GROUNDWATER MONITORING AND
 CORRECTIVE ACTIONS REPORT ASH POND 1

TITLE
PLANT MCDONOUGH CCR REMOVAL AREA

CONSULTANT	YYYY-MM-DD	2023-02-27
	DESIGNED	SEB
	PREPARED	CRP
	CHECKED	DLP
	REVIEWED / APPROVED	GLH

PROJECT NO. 166849622 REV. FIGURE 2



1 in IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET SIZE HAS BEEN MODIFIED FROM ANS D

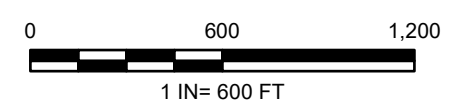


- LEGEND**
- AP-1 MONITORING WELL
 - AP-2,3/4 MONITORING WELL
 - UPGRADIENT WELL
 - ASSESSMENT MONITORING WELLS
 - PIEZOMETER
 - DEWATERING WELL
 - SURFACE WATER MONITORING LOCATION
 - STAFF GAUGE
 - PROPERTY BOUNDARY
 - PERMIT BOUNDARY

NOTES
 1. ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.

REFERENCE

1. AERIAL IMAGE DATED NOVEMBER 2019 FROM GOOGLE EARTH AND AUGUST 31, 2022 PROVIDED BY GPC.
2. COORDINATE SYSTEM: NAD 1983 STATE PLANE GEORGIA WEST (U.S. FEET).
3. MONITORING WELL/PIEZOMETER LOCATIONS AND ELEVATIONS SURVEYED BY METRO ENGINEERING AND SURVEYING COMPANY IN AUGUST 2020 WITH ADDITIONAL SURVEY PROVIDED IN JANUARY 2021 AND MAY 2021.



CLIENT
 GEORGIA POWER COMPANY
 PLANT MCDONOUGH-ATKINSON



PROJECT
 2022 SEMI-ANNUAL GROUNDWATER MONITORING AND CORRECTIVE ACTION REPORT-ASH POND 1

TITLE
MONITORING WELL, PIEZOMETER AND SURFACE WATER LOCATION MAP

CONSULTANT	YYYY-MM-DD	2022-07-11
	PREPARED	SEB
	DESIGN	DLP
	CHECKED	DP/RPK
	REVIEWED/APPROVED	RPK

ALL MEASUREMENTS ARE APPROXIMATE. THIS SHEET HAS BEEN MODIFIED FROM ANS-8.



LEGEND

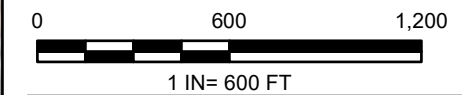
- AP-1 MONITORING WELL
- AP-2,3/4 MONITORING WELL
- UPGRADIENT WELL
- ★ ASSESSMENT MONITORING WELLS
- PIEZOMETER
- DEWATERING WELL
- APPROXIMATE GROUNDWATER FLOW
- GROUNDWATER SURFACE CONTOUR (FT-NAVD88)
- SURFACE WATER STREAM
- - - PERMIT BOUNDARY
- - - PROPERTY BOUNDARY
- EXISTING TOPOGRAPHY 10-FOOT
- EXISTING TOPOGRAPHY 2-FOOT

NOTES

1. ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.
2. GROUNDWATER ELEVATION MEASUREMENTS OBTAINED SEPTEMBER 6, 2022 BY WSP GOLDBERGER.
3. GROUNDWATER ELEVATIONS DISPLAYED IN FEET REFERENCED TO NORTH AMERICAN VERTICAL DATUM (FT NAVD88).
4. WELLS AND PIEZOMETERS THAT CONTAIN A "D" DESIGNATION FOLLOWING THE NUMBER ARE DEEP WELLS AND ELEVATIONS ARE NOT USED FOR CONTOURING.
5. NM = NOT MEASURED.

REFERENCE

1. AERIAL IMAGE DATED NOVEMBER 2019 FROM GOOGLE EARTH AND AUGUST 31, 2022 PROVIDED BY GPC.
2. COORDINATE SYSTEM: NAD 1983 STATE PLANE GEORGIA WEST (U.S. FEET).
3. MONITORING WELL/PIEZOMETER LOCATIONS AND ELEVATIONS SURVEYED BY METRO ENGINEERING AND SURVEYING COMPANY IN AUGUST 2020 WITH ADDITIONAL SURVEY PROVIDED IN JANUARY 2021 AND MAY 2021.



CLIENT
 GEORGIA POWER COMPANY
 PLANT MCDONOUGH-ATKINSON



PROJECT
 2022 SEMI-ANNUAL GROUNDWATER MONITORING AND
 CORRECTIVE ACTION REPORT-ASH POND 1

TITLE
SITE POTENTIOMETRIC MAP – SEPTEMBER 6, 2022

CONSULTANT	YYYY-MM-DD	2022-10-07
	PREPARED	SEB
	DESIGN	SEB
	CHECKED	DLP
	REVIEWED/APPROVED	RPK



IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANS/B

APPENDIX A

Field Data Forms and Instrument Calibration Records

APPENDIX A

Field Data Forms

Low-Flow Test Report:

Test Date / Time: 9/9/2022 11:13:42 AM

Project: Plant McDonough

Operator Name: Jude Waguespack

Location Name: DGWC-37 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 33.08 ft Total Depth: 43.08 ft Initial Depth to Water: 14.2 ft	Pump Type: dedicated bladder Tubing Type: LDPE Tubing Inner Diameter: 0.175 cm Tubing Length: 42 m Pump Intake From TOC: 38 ft Estimated Total Volume Pumped: 6250 ml Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 0.15 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
---	---	--

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 2	+/- 1000 %	+/- 0.3	
9/9/2022 11:13 AM	00:00	6.92 pH	24.56 °C	0.46 µS/cm	5.69 mg/L	1.48 NTU	29.8 mV	14.20 ft	250.00 ml/min
9/9/2022 11:18 AM	05:00	6.32 pH	21.78 °C	0.50 µS/cm	1.64 mg/L	1.22 NTU	64.3 mV	14.35 ft	250.00 ml/min
9/9/2022 11:23 AM	10:00	6.30 pH	21.15 °C	0.50 µS/cm	1.29 mg/L	0.42 NTU	71.7 mV	14.35 ft	250.00 ml/min
9/9/2022 11:28 AM	15:00	6.30 pH	21.10 °C	0.50 µS/cm	0.96 mg/L	0.66 NTU	72.6 mV	14.35 ft	250.00 ml/min
9/9/2022 11:33 AM	20:00	6.30 pH	21.26 °C	0.50 µS/cm	0.98 mg/L	0.44 NTU	65.0 mV	14.35 ft	250.00 ml/min
9/9/2022 11:38 AM	25:00	6.30 pH	21.21 °C	0.50 µS/cm	0.87 mg/L	0.46 NTU	73.0 mV	14.35 ft	250.00 ml/min

Samples

Sample ID:	Description:
DGWC-37	

Low-Flow Test Report:

Test Date / Time: 9/12/2022 11:57:53 AM

Project: Plant McDonough

Operator Name: M. Mann

Location Name: DGWC-38 Well Diameter: 2 in Casing Type: PVC Screen Length: 18 ft Top of Screen: 10 ft Total Depth: 28.08 ft Initial Depth to Water: 6.64 ft	Pump Type: Dedicated Bladder Tubing Type: Polyethylene Pump Intake From TOC: 23 ft Estimated Total Volume Pumped: 3950 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 0.2 ft	Instrument Used: Aqua TROLL 400 Serial Number: 851413
--	--	--

Test Notes:

Weather Conditions:

Sunny

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/12/2022 11:57 AM	00:00	6.24 pH	24.11 °C	673.06 µS/cm	2.09 mg/L	1.84 NTU	45.9 mV	6.64 ft	300.00 ml/min
9/12/2022 12:02 PM	05:00	6.07 pH	21.10 °C	714.07 µS/cm	0.28 mg/L	0.80 NTU	46.0 mV	6.89 ft	140.00 ml/min
9/12/2022 12:07 PM	10:00	6.05 pH	22.09 °C	710.96 µS/cm	0.21 mg/L	0.63 NTU	45.3 mV	6.86 ft	140.00 ml/min
9/12/2022 12:12 PM	15:00	6.05 pH	21.73 °C	710.90 µS/cm	0.18 mg/L	1.45 NTU	45.7 mV	6.84 ft	140.00 ml/min

Samples

Sample ID:	Description:
DGWC-38	
FB-3	

Low-Flow Test Report:

Test Date / Time: 9/7/2022 2:23:39 PM

Project: Plant McDonough

Operator Name: Jude Waguespack

Location Name: DGWC-39 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 14.65 ft Total Depth: 24.65 ft Initial Depth to Water: 7.85 ft	Pump Type: dedicated Bladder Tubing Type: LDPE Tubing Inner Diameter: 0.175 cm Tubing Length: 42 m Pump Intake From TOC: 19 ft Estimated Total Volume Pumped: 6000 ml Flow Cell Volume: 90 ml Final Flow Rate: 300 ml/min Final Draw Down: 1.21 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
---	---	--

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 2	+/- 1000 %	+/- 0.3	
9/7/2022 2:23 PM	00:00	6.39 pH	71.95 °F	755.26 µS/cm	0.26 mg/L	28.00 NTU	-22.0 mV	7.85 ft	300.00 ml/min
9/7/2022 2:28 PM	05:00	6.41 pH	70.98 °F	763.39 µS/cm	0.12 mg/L	11.50 NTU	-33.9 mV	8.64 ft	300.00 ml/min
9/7/2022 2:33 PM	10:00	6.42 pH	70.73 °F	765.36 µS/cm	0.11 mg/L	5.61 NTU	-35.2 mV	9.02 ft	300.00 ml/min
9/7/2022 2:38 PM	15:00	6.43 pH	70.72 °F	766.03 µS/cm	0.11 mg/L	3.59 NTU	-42.1 mV	9.06 ft	300.00 ml/min
9/7/2022 2:43 PM	20:00	6.43 pH	70.96 °F	766.04 µS/cm	0.11 mg/L	2.99 NTU	-40.6 mV	9.06 ft	300.00 ml/min

Samples

Sample ID:	Description:
DGWC-39	

Low-Flow Test Report:

Test Date / Time: 9/7/2022 11:48:55 AM

Project: Plant McDonough (22)

Operator Name: Cole Mayer

Location Name: DGWC-40 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 28.4 ft Total Depth: 38.4 ft Initial Depth to Water: 18.89 ft	Pump Type: Dedicated Bladder Tubing Type: LDPE Pump Intake From TOC: 33 ft Estimated Total Volume Pumped: 6250 ml Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 884187
--	---	--

Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/7/2022 11:48 AM	00:00	4.76 pH	25.97 °C	440.77 µS/cm	5.35 mg/L	1.11 NTU	42.2 mV	18.89 ft	250.00 ml/min
9/7/2022 11:53 AM	05:00	4.56 pH	21.07 °C	468.43 µS/cm	3.06 mg/L	0.97 NTU	45.3 mV	18.80 ft	250.00 ml/min
9/7/2022 11:58 AM	10:00	4.56 pH	20.96 °C	469.24 µS/cm	2.60 mg/L	1.56 NTU	46.1 mV	18.80 ft	250.00 ml/min
9/7/2022 12:03 PM	15:00	4.55 pH	20.98 °C	469.86 µS/cm	2.71 mg/L	2.49 NTU	47.0 mV	18.60 ft	250.00 ml/min
9/7/2022 12:08 PM	20:00	4.54 pH	20.94 °C	469.97 µS/cm	2.72 mg/L	1.21 NTU	47.9 mV	18.90 ft	250.00 ml/min
9/7/2022 12:13 PM	25:00	4.54 pH	20.84 °C	469.34 µS/cm	2.64 mg/L	1.03 NTU	48.9 mV	18.90 ft	250.00 ml/min

Samples

Sample ID:	Description:
DGWC-40	
Dup-1	

Low-Flow Test Report:

Test Date / Time: 9/8/2022 10:23:34 AM

Project: SCS Plant McDonough

Operator Name: Duane Fulton

Location Name: DGWC-67 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 45 ft Total Depth: 55.50 ft Initial Depth to Water: 10.60 ft	Pump Type: Alexis Peri Pump Tubing Type: LDPE Pump Intake From TOC: 50 ft Estimated Total Volume Pumped: 3500 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.3 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883533
---	---	--

Test Notes:

Weather Conditions:

Clear, 76

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/8/2022 10:23 AM	00:00	6.49 pH	24.51 °C	453.57 µS/cm	6.42 mg/L	6.92 NTU	182.3 mV	10.78 ft	100.00 ml/min
9/8/2022 10:28 AM	05:00	6.20 pH	20.97 °C	434.63 µS/cm	0.45 mg/L	1.90 NTU	117.8 mV	10.87 ft	100.00 ml/min
9/8/2022 10:33 AM	10:00	6.20 pH	20.66 °C	440.67 µS/cm	0.23 mg/L	0.65 NTU	131.0 mV	10.88 ft	100.00 ml/min
9/8/2022 10:38 AM	15:00	6.20 pH	20.59 °C	441.80 µS/cm	0.19 mg/L	0.38 NTU	96.2 mV	10.90 ft	100.00 ml/min
9/8/2022 10:43 AM	20:00	6.20 pH	20.66 °C	441.73 µS/cm	0.16 mg/L	0.59 NTU	90.9 mV	10.91 ft	100.00 ml/min
9/8/2022 10:48 AM	25:00	6.20 pH	20.67 °C	440.84 µS/cm	0.14 mg/L	0.56 NTU	87.9 mV	10.91 ft	100.00 ml/min
9/8/2022 10:53 AM	30:00	6.21 pH	20.68 °C	439.93 µS/cm	0.12 mg/L	0.07 NTU	85.6 mV	10.91 ft	100.00 ml/min
9/8/2022 10:58 AM	35:00	6.21 pH	20.73 °C	440.00 µS/cm	0.12 mg/L	0.00 NTU	83.7 mV	10.90 ft	100.00 ml/min

Samples

Sample ID:	Description:
DGWC-67	

Low-Flow Test Report:

Test Date / Time: 9/7/2022 2:44:23 PM

Project: SCS Plant McDonough

Operator Name: Duane Fulton

Location Name: DGWC-68A Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 19.79 ft Total Depth: 29.79 ft Initial Depth to Water: 10.56 ft	Pump Type: Alexis Peri Pump Tubing Type: LDPE Pump Intake From TOC: 24 ft Estimated Total Volume Pumped: 3250 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 0.24 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883533
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Test Notes:

Weather Conditions:

Cloudy, 83

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/7/2022 2:44 PM	00:00	6.72 pH	29.22 °C	390.34 µS/cm	3.45 mg/L	0.00 NTU	44.2 mV	10.75 ft	130.00 ml/min
9/7/2022 2:49 PM	05:00	6.60 pH	21.94 °C	434.38 µS/cm	0.23 mg/L	3.76 NTU	49.9 mV	10.75 ft	130.00 ml/min
9/7/2022 2:54 PM	10:00	6.61 pH	21.04 °C	437.27 µS/cm	0.16 mg/L	1.25 NTU	48.8 mV	10.80 ft	130.00 ml/min
9/7/2022 2:59 PM	15:00	6.61 pH	21.09 °C	438.66 µS/cm	0.14 mg/L	0.50 NTU	43.4 mV	10.80 ft	130.00 ml/min
9/7/2022 3:04 PM	20:00	6.61 pH	21.37 °C	435.86 µS/cm	0.12 mg/L	0.00 NTU	46.4 mV	10.80 ft	130.00 ml/min
9/7/2022 3:09 PM	25:00	6.62 pH	21.17 °C	437.92 µS/cm	0.11 mg/L	0.00 NTU	44.8 mV	10.80 ft	130.00 ml/min

Samples

Sample ID:	Description:
DGWC-68A	

Low-Flow Test Report:

Test Date / Time: 9/7/2022 10:33:01 AM

Project: SCS Plant McDonough

Operator Name: Duane Fulton

Location Name: DGWC-69 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 14.06 ft Total Depth: 24.06 ft Initial Depth to Water: 6.2 ft	Pump Type: Alexis Peri Pump Tubing Type: LDPE Pump Intake From TOC: 20 ft Estimated Total Volume Pumped: 6900 ml Flow Cell Volume: 90 ml Final Flow Rate: 95 ml/min Final Draw Down: 0.62 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883533
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Test Notes:

Weather Conditions:

Cloudy, 75

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/7/2022 10:33 AM	00:00	6.25 pH	28.90 °C	128.21 µS/cm	2.33 mg/L	51.70 NTU	92.3 mV	6.55 ft	100.00 ml/min
9/7/2022 10:38 AM	05:00	6.21 pH	23.66 °C	142.96 µS/cm	1.88 mg/L	43.40 NTU	131.5 mV	6.62 ft	100.00 ml/min
9/7/2022 10:43 AM	10:00	6.20 pH	23.12 °C	142.77 µS/cm	1.74 mg/L	44.00 NTU	136.7 mV	6.68 ft	90.00 ml/min
9/7/2022 10:48 AM	15:00	6.20 pH	23.13 °C	142.47 µS/cm	1.73 mg/L	20.10 NTU	183.5 mV	6.68 ft	90.00 ml/min
9/7/2022 10:53 AM	20:00	6.21 pH	22.83 °C	142.48 µS/cm	1.70 mg/L	12.90 NTU	139.5 mV	6.68 ft	90.00 ml/min
9/7/2022 10:58 AM	25:00	6.20 pH	22.88 °C	139.67 µS/cm	1.72 mg/L	9.03 NTU	132.4 mV	6.70 ft	90.00 ml/min
9/7/2022 11:03 AM	30:00	6.20 pH	22.67 °C	138.71 µS/cm	1.72 mg/L	7.34 NTU	126.6 mV	6.72 ft	90.00 ml/min
9/7/2022 11:08 AM	35:00	6.20 pH	22.75 °C	138.47 µS/cm	1.71 mg/L	8.54 NTU	116.9 mV	6.73 ft	90.00 ml/min
9/7/2022 11:13 AM	40:00	6.20 pH	22.86 °C	138.48 µS/cm	1.72 mg/L	7.25 NTU	148.7 mV	6.70 ft	80.00 ml/min
9/7/2022 11:18 AM	45:00	6.20 pH	22.94 °C	138.03 µS/cm	1.72 mg/L	7.21 NTU	155.6 mV	6.71 ft	90.00 ml/min
9/7/2022 11:23 AM	50:00	6.20 pH	22.73 °C	138.23 µS/cm	1.70 mg/L	6.87 NTU	161.4 mV	6.75 ft	90.00 ml/min
9/7/2022 11:28 AM	55:00	6.20 pH	22.44 °C	138.71 µS/cm	1.70 mg/L	5.85 NTU	164.9 mV	6.78 ft	95.00 ml/min
9/7/2022 11:33 AM	01:00:00	6.20 pH	22.29 °C	138.70 µS/cm	1.69 mg/L	6.77 NTU	167.2 mV	6.80 ft	95.00 ml/min

9/7/2022 11:38 AM	01:05:00	6.20 pH	22.13 °C	139.62 µS/cm	1.69 mg/L	7.10 NTU	125.1 mV	6.80 ft	95.00 ml/min
9/7/2022 11:43 AM	01:10:00	6.20 pH	22.36 °C	139.78 µS/cm	1.69 mg/L	5.21 NTU	118.0 mV	6.81 ft	95.00 ml/min
9/7/2022 11:48 AM	01:15:00	6.20 pH	22.33 °C	140.22 µS/cm	1.67 mg/L	4.33 NTU	113.4 mV	6.82 ft	95.00 ml/min

Samples

Sample ID:	Description:
DGWC-69	

Low-Flow Test Report:

Test Date / Time: 9/8/2022 11:58:27 AM

Project: SCS Plant McDonough

Operator Name: Duane Fulton

Location Name: DGWC-121 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 39.4 ft Total Depth: 49.4 ft Initial Depth to Water: 9.48 ft	Pump Type: Alexis Peri Pump Tubing Type: LDPE Pump Intake From TOC: 45 ft Estimated Total Volume Pumped: 7315 ml Flow Cell Volume: 90 ml Final Flow Rate: 133 ml/min Final Draw Down: 5.63 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883533
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Test Notes:

Weather Conditions:

Clear 78

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/8/2022 11:58 AM	00:00	6.47 pH	28.75 °C	332.61 µS/cm	3.09 mg/L	12.47 NTU	-26.8 mV	9.84 ft	75.00 ml/min
9/8/2022 12:03 PM	05:00	6.33 pH	22.58 °C	387.63 µS/cm	0.65 mg/L	7.02 NTU	-80.6 mV	10.36 ft	75.00 ml/min
9/8/2022 12:08 PM	10:00	6.35 pH	22.85 °C	392.03 µS/cm	0.52 mg/L	5.50 NTU	-129.3 mV	10.65 ft	55.00 ml/min
9/8/2022 12:13 PM	15:00	6.35 pH	23.43 °C	392.35 µS/cm	0.51 mg/L	6.56 NTU	-87.2 mV	10.80 ft	45.00 ml/min
9/8/2022 12:18 PM	20:00	6.33 pH	23.40 °C	390.75 µS/cm	0.45 mg/L	5.78 NTU	-85.5 mV	10.90 ft	45.00 ml/min
9/8/2022 12:23 PM	25:00	6.37 pH	20.25 °C	381.58 µS/cm	0.08 mg/L	7.05 NTU	-129.4 mV	12.01 ft	220.00 ml/min
9/8/2022 12:28 PM	30:00	6.36 pH	19.71 °C	384.43 µS/cm	0.06 mg/L	5.15 NTU	-79.6 mV	13.30 ft	220.00 ml/min
9/8/2022 12:28 PM	30:30	6.36 pH	19.69 °C	384.94 µS/cm	0.06 mg/L	5.15 NTU	-110.4 mV	13.30 ft	220.00 ml/min
9/8/2022 12:33 PM	35:30	6.35 pH	19.64 °C	386.73 µS/cm	0.05 mg/L	4.08 NTU	-123.4 mV	14.20 ft	220.00 ml/min
9/8/2022 12:38 PM	40:30	6.34 pH	19.59 °C	385.75 µS/cm	0.04 mg/L	4.98 NTU	-77.6 mV	14.90 ft	220.00 ml/min
9/8/2022 12:43 PM	45:30	6.32 pH	19.99 °C	390.46 µS/cm	0.06 mg/L	3.03 NTU	-76.3 mV	15.09 ft	133.00 ml/min
9/8/2022 12:48 PM	50:30	6.32 pH	20.02 °C	389.47 µS/cm	0.06 mg/L	1.04 NTU	-74.6 mV	15.11 ft	133.00 ml/min
9/8/2022 12:53 PM	55:30	6.32 pH	20.14 °C	387.84 µS/cm	0.05 mg/L	0.99 NTU	-73.6 mV	15.11 ft	133.00 ml/min

Samples

Sample ID:	Description:
DGWC-121	

Low-Flow Test Report:

Test Date / Time: 9/8/2022 10:03:35 AM

Project: Plant McDonough

Operator Name: Jude Waguespack

Location Name: DGWA-53 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 26.89 ft Total Depth: 36.89 ft Initial Depth to Water: 14.2 ft	Pump Type: peristaltic Tubing Type: LDPE Tubing Inner Diameter: 0.175 cm Tubing Length: 42 m Pump Intake From TOC: 31 ft Estimated Total Volume Pumped: 30750 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 13.25 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 2	+/- 10	+/- 0.3	
9/8/2022 10:03 AM	00:00	6.60 pH	82.46 °F	0.17 µS/cm	5.60 mg/L	42.90 NTU	106.3 mV	14.20 ft	150.00 ml/min
9/8/2022 10:08 AM	05:00	6.12 pH	70.29 °F	0.17 µS/cm	2.33 mg/L	40.80 NTU	83.9 mV	15.53 ft	150.00 ml/min
9/8/2022 10:13 AM	10:00	6.13 pH	69.19 °F	0.17 µS/cm	2.42 mg/L	40.40 NTU	90.5 mV	16.81 ft	150.00 ml/min
9/8/2022 10:18 AM	15:00	6.14 pH	69.91 °F	0.17 µS/cm	2.49 mg/L	39.90 NTU	91.7 mV	17.75 ft	150.00 ml/min
9/8/2022 10:23 AM	20:00	6.14 pH	70.15 °F	0.17 µS/cm	2.61 mg/L	38.80 NTU	93.4 mV	18.58 ft	150.00 ml/min
9/8/2022 10:28 AM	25:00	6.15 pH	70.09 °F	0.17 µS/cm	2.62 mg/L	38.80 NTU	94.4 mV	19.43 ft	150.00 ml/min
9/8/2022 10:33 AM	30:00	6.15 pH	70.40 °F	0.17 µS/cm	2.61 mg/L	37.10 NTU	86.2 mV	20.10 ft	150.00 ml/min
9/8/2022 10:38 AM	35:00	6.16 pH	70.40 °F	0.17 µS/cm	2.67 mg/L	35.00 NTU	93.4 mV	20.63 ft	150.00 ml/min
9/8/2022 10:43 AM	40:00	6.17 pH	70.06 °F	0.17 µS/cm	2.65 mg/L	33.30 NTU	88.9 mV	21.23 ft	150.00 ml/min
9/8/2022 10:48 AM	45:00	6.18 pH	69.80 °F	0.17 µS/cm	2.87 mg/L	30.50 NTU	86.6 mV	21.75 ft	150.00 ml/min
9/8/2022 10:53 AM	50:00	6.18 pH	69.56 °F	0.17 µS/cm	3.07 mg/L	30.70 NTU	78.3 mV	22.40 ft	150.00 ml/min
9/8/2022 10:58 AM	55:00	6.19 pH	69.55 °F	0.17 µS/cm	3.16 mg/L	25.30 NTU	80.5 mV	22.65 ft	150.00 ml/min
9/8/2022 11:03 AM	01:00:00	6.19 pH	69.51 °F	0.17 µS/cm	3.20 mg/L	25.20 NTU	72.5 mV	23.00 ft	150.00 ml/min
9/8/2022 11:08 AM	01:05:00	6.20 pH	69.67 °F	0.17 µS/cm	3.29 mg/L	26.10 NTU	73.9 mV	23.40 ft	150.00 ml/min

9/8/2022 11:13 AM	01:10:00	6.20 pH	70.07 °F	0.18 µS/cm	3.29 mg/L	21.30 NTU	66.3 mV	23.75 ft	150.00 ml/min
9/8/2022 11:18 AM	01:15:00	6.20 pH	70.71 °F	0.18 µS/cm	3.24 mg/L	21.50 NTU	68.6 mV	24.01 ft	150.00 ml/min
9/8/2022 11:23 AM	01:20:00	6.21 pH	70.96 °F	0.18 µS/cm	3.33 mg/L	23.00 NTU	66.1 mV	24.35 ft	150.00 ml/min
9/8/2022 11:28 AM	01:25:00	6.22 pH	70.32 °F	0.18 µS/cm	3.26 mg/L	18.60 NTU	60.0 mV	24.63 ft	150.00 ml/min
9/8/2022 11:33 AM	01:30:00	6.23 pH	70.22 °F	0.18 µS/cm	3.21 mg/L	17.90 NTU	59.4 mV	24.95 ft	150.00 ml/min
9/8/2022 11:38 AM	01:35:00	6.23 pH	70.56 °F	0.18 µS/cm	3.19 mg/L	17.00 NTU	54.4 mV	25.25 ft	150.00 ml/min
9/8/2022 11:43 AM	01:40:00	6.24 pH	70.80 °F	0.18 µS/cm	3.15 mg/L	16.90 NTU	53.2 mV	25.45 ft	150.00 ml/min
9/8/2022 11:48 AM	01:45:00	6.25 pH	70.73 °F	0.18 µS/cm	3.08 mg/L	16.00 NTU	48.3 mV	25.64 ft	150.00 ml/min
9/8/2022 11:53 AM	01:50:00	6.27 pH	70.78 °F	0.19 µS/cm	3.05 mg/L	16.30 NTU	46.1 mV	25.90 ft	150.00 ml/min
9/8/2022 11:58 AM	01:55:00	6.28 pH	70.70 °F	0.19 µS/cm	2.97 mg/L	13.90 NTU	42.5 mV	26.05 ft	150.00 ml/min
9/8/2022 12:03 PM	02:00:00	6.28 pH	70.56 °F	0.19 µS/cm	2.93 mg/L	13.50 NTU	40.9 mV	26.20 ft	150.00 ml/min
9/8/2022 12:08 PM	02:05:00	6.28 pH	70.81 °F	0.19 µS/cm	2.86 mg/L	13.20 NTU	38.7 mV	26.32 ft	150.00 ml/min
9/8/2022 12:13 PM	02:10:00	6.27 pH	70.99 °F	0.19 µS/cm	2.80 mg/L	11.70 NTU	38.9 mV	26.45 ft	150.00 ml/min
9/8/2022 12:18 PM	02:15:00	6.28 pH	70.48 °F	0.19 µS/cm	2.72 mg/L	12.00 NTU	35.4 mV	26.60 ft	150.00 ml/min
9/8/2022 12:23 PM	02:20:00	6.28 pH	70.48 °F	0.19 µS/cm	2.58 mg/L	10.70 NTU	33.2 mV	26.70 ft	150.00 ml/min
9/8/2022 12:28 PM	02:25:00	6.28 pH	71.22 °F	0.19 µS/cm	2.56 mg/L	10.00 NTU	30.1 mV	26.85 ft	150.00 ml/min
9/8/2022 12:33 PM	02:30:00	6.28 pH	71.17 °F	0.19 µS/cm	2.45 mg/L	9.56 NTU	30.7 mV	26.85 ft	150.00 ml/min
9/8/2022 12:38 PM	02:35:00	6.29 pH	70.64 °F	0.19 µS/cm	2.41 mg/L	8.71 NTU	29.9 mV	26.93 ft	150.00 ml/min
9/8/2022 12:43 PM	02:40:00	6.30 pH	70.97 °F	0.20 µS/cm	2.29 mg/L	8.97 NTU	28.0 mV	27.03 ft	150.00 ml/min
9/8/2022 12:48 PM	02:45:00	6.30 pH	70.96 °F	0.20 µS/cm	2.24 mg/L	7.46 NTU	26.5 mV	27.10 ft	150.00 ml/min
9/8/2022 12:53 PM	02:50:00	6.31 pH	71.76 °F	0.20 µS/cm	2.18 mg/L	7.26 NTU	24.4 mV	27.16 ft	150.00 ml/min
9/8/2022 12:58 PM	02:55:00	6.31 pH	71.38 °F	0.20 µS/cm	2.12 mg/L	7.54 NTU	25.5 mV	27.24 ft	150.00 ml/min
9/8/2022 1:03 PM	03:00:00	6.31 pH	70.88 °F	0.20 µS/cm	2.08 mg/L	8.46 NTU	25.4 mV	27.30 ft	150.00 ml/min
9/8/2022 1:08 PM	03:05:00	6.31 pH	71.50 °F	0.20 µS/cm	2.01 mg/L	7.87 NTU	24.8 mV	27.38 ft	150.00 ml/min
9/8/2022 1:13 PM	03:10:00	6.32 pH	72.00 °F	0.20 µS/cm	1.89 mg/L	7.67 NTU	23.2 mV	27.40 ft	150.00 ml/min
9/8/2022 1:18 PM	03:15:00	6.31 pH	71.85 °F	0.20 µS/cm	1.83 mg/L	6.44 NTU	22.8 mV	27.40 ft	150.00 ml/min
9/8/2022 1:23 PM	03:20:00	6.32 pH	71.28 °F	0.20 µS/cm	1.73 mg/L	5.76 NTU	21.0 mV	27.45 ft	150.00 ml/min
9/8/2022 1:28 PM	03:25:00	6.32 pH	71.44 °F	0.20 µS/cm	1.70 mg/L	4.39 NTU	20.9 mV	27.45 ft	150.00 ml/min

Samples

Sample ID:	Description:
DGWA-53	

Low-Flow Test Report:

Test Date / Time: 9/7/2022 9:00:52 AM

Project: SCS Plant McDonough

Operator Name: Duane Fulton

Location Name: DGWA-70A Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 52.54 ft Total Depth: 62.54 ft Initial Depth to Water: 43.02 ft	Pump Type: Dedicated Bladder Pump Tubing Type: LDPE Pump Intake From TOC: 57 ft Estimated Total Volume Pumped: 4807.5 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.36 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883533
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Test Notes:

Weather Conditions:

Cloudy, 75

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/7/2022 9:00 AM	00:00	6.76 pH	23.69 °C	71.22 µS/cm	7.84 mg/L	1.10 NTU	142.3 mV	43.30 ft	150.00 ml/min
9/7/2022 9:05 AM	05:00	5.62 pH	19.53 °C	68.82 µS/cm	4.78 mg/L	0.16 NTU	142.9 mV	43.35 ft	150.00 ml/min
9/7/2022 9:10 AM	10:00	5.59 pH	18.70 °C	68.96 µS/cm	4.79 mg/L	0.00 NTU	139.4 mV	43.38 ft	150.00 ml/min
9/7/2022 9:15 AM	15:00	5.59 pH	18.57 °C	69.46 µS/cm	4.74 mg/L	0.00 NTU	136.2 mV	43.38 ft	150.00 ml/min
9/7/2022 9:20 AM	20:00	5.60 pH	18.57 °C	69.93 µS/cm	4.66 mg/L	0.00 NTU	134.6 mV	43.40 ft	150.00 ml/min
9/7/2022 9:25 AM	25:00	5.60 pH	19.06 °C	69.76 µS/cm	4.63 mg/L	0.00 NTU	133.7 mV	43.40 ft	150.00 ml/min
9/7/2022 9:27 AM	26:28	5.60 pH	19.15 °C	70.23 µS/cm	4.61 mg/L	0.00 NTU	126.1 mV	43.40 ft	150.00 ml/min
9/7/2022 9:27 AM	27:03	5.60 pH	19.10 °C	69.77 µS/cm	4.61 mg/L	0.00 NTU	145.9 mV	43.38 ft	150.00 ml/min
9/7/2022 9:32 AM	32:03	5.60 pH	18.99 °C	70.03 µS/cm	4.62 mg/L	0.00 NTU	137.2 mV	43.38 ft	150.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 9/7/2022 9:48:54 AM

Project: Plant McDonough

Operator Name: Cole Mayer

Location Name: DGWA-71 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 37.71 ft Total Depth: 47.71 ft Initial Depth to Water: 29.37 ft	Pump Type: Dedicated Bladder Tubing Type: LDPE Pump Intake From TOC: 42 ft Estimated Total Volume Pumped: 8750 ml Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 0.55 ft	Instrument Used: Aqua TROLL 400 Serial Number: 884187
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/7/2022 9:48 AM	00:00	5.77 pH	25.20 °C	73.26 µS/cm	7.41 mg/L	1.97 NTU	49.9 mV	29.37 ft	250.00 ml/min
9/7/2022 9:53 AM	05:00	5.66 pH	18.99 °C	76.50 µS/cm	2.61 mg/L	1.85 NTU	18.6 mV	29.91 ft	250.00 ml/min
9/7/2022 9:58 AM	10:00	5.64 pH	18.83 °C	77.16 µS/cm	1.97 mg/L	0.99 NTU	10.0 mV	29.89 ft	250.00 ml/min
9/7/2022 10:03 AM	15:00	5.66 pH	18.84 °C	77.35 µS/cm	1.86 mg/L	0.81 NTU	9.0 mV	29.89 ft	250.00 ml/min
9/7/2022 10:08 AM	20:00	5.68 pH	18.79 °C	77.40 µS/cm	1.88 mg/L	1.83 NTU	9.0 mV	29.90 ft	250.00 ml/min
9/7/2022 10:13 AM	25:00	5.65 pH	18.89 °C	77.37 µS/cm	1.78 mg/L	1.05 NTU	6.4 mV	29.91 ft	250.00 ml/min
9/7/2022 10:18 AM	30:00	5.64 pH	18.85 °C	77.45 µS/cm	1.70 mg/L	0.58 NTU	5.0 mV	29.91 ft	250.00 ml/min
9/7/2022 10:23 AM	35:00	5.65 pH	18.80 °C	77.56 µS/cm	1.66 mg/L	1.43 NTU	4.6 mV	29.92 ft	250.00 ml/min

Samples

Sample ID:	Description:
DGWA-71	

Low-Flow Test Report:

Test Date / Time: 9/7/2022 2:04:59 PM

Project: Plant McDonough (23)

Operator Name: Cole Mayer

Location Name: B-105D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 60 ft Total Depth: 70 ft Initial Depth to Water: 18.32 ft	Pump Type: Bladder Tubing Type: LDPE Pump Intake From TOC: 65 ft Estimated Total Volume Pumped: 8750 ml Flow Cell Volume: 90 ml Final Flow Rate: 175 ml/min Final Draw Down: 0.77 ft	Instrument Used: Aqua TROLL 400 Serial Number: 884187
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/7/2022 2:04 PM	00:00	6.50 pH	29.82 °C	558.95 µS/cm	2.49 mg/L	3.08 NTU	45.8 mV	18.32 ft	175.00 ml/min
9/7/2022 2:09 PM	05:00	6.43 pH	24.52 °C	598.90 µS/cm	0.43 mg/L	2.25 NTU	28.0 mV	18.98 ft	175.00 ml/min
9/7/2022 2:14 PM	10:00	6.45 pH	24.52 °C	598.69 µS/cm	0.24 mg/L	4.05 NTU	15.4 mV	19.02 ft	175.00 ml/min
9/7/2022 2:19 PM	15:00	6.47 pH	24.25 °C	594.43 µS/cm	0.19 mg/L	2.60 NTU	5.9 mV	19.02 ft	175.00 ml/min
9/7/2022 2:24 PM	20:00	6.48 pH	24.29 °C	600.54 µS/cm	0.16 mg/L	6.22 NTU	-1.7 mV	19.05 ft	175.00 ml/min
9/7/2022 2:29 PM	25:00	6.52 pH	24.12 °C	616.42 µS/cm	0.16 mg/L	2.12 NTU	-6.5 mV	19.04 ft	175.00 ml/min
9/7/2022 2:34 PM	30:00	6.54 pH	23.75 °C	635.40 µS/cm	0.15 mg/L	1.87 NTU	-6.2 mV	19.05 ft	175.00 ml/min
9/7/2022 2:39 PM	35:00	6.54 pH	24.11 °C	640.03 µS/cm	0.15 mg/L	1.04 NTU	-5.6 mV	19.05 ft	175.00 ml/min
9/7/2022 2:44 PM	40:00	6.50 pH	24.03 °C	631.63 µS/cm	0.14 mg/L	1.04 NTU	-4.4 mV	19.06 ft	175.00 ml/min
9/7/2022 2:49 PM	45:00	6.45 pH	24.21 °C	628.44 µS/cm	0.12 mg/L	1.40 NTU	-2.6 mV	19.07 ft	175.00 ml/min
9/7/2022 2:54 PM	50:00	6.44 pH	23.85 °C	623.28 µS/cm	0.10 mg/L	1.20 NTU	-0.5 mV	19.09 ft	175.00 ml/min

Samples

Sample ID:	Description:
B-105D	

Low-Flow Test Report:

Test Date / Time: 9/7/2022 12:31:54 PM

Project: SCS Plant McDonough

Operator Name: Duane Fulton

Location Name: B-112D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 45 ft Total Depth: 55 ft Initial Depth to Water: 7.8 ft	Pump Type: Alexis Peri Pump Tubing Type: LDPE Pump Intake From TOC: 50 ft Estimated Total Volume Pumped: 4500 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.12 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883533
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Test Notes:

Weather Conditions:

Clear, 82

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/7/2022 12:31 PM	00:00	7.00 pH	31.91 °C	206.86 µS/cm	4.28 mg/L	0.00 NTU	-82.6 mV	7.88 ft	150.00 ml/min
9/7/2022 12:36 PM	05:00	6.75 pH	21.92 °C	252.26 µS/cm	0.36 mg/L	2.30 NTU	-13.6 mV	7.90 ft	150.00 ml/min
9/7/2022 12:41 PM	10:00	6.77 pH	21.07 °C	252.84 µS/cm	0.19 mg/L	1.22 NTU	-89.5 mV	7.92 ft	150.00 ml/min
9/7/2022 12:46 PM	15:00	6.75 pH	20.66 °C	253.83 µS/cm	0.13 mg/L	0.50 NTU	-47.5 mV	7.92 ft	150.00 ml/min
9/7/2022 12:51 PM	20:00	6.75 pH	20.47 °C	255.19 µS/cm	0.11 mg/L	0.45 NTU	-32.5 mV	7.92 ft	150.00 ml/min
9/7/2022 12:56 PM	25:00	6.74 pH	20.47 °C	256.95 µS/cm	0.09 mg/L	0.50 NTU	-18.7 mV	7.92 ft	150.00 ml/min
9/7/2022 1:01 PM	30:00	6.72 pH	20.37 °C	257.44 µS/cm	0.08 mg/L	0.75 NTU	-11.5 mV	7.92 ft	150.00 ml/min

Samples

Sample ID:	Description:
B-112D	

Low-Flow Test Report:

Test Date / Time: 9/12/2022 1:31:15 PM

Project: Plant McDonough

Operator Name: M. Mann

Location Name: B-113D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 74 ft Total Depth: 84.18 ft Initial Depth to Water: 3.31 ft	Pump Type: Peristaltic Tubing Type: Polyethylene Pump Intake From TOC: 79 ft Estimated Total Volume Pumped: 7200 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 8.97 ft	Instrument Used: Aqua TROLL 400 Serial Number: 851413
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Test Notes:

Weather Conditions:

Sunny

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/12/2022 1:31 PM	00:00	7.86 pH	21.10 °C	344.42 µS/cm	0.21 mg/L	1.47 NTU	-45.4 mV	3.31 ft	290.00 ml/min
9/12/2022 1:36 PM	05:00	7.91 pH	20.16 °C	345.66 µS/cm	0.14 mg/L	1.47 NTU	-82.5 mV	7.22 ft	290.00 ml/min
9/12/2022 1:41 PM	10:00	7.92 pH	20.84 °C	348.69 µS/cm	0.16 mg/L	2.83 NTU	-97.9 mV	8.26 ft	180.00 ml/min
9/12/2022 1:46 PM	15:00	7.95 pH	20.59 °C	348.23 µS/cm	0.14 mg/L	1.92 NTU	-104.0 mV	9.65 ft	180.00 ml/min
9/12/2022 1:51 PM	20:00	7.95 pH	20.97 °C	349.99 µS/cm	0.18 mg/L	1.35 NTU	-106.5 mV	10.49 ft	180.00 ml/min
9/12/2022 1:56 PM	25:00	7.95 pH	21.42 °C	349.62 µS/cm	0.18 mg/L	1.65 NTU	-140.5 mV	11.40 ft	120.00 ml/min
9/12/2022 2:01 PM	30:00	7.96 pH	21.61 °C	347.21 µS/cm	0.17 mg/L	1.72 NTU	-107.2 mV	12.00 ft	100.00 ml/min
9/12/2022 2:06 PM	35:00	7.96 pH	21.93 °C	351.68 µS/cm	0.20 mg/L	1.16 NTU	-141.1 mV	12.22 ft	100.00 ml/min
9/12/2022 2:11 PM	40:00	7.95 pH	22.61 °C	350.19 µS/cm	0.24 mg/L	0.97 NTU	-105.7 mV	12.28 ft	100.00 ml/min

Samples

Sample ID:	Description:
B-113D	

Low-Flow Test Report:

Test Date / Time: 9/9/2022 9:57:11 AM

Project: Plant McDonough (26)

Operator Name: Cole Mayer

Location Name: B-62 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 29.62 ft Total Depth: 39.62 ft Initial Depth to Water: 15.52 ft	Pump Type: peristaltic Tubing Type: LDPE Pump Intake From TOC: 34 ft Estimated Total Volume Pumped: 9095 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: -0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 884187
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/9/2022 9:57 AM	00:00	6.78 pH	23.43 °C	509.32 µS/cm	4.36 mg/L	13.02 NTU	107.4 mV	15.58 ft	100.00 ml/min
9/9/2022 10:02 AM	05:00	6.48 pH	20.58 °C	505.34 µS/cm	0.44 mg/L	3.16 NTU	81.4 mV	15.61 ft	100.00 ml/min
9/9/2022 10:07 AM	10:00	6.48 pH	20.07 °C	491.81 µS/cm	0.26 mg/L	6.67 NTU	73.8 mV	15.61 ft	100.00 ml/min
9/9/2022 10:12 AM	15:00	6.38 pH	19.97 °C	398.62 µS/cm	0.19 mg/L	20.96 NTU	66.6 mV	15.62 ft	100.00 ml/min
9/9/2022 10:17 AM	20:00	6.36 pH	19.78 °C	375.78 µS/cm	0.17 mg/L	19.70 NTU	62.8 mV	15.62 ft	100.00 ml/min
9/9/2022 10:22 AM	25:00	6.30 pH	19.77 °C	334.58 µS/cm	0.17 mg/L	10.82 NTU	58.6 mV	15.62 ft	100.00 ml/min
9/9/2022 10:27 AM	30:00	6.26 pH	19.73 °C	305.81 µS/cm	0.19 mg/L	7.57 NTU	55.4 mV	15.61 ft	100.00 ml/min
9/9/2022 10:32 AM	35:00	6.24 pH	19.87 °C	294.79 µS/cm	0.20 mg/L	6.39 NTU	53.1 mV	15.60 ft	100.00 ml/min
9/9/2022 10:37 AM	40:00	6.23 pH	19.98 °C	284.80 µS/cm	0.21 mg/L	6.85 NTU	51.3 mV	15.60 ft	100.00 ml/min
9/9/2022 10:42 AM	45:00	6.23 pH	20.22 °C	281.88 µS/cm	0.25 mg/L	7.84 NTU	49.7 mV	15.59 ft	100.00 ml/min
9/9/2022 10:47 AM	50:00	6.22 pH	20.28 °C	280.42 µS/cm	0.17 mg/L	8.18 NTU	48.3 mV	15.58 ft	100.00 ml/min
9/9/2022 10:52 AM	55:00	6.23 pH	20.30 °C	277.68 µS/cm	0.16 mg/L	7.20 NTU	47.3 mV	15.57 ft	100.00 ml/min
9/9/2022 10:57 AM	01:00:00	6.23 pH	20.32 °C	275.94 µS/cm	0.16 mg/L	7.25 NTU	46.2 mV	15.56 ft	100.00 ml/min
9/9/2022 11:02 AM	01:05:00	6.22 pH	20.41 °C	274.68 µS/cm	0.15 mg/L	8.09 NTU	45.6 mV	15.55 ft	100.00 ml/min
9/9/2022 11:07 AM	01:10:00	6.23 pH	20.53 °C	274.55 µS/cm	0.16 mg/L	7.18 NTU	44.8 mV	15.54 ft	100.00 ml/min

9/9/2022 11:12 AM	01:15:00	6.23 pH	20.56 °C	272.70 µS/cm	0.16 mg/L	7.22 NTU	44.1 mV	15.54 ft	100.00 ml/min
9/9/2022 11:17 AM	01:20:00	6.22 pH	20.67 °C	271.88 µS/cm	0.13 mg/L	5.95 NTU	43.3 mV	15.54 ft	100.00 ml/min
9/9/2022 11:22 AM	01:25:00	6.22 pH	20.42 °C	271.27 µS/cm	0.12 mg/L	5.74 NTU	42.5 mV	15.52 ft	100.00 ml/min
9/9/2022 11:25 AM	01:30:00	6.22 pH	20.71 °C	270.15 µS/cm	0.12 mg/L	4.84 NTU	41.3 mV	15.51 ft	100.00 ml/min

Samples

Sample ID:	Description:
B-62	

Low-Flow Test Report:

Test Date / Time: 9/8/2022 10:00:04 AM

Project: Plant McDonough (24)

Operator Name: Cole Mayer

Location Name: B-100 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 37.93 ft Total Depth: 47.93 ft Initial Depth to Water: 31.03 ft	Pump Type: Bladder Tubing Type: LDPE Pump Intake From TOC: 42 ft Estimated Total Volume Pumped: 7000 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: -0.09 ft	Instrument Used: Aqua TROLL 400 Serial Number: 884187
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/8/2022 10:00 AM	00:00	5.23 pH	25.80 °C	0.67 µS/cm	3.82 mg/L	43.38 NTU	72.6 mV	31.04 ft	100.00 ml/min
9/8/2022 10:05 AM	05:00	5.16 pH	23.44 °C	0.80 µS/cm	0.63 mg/L	20.58 NTU	54.5 mV	31.03 ft	100.00 ml/min
9/8/2022 10:10 AM	10:00	5.17 pH	23.01 °C	0.81 µS/cm	0.37 mg/L	10.87 NTU	51.1 mV	31.02 ft	100.00 ml/min
9/8/2022 10:15 AM	15:00	5.18 pH	22.94 °C	0.81 µS/cm	0.28 mg/L	12.72 NTU	49.3 mV	31.01 ft	100.00 ml/min
9/8/2022 10:20 AM	20:00	5.19 pH	22.95 °C	0.82 µS/cm	0.20 mg/L	10.89 NTU	48.2 mV	31.03 ft	100.00 ml/min
9/8/2022 10:25 AM	25:00	5.20 pH	23.01 °C	0.82 µS/cm	0.20 mg/L	8.06 NTU	47.6 mV	30.99 ft	100.00 ml/min
9/8/2022 10:30 AM	30:00	5.21 pH	23.08 °C	0.82 µS/cm	0.15 mg/L	9.29 NTU	47.2 mV	30.99 ft	100.00 ml/min
9/8/2022 10:35 AM	35:00	5.21 pH	23.08 °C	0.82 µS/cm	0.14 mg/L	8.14 NTU	46.4 mV	30.99 ft	100.00 ml/min
9/8/2022 10:40 AM	40:00	5.22 pH	23.28 °C	0.83 µS/cm	0.13 mg/L	8.03 NTU	45.9 mV	30.99 ft	100.00 ml/min
9/8/2022 10:45 AM	45:00	5.22 pH	23.62 °C	0.82 µS/cm	0.15 mg/L	11.23 NTU	45.2 mV	30.94 ft	100.00 ml/min
9/8/2022 10:50 AM	50:00	5.23 pH	23.54 °C	0.82 µS/cm	0.14 mg/L	9.74 NTU	45.0 mV	30.94 ft	100.00 ml/min
9/8/2022 10:55 AM	55:00	5.23 pH	23.53 °C	0.83 µS/cm	0.13 mg/L	8.05 NTU	44.7 mV	30.96 ft	100.00 ml/min
9/8/2022 11:00 AM	01:00:00	5.24 pH	23.44 °C	0.83 µS/cm	0.12 mg/L	5.64 NTU	44.7 mV	30.94 ft	100.00 ml/min
9/8/2022 11:05 AM	01:05:00	5.24 pH	23.41 °C	0.83 µS/cm	0.12 mg/L	5.46 NTU	44.5 mV	30.96 ft	100.00 ml/min
9/8/2022 11:10 AM	01:10:00	5.24 pH	23.50 °C	0.83 µS/cm	0.10 mg/L	4.72 NTU	44.4 mV	30.94 ft	100.00 ml/min

Samples

Sample ID:	Description:
B100	

Low-Flow Test Report:

Test Date / Time: 9/12/2022 11:30:12 AM

Project: Plant McDonough

Operator Name: Jude Waguespack

Location Name: B-90 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 23.4 ft Total Depth: 33.4 ft Initial Depth to Water: 2.55 ft	Pump Type: peristaltic Tubing Type: LDPE Tubing Inner Diameter: 0.175 cm Tubing Length: 42 m Pump Intake From TOC: 28 ft Estimated Total Volume Pumped: 11250 ml Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 1.25 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 2	+/- 1000 %	+/- 0.3	
9/12/2022 11:30 AM	00:00	5.28 pH	22.17 °C	872.60 µS/cm	0.33 mg/L	8.61 NTU	81.3 mV	2.55 ft	250.00 ml/min
9/12/2022 11:35 AM	05:00	5.27 pH	20.24 °C	870.12 µS/cm	0.22 mg/L	7.22 NTU	78.1 mV	3.60 ft	250.00 ml/min
9/12/2022 11:40 AM	10:00	5.28 pH	19.90 °C	869.47 µS/cm	0.18 mg/L	5.00 NTU	76.9 mV	3.70 ft	250.00 ml/min
9/12/2022 11:45 AM	15:00	5.30 pH	19.78 °C	858.57 µS/cm	0.18 mg/L	3.04 NTU	77.7 mV	3.80 ft	250.00 ml/min
9/12/2022 11:50 AM	20:00	5.31 pH	19.86 °C	854.28 µS/cm	0.12 mg/L	3.03 NTU	77.5 mV	3.80 ft	250.00 ml/min
9/12/2022 11:55 AM	25:00	5.32 pH	19.73 °C	849.31 µS/cm	0.22 mg/L	2.71 NTU	75.6 mV	3.80 ft	250.00 ml/min
9/12/2022 12:00 PM	30:00	5.32 pH	19.70 °C	841.62 µS/cm	0.20 mg/L	2.73 NTU	77.0 mV	3.80 ft	250.00 ml/min
9/12/2022 12:05 PM	35:00	5.34 pH	19.72 °C	836.03 µS/cm	0.15 mg/L	2.82 NTU	76.7 mV	3.80 ft	250.00 ml/min
9/12/2022 12:10 PM	40:00	5.33 pH	20.06 °C	837.83 µS/cm	0.19 mg/L	2.21 NTU	74.8 mV	3.80 ft	250.00 ml/min
9/12/2022 12:15 PM	45:00	5.35 pH	19.98 °C	829.87 µS/cm	0.10 mg/L	1.13 NTU	76.4 mV	3.80 ft	250.00 ml/min

Samples

Sample ID:	Description:
B-90	

Low-Flow Test Report:

Test Date / Time: 9/12/2022 12:46:24 PM

Project: Plant McDonough

Operator Name: Jude Waguespack

Location Name: B-91 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 24.6 ft Total Depth: 34.6 ft Initial Depth to Water: 4.05 ft	Pump Type: peristaltic Tubing Type: LDPE Tubing Inner Diameter: 0.175 cm Tubing Length: 42 m Pump Intake From TOC: 29 ft Estimated Total Volume Pumped: 10000 ml Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 0.5 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 2	+/- 1000 %	+/- 0.3	
9/12/2022 12:46 PM	00:00	5.32 pH	24.66 °C	861.55 µS/cm	0.51 mg/L	5.27 NTU	85.0 mV	4.05 ft	250.00 ml/min
9/12/2022 12:51 PM	05:00	5.30 pH	20.93 °C	897.36 µS/cm	0.17 mg/L	20.02 NTU	87.5 mV	4.50 ft	250.00 ml/min
9/12/2022 12:56 PM	10:00	5.29 pH	20.53 °C	900.37 µS/cm	0.14 mg/L	25.40 NTU	87.5 mV	4.50 ft	250.00 ml/min
9/12/2022 1:01 PM	15:00	5.28 pH	21.00 °C	906.97 µS/cm	0.12 mg/L	9.29 NTU	84.6 mV	4.50 ft	250.00 ml/min
9/12/2022 1:06 PM	20:00	5.28 pH	20.89 °C	901.43 µS/cm	0.11 mg/L	4.13 NTU	87.9 mV	4.55 ft	250.00 ml/min
9/12/2022 1:11 PM	25:00	5.27 pH	20.97 °C	901.61 µS/cm	0.11 mg/L	3.20 NTU	85.3 mV	4.55 ft	250.00 ml/min
9/12/2022 1:16 PM	30:00	5.27 pH	20.75 °C	896.67 µS/cm	0.10 mg/L	3.21 NTU	89.2 mV	4.55 ft	250.00 ml/min
9/12/2022 1:21 PM	35:00	5.28 pH	20.87 °C	893.83 µS/cm	0.09 mg/L	1.62 NTU	86.7 mV	4.55 ft	250.00 ml/min
9/12/2022 1:26 PM	40:00	5.28 pH	20.93 °C	895.66 µS/cm	0.09 mg/L	1.02 NTU	90.8 mV	4.55 ft	250.00 ml/min

Samples

Sample ID:	Description:
B-91	

Low-Flow Test Report:

Test Date / Time: 9/12/2022 2:03:34 PM

Project: Plant McDonough

Operator Name: Jude Waguespack

Location Name: B-95 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 25.16 ft Total Depth: 35.16 ft Initial Depth to Water: 2.61 ft	Pump Type: peristaltic Tubing Type: LDPE Tubing Inner Diameter: 0.175 cm Tubing Length: 42 m Pump Intake From TOC: 30 ft Estimated Total Volume Pumped: 8750 ml Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 1.19 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 2	+/- 1000 %	+/- 0.3	
9/12/2022 2:03 PM	00:00	5.34 pH	26.03 °C	547.22 µS/cm	1.02 mg/L	21.90 NTU	101.6 mV	2.61 ft	250.00 ml/min
9/12/2022 2:08 PM	05:00	5.32 pH	22.62 °C	579.09 µS/cm	0.19 mg/L	24.90 NTU	106.5 mV	3.65 ft	250.00 ml/min
9/12/2022 2:13 PM	10:00	5.32 pH	22.67 °C	571.69 µS/cm	0.14 mg/L	7.62 NTU	106.2 mV	3.70 ft	250.00 ml/min
9/12/2022 2:18 PM	15:00	5.33 pH	22.91 °C	570.70 µS/cm	0.13 mg/L	4.08 NTU	100.0 mV	3.80 ft	250.00 ml/min
9/12/2022 2:23 PM	20:00	5.33 pH	22.76 °C	556.31 µS/cm	0.13 mg/L	3.20 NTU	105.6 mV	3.80 ft	250.00 ml/min
9/12/2022 2:28 PM	25:00	5.33 pH	22.76 °C	550.96 µS/cm	0.15 mg/L	2.40 NTU	100.1 mV	3.80 ft	250.00 ml/min
9/12/2022 2:33 PM	30:00	5.33 pH	22.28 °C	551.67 µS/cm	0.15 mg/L	2.36 NTU	107.0 mV	3.80 ft	250.00 ml/min
9/12/2022 2:38 PM	35:00	5.33 pH	22.11 °C	555.26 µS/cm	0.15 mg/L	1.45 NTU	107.6 mV	3.80 ft	250.00 ml/min

Samples

Sample ID:	Description:
B-95	

Low-Flow Test Report:

Test Date / Time: 9/13/2022 10:41:19 AM

Project: Plant McDonough

Operator Name: Jude Waguespack

Location Name: B-96 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 22.33 ft Total Depth: 32.33 ft Initial Depth to Water: 6.4 ft	Pump Type: peristaltic Tubing Type: LDPE Tubing Inner Diameter: 0.175 cm Tubing Length: 42 m Pump Intake From TOC: 27 ft Estimated Total Volume Pumped: 13204.167 ml Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 0.33 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 2	+/- 1000 %	+/- 0.3	
9/13/2022 10:41 AM	00:00	5.24 pH	21.49 °C	1,046.7 µS/cm	1.81 mg/L	121.00 NTU	218.7 mV	6.40 ft	250.00 ml/min
9/13/2022 10:46 AM	05:00	5.03 pH	20.40 °C	1,047.0 µS/cm	0.17 mg/L	83.50 NTU	405.4 mV	6.60 ft	250.00 ml/min
9/13/2022 10:51 AM	10:00	5.02 pH	20.26 °C	1,037.0 µS/cm	0.13 mg/L	35.20 NTU	528.3 mV	6.60 ft	250.00 ml/min
9/13/2022 10:56 AM	15:00	5.03 pH	20.22 °C	1,035.9 µS/cm	0.11 mg/L	12.20 NTU	539.5 mV	6.75 ft	250.00 ml/min
9/13/2022 10:57 AM	16:31	5.03 pH	20.17 °C	1,102.3 µS/cm	0.11 mg/L	12.20 NTU	451.8 mV	6.75 ft	250.00 ml/min
9/13/2022 11:02 AM	21:31	5.03 pH	20.14 °C	1,040.8 µS/cm	0.09 mg/L	8.72 NTU	437.8 mV	6.70 ft	250.00 ml/min
9/13/2022 11:04 AM	22:49	5.03 pH	20.13 °C	1,085.3 µS/cm	0.09 mg/L	8.72 NTU	449.1 mV	6.70 ft	250.00 ml/min
9/13/2022 11:09 AM	27:49	5.03 pH	20.13 °C	1,040.7 µS/cm	0.09 mg/L	4.95 NTU	454.3 mV	6.70 ft	250.00 ml/min
9/13/2022 11:14 AM	32:49	5.03 pH	20.13 °C	1,033.2 µS/cm	0.10 mg/L	4.12 NTU	453.5 mV	6.73 ft	250.00 ml/min
9/13/2022 11:19 AM	37:49	5.02 pH	20.16 °C	1,034.4 µS/cm	0.09 mg/L	1.79 NTU	550.8 mV	6.73 ft	250.00 ml/min
9/13/2022 11:24 AM	42:49	5.03 pH	20.10 °C	1,033.9 µS/cm	0.09 mg/L	1.71 NTU	456.6 mV	6.73 ft	250.00 ml/min
9/13/2022 11:29 AM	47:49	5.03 pH	20.17 °C	1,033.3 µS/cm	0.08 mg/L	1.35 NTU	456.2 mV	6.73 ft	250.00 ml/min
9/13/2022 11:34 AM	52:49	5.03 pH	20.16 °C	1,033.9 µS/cm	0.09 mg/L	0.94 NTU	552.6 mV	6.73 ft	250.00 ml/min

Samples

Sample ID:	Description:
B-96	

Low-Flow Test Report:

Test Date / Time: 9/12/2022 9:43:26 AM

Project: SCS Plant McDonough

Operator Name: Duane Fulton

Location Name: B-99 Well Diameter: 2 in Casing Type: PVC Screen Length: 5 ft Top of Screen: 6.93 ft Total Depth: 11.93 ft Initial Depth to Water: 4 ft	Pump Type: Alexis Peri Pump Tubing Type: LDPE Pump Intake From TOC: 8 ft Estimated Total Volume Pumped: 3475 ml Flow Cell Volume: 90 ml Final Flow Rate: 85 ml/min Final Draw Down: 0.2 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883533
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Test Notes:

Weather Conditions:

Cloudy, 70

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/12/2022 9:43 AM	00:00	5.79 pH	23.72 °C	737.06 µS/cm	3.88 mg/L	47.70 NTU	60.9 mV	4.14 ft	100.00 ml/min
9/12/2022 9:48 AM	05:00	5.75 pH	23.02 °C	757.13 µS/cm	0.50 mg/L	21.10 NTU	43.7 mV	4.20 ft	85.00 ml/min
9/12/2022 9:53 AM	10:00	5.75 pH	22.94 °C	756.31 µS/cm	0.32 mg/L	13.80 NTU	46.0 mV	4.20 ft	85.00 ml/min
9/12/2022 9:58 AM	15:00	5.75 pH	23.18 °C	747.49 µS/cm	0.31 mg/L	11.95 NTU	41.8 mV	4.20 ft	85.00 ml/min
9/12/2022 10:03 AM	20:00	5.74 pH	23.34 °C	739.33 µS/cm	0.28 mg/L	7.00 NTU	43.1 mV	4.20 ft	85.00 ml/min
9/12/2022 10:08 AM	25:00	5.72 pH	23.66 °C	732.77 µS/cm	0.24 mg/L	6.20 NTU	45.1 mV	4.20 ft	85.00 ml/min
9/12/2022 10:13 AM	30:00	5.71 pH	23.45 °C	729.37 µS/cm	0.21 mg/L	5.65 NTU	46.8 mV	4.20 ft	85.00 ml/min
9/12/2022 10:18 AM	35:00	5.71 pH	23.20 °C	730.80 µS/cm	0.20 mg/L	3.97 NTU	46.8 mV	4.20 ft	85.00 ml/min
9/12/2022 10:23 AM	40:00	5.71 pH	23.52 °C	727.49 µS/cm	0.19 mg/L	3.79 NTU	47.1 mV	4.20 ft	85.00 ml/min

Samples

Sample ID:	Description:
B-99	

Low-Flow Test Report:

Test Date / Time: 9/8/2022 12:27:16 PM

Project: Plant Scherer (4)

Operator Name: Mark Mann

Location Name: B116D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 82 ft Total Depth: 92.45 ft Initial Depth to Water: 44.78 ft	Pump Type: bladder Tubing Type: Polyethylene Pump Intake From TOC: 88 ft Estimated Total Volume Pumped: 3750 ml Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 0.2 ft	Instrument Used: Aqua TROLL 400 Serial Number: 851413
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Test Notes:

Weather Conditions:

Sunny

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 0.2	+/- 5	+/- 10	+/- 0.3	
9/8/2022 12:27 PM	00:00	6.16 pH	30.75 °C	113.95 µS/cm	3.47 mg/L	14.10 NTU	39.6 mV	44.78 ft	250.00 ml/min
9/8/2022 12:32 PM	05:00	5.96 pH	20.48 °C	122.82 µS/cm	4.05 mg/L	6.83 NTU	43.5 mV	44.95 ft	250.00 ml/min
9/8/2022 12:37 PM	10:00	5.98 pH	20.57 °C	122.89 µS/cm	4.01 mg/L	4.13 NTU	41.6 mV	45.00 ft	250.00 ml/min
9/8/2022 12:42 PM	15:00	5.97 pH	20.94 °C	123.48 µS/cm	4.06 mg/L	3.05 NTU	41.1 mV	44.98 ft	250.00 ml/min

Samples

Sample ID:	Description:
B-116D	
DUP-2	

Low-Flow Test Report:

Test Date / Time: 9/15/2022 9:51:20 AM

Project: Plant McDonough

Operator Name: Jude Waguespack

Location Name: B-117D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 69.03 ft Total Depth: 79.03 ft Initial Depth to Water: 30.1 ft	Pump Type: bladder Tubing Type: LDPE Tubing Inner Diameter: 0.175 cm Tubing Length: 42 m Pump Intake From TOC: 74 ft Estimated Total Volume Pumped: 9000 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 1.46 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 2	+/- 1000 %	+/- 0.3	
9/15/2022 9:51 AM	00:00	6.73 pH	21.96 °C	131.37 µS/cm	7.85 mg/L	3.54 NTU	116.5 mV	30.10 ft	200.00 ml/min
9/15/2022 9:56 AM	05:00	5.83 pH	18.93 °C	113.71 µS/cm	1.43 mg/L	4.45 NTU	118.1 mV	30.90 ft	200.00 ml/min
9/15/2022 10:01 AM	10:00	5.73 pH	18.48 °C	114.24 µS/cm	0.94 mg/L	2.62 NTU	134.1 mV	31.30 ft	200.00 ml/min
9/15/2022 10:06 AM	15:00	5.71 pH	18.45 °C	121.45 µS/cm	1.41 mg/L	2.06 NTU	122.8 mV	31.45 ft	200.00 ml/min
9/15/2022 10:11 AM	20:00	5.73 pH	18.35 °C	130.07 µS/cm	1.53 mg/L	1.28 NTU	122.5 mV	31.45 ft	200.00 ml/min
9/15/2022 10:16 AM	25:00	5.77 pH	18.30 °C	140.07 µS/cm	1.51 mg/L	1.09 NTU	121.5 mV	31.45 ft	200.00 ml/min
9/15/2022 10:21 AM	30:00	5.80 pH	18.30 °C	147.84 µS/cm	1.46 mg/L	1.79 NTU	120.5 mV	31.45 ft	200.00 ml/min
9/15/2022 10:26 AM	35:00	5.83 pH	18.35 °C	153.55 µS/cm	1.30 mg/L	2.43 NTU	119.3 mV	31.45 ft	200.00 ml/min
9/15/2022 10:31 AM	40:00	5.85 pH	18.31 °C	155.74 µS/cm	1.23 mg/L	2.05 NTU	118.3 mV	31.56 ft	200.00 ml/min
9/15/2022 10:36 AM	45:00	5.86 pH	18.40 °C	154.14 µS/cm	1.30 mg/L	1.33 NTU	117.8 mV	31.56 ft	200.00 ml/min

Samples

Sample ID:	Description:
B-117D	

Low-Flow Test Report:

Test Date / Time: 9/9/2022 10:10:35 AM

Project: Plant McDonough

Operator Name: M. Mann

Location Name: B118 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 68 ft Total Depth: 78.32 ft Initial Depth to Water: 52.13 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 73 ft Estimated Total Volume Pumped: 22000 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 851413
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Test Notes:

Weather Conditions:

Cloudy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/9/2022 10:10 AM	00:00	6.77 pH	22.17 °C	0.44 µS/cm	8.11 mg/L	17.20 NTU	141.9 mV	52.13 ft	200.00 ml/min
9/9/2022 10:15 AM	05:00	6.49 pH	17.50 °C	89.05 µS/cm	9.44 mg/L	28.50 NTU	87.3 mV	52.09 ft	200.00 ml/min
9/9/2022 10:20 AM	10:00	6.50 pH	17.12 °C	88.60 µS/cm	9.89 mg/L	22.20 NTU	87.1 mV	52.03 ft	200.00 ml/min
9/9/2022 10:25 AM	15:00	6.54 pH	17.05 °C	88.97 µS/cm	9.85 mg/L	18.20 NTU	86.8 mV	52.07 ft	200.00 ml/min
9/9/2022 10:30 AM	20:00	6.54 pH	17.00 °C	90.83 µS/cm	9.84 mg/L	17.30 NTU	86.7 mV	52.04 ft	200.00 ml/min
9/9/2022 10:35 AM	25:00	6.55 pH	17.01 °C	92.35 µS/cm	9.88 mg/L	13.80 NTU	86.7 mV	52.05 ft	200.00 ml/min
9/9/2022 10:40 AM	30:00	6.54 pH	17.03 °C	93.50 µS/cm	10.41 mg/L	13.10 NTU	86.7 mV	52.08 ft	200.00 ml/min
9/9/2022 10:45 AM	35:00	6.53 pH	17.01 °C	94.56 µS/cm	10.26 mg/L	11.80 NTU	86.7 mV	52.09 ft	200.00 ml/min
9/9/2022 10:50 AM	40:00	6.52 pH	17.02 °C	95.20 µS/cm	10.28 mg/L	10.50 NTU	86.8 mV	52.11 ft	200.00 ml/min
9/9/2022 10:55 AM	45:00	6.51 pH	17.03 °C	95.56 µS/cm	10.39 mg/L	9.41 NTU	86.9 mV	52.08 ft	200.00 ml/min
9/9/2022 11:00 AM	50:00	6.51 pH	17.02 °C	95.79 µS/cm	10.55 mg/L	9.19 NTU	87.1 mV	52.07 ft	200.00 ml/min
9/9/2022 11:05 AM	55:00	6.50 pH	17.05 °C	96.01 µS/cm	10.63 mg/L	8.44 NTU	87.3 mV	52.09 ft	200.00 ml/min
9/9/2022 11:10 AM	01:00:00	6.50 pH	17.08 °C	95.13 µS/cm	10.53 mg/L	7.94 NTU	87.4 mV	52.08 ft	200.00 ml/min

9/9/2022 11:15 AM	01:05:00	6.50 pH	17.08 °C	95.02 µS/cm	10.49 mg/L	7.37 NTU	87.8 mV	52.05 ft	200.00 ml/min
9/9/2022 11:20 AM	01:10:00	6.49 pH	17.05 °C	94.82 µS/cm	10.35 mg/L	6.80 NTU	88.1 mV	52.07 ft	200.00 ml/min
9/9/2022 11:25 AM	01:15:00	6.50 pH	17.02 °C	94.37 µS/cm	10.34 mg/L	6.30 NTU	88.4 mV	52.07 ft	200.00 ml/min
9/9/2022 11:30 AM	01:20:00	6.49 pH	17.03 °C	93.85 µS/cm	10.47 mg/L	6.09 NTU	88.8 mV	52.04 ft	200.00 ml/min
9/9/2022 11:35 AM	01:25:00	6.49 pH	17.12 °C	93.62 µS/cm	10.39 mg/L	5.91 NTU	89.0 mV	52.08 ft	200.00 ml/min
9/9/2022 11:40 AM	01:30:00	6.50 pH	17.14 °C	93.63 µS/cm	10.60 mg/L	5.76 NTU	89.3 mV	52.10 ft	200.00 ml/min
9/9/2022 11:45 AM	01:35:00	6.49 pH	17.14 °C	93.09 µS/cm	10.64 mg/L	5.49 NTU	89.6 mV	52.03 ft	200.00 ml/min
9/9/2022 11:50 AM	01:40:00	6.50 pH	17.14 °C	92.83 µS/cm	10.68 mg/L	5.37 NTU	90.0 mV	52.08 ft	200.00 ml/min
9/9/2022 11:55 AM	01:45:00	6.50 pH	17.27 °C	93.17 µS/cm	10.64 mg/L	5.17 NTU	90.2 mV	52.07 ft	200.00 ml/min
9/9/2022 12:00 PM	01:50:00	6.49 pH	17.26 °C	92.95 µS/cm	10.62 mg/L	4.90 NTU	90.7 mV	52.12 ft	200.00 ml/min

Samples

Sample ID:	Description:
B-118	Extra Rad

Low-Flow Test Report:

Test Date / Time: 9/12/2022 9:57:33 AM

Project: Plant McDonough

Operator Name: M. Mann

Location Name: B-119D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 98 ft Total Depth: 107.98 ft Initial Depth to Water: 47.04 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 103 ft Estimated Total Volume Pumped: 6300 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 5.22 ft	Instrument Used: Aqua TROLL 400 Serial Number: 851413
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Test Notes:

Weather Conditions:

Cloudy

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/12/2022 9:57 AM	00:00	6.44 pH	21.23 °C	135.37 µS/cm	2.83 mg/L	5.29 NTU	21.8 mV	47.04 ft	170.00 ml/min
9/12/2022 10:02 AM	05:00	6.57 pH	17.98 °C	138.48 µS/cm	3.19 mg/L	5.21 NTU	2.2 mV	49.07 ft	170.00 ml/min
9/12/2022 10:07 AM	10:00	6.61 pH	17.68 °C	138.82 µS/cm	4.58 mg/L	4.68 NTU	2.9 mV	50.21 ft	170.00 ml/min
9/12/2022 10:12 AM	15:00	6.61 pH	17.47 °C	138.26 µS/cm	5.10 mg/L	5.03 NTU	7.0 mV	51.16 ft	150.00 ml/min
9/12/2022 10:17 AM	20:00	6.61 pH	17.58 °C	138.84 µS/cm	5.30 mg/L	4.77 NTU	10.9 mV	51.71 ft	150.00 ml/min
9/12/2022 10:22 AM	25:00	6.62 pH	17.99 °C	139.02 µS/cm	5.15 mg/L	3.48 NTU	11.7 mV	51.88 ft	150.00 ml/min
9/12/2022 10:27 AM	30:00	6.59 pH	18.16 °C	136.22 µS/cm	4.47 mg/L	3.21 NTU	11.2 mV	51.99 ft	150.00 ml/min
9/12/2022 10:32 AM	35:00	6.57 pH	17.99 °C	134.61 µS/cm	4.46 mg/L	2.78 NTU	16.8 mV	52.16 ft	150.00 ml/min
9/12/2022 10:37 AM	40:00	6.57 pH	17.91 °C	134.84 µS/cm	4.71 mg/L	2.47 NTU	19.1 mV	52.26 ft	150.00 ml/min

Samples

Sample ID:	Description:
B-119D	

Low-Flow Test Report:

Test Date / Time: 9/14/2022 10:03:46 AM

Project: Plant McDonough

Operator Name: M. Mann

Location Name: B-122D Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 70 ft Total Depth: 80.63 ft Initial Depth to Water: 31.12 ft	Pump Type: Bladder Tubing Type: Polyethylene Pump Intake From TOC: 75 ft Estimated Total Volume Pumped: 4725 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 2.4 ft	Instrument Used: Aqua TROLL 400 Serial Number: 851413
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Test Notes:

Weather Conditions:

Sunny

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/14/2022 10:03 AM	00:00	6.15 pH	24.62 °C	450.12 µS/cm	3.36 mg/L	4.13 NTU	30.0 mV	31.12 ft	185.00 ml/min
9/14/2022 10:08 AM	05:00	6.12 pH	21.55 °C	452.23 µS/cm	0.87 mg/L	2.83 NTU	28.9 mV	32.96 ft	185.00 ml/min
9/14/2022 10:13 AM	10:00	6.11 pH	21.55 °C	455.01 µS/cm	0.61 mg/L	2.35 NTU	23.9 mV	33.80 ft	185.00 ml/min
9/14/2022 10:18 AM	15:00	6.11 pH	21.68 °C	454.27 µS/cm	0.44 mg/L	1.88 NTU	21.0 mV	33.13 ft	130.00 ml/min
9/14/2022 10:23 AM	20:00	6.11 pH	21.59 °C	454.72 µS/cm	0.34 mg/L	1.59 NTU	17.0 mV	33.31 ft	130.00 ml/min
9/14/2022 10:28 AM	25:00	6.11 pH	21.70 °C	454.67 µS/cm	0.29 mg/L	1.17 NTU	15.4 mV	33.49 ft	130.00 ml/min
9/14/2022 10:33 AM	30:00	6.07 pH	21.86 °C	459.33 µS/cm	0.26 mg/L	0.85 NTU	16.9 mV	33.52 ft	130.00 ml/min

Samples

Sample ID:	Description:
B-122D	
EB-4	

Low-Flow Test Report:

Test Date / Time: 9/20/2022 3:20:34 PM

Project: Plant McDonough

Operator Name: M. Mann

Location Name: B-123D Well Diameter: 2 in Casing Type: PVC Screen Length: 50 ft Top of Screen: 115 ft Total Depth: 164.9 ft Initial Depth to Water: 120.75 ft	Pump Type: reclaimer Tubing Type: Polyethylene Pump Intake From TOC: 135 ft Estimated Total Volume Pumped: 2500 ml Flow Cell Volume: 90 ml Final Flow Rate: 500 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 851413
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Test Notes:

Over 150 gallons pumped over last 2 days, 52 pumped this day. Redeveloped before sampled.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/20/2022 3:20 PM	00:00	7.16 pH	21.55 °C	818.13 µS/cm	8.58 mg/L	3.91 NTU	0.4 mV	120.75 ft	500.00 ml/min
9/20/2022 3:25 PM	05:00	7.13 pH	21.87 °C	817.85 µS/cm	8.47 mg/L	4.57 NTU	4.9 mV	120.75 ft	500.00 ml/min

Samples

Sample ID:	Description:
B-123D	

Low-Flow Test Report:

Test Date / Time: 9/13/2022 9:09:37 AM

Project: SCS Plant McDonough

Operator Name: Duane Fulton

Location Name: B-54 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 27.71 ft Total Depth: 37.71 ft Initial Depth to Water: 6.25 ft	Pump Type: Alexis Peri Pump Tubing Type: LDPE Pump Intake From TOC: 32 ft Estimated Total Volume Pumped: 4730 ml Flow Cell Volume: 90 ml Final Flow Rate: 195 ml/min Final Draw Down: 0.1 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883533
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Test Notes:

Weather Conditions:

Clear, 67

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/13/2022 9:09 AM	00:00	5.26 pH	19.55 °C	869.97 µS/cm	0.66 mg/L	2.84 NTU	130.2 mV	6.30 ft	166.00 ml/min
9/13/2022 9:14 AM	05:00	5.31 pH	20.15 °C	858.75 µS/cm	0.22 mg/L	2.60 NTU	131.2 mV	6.33 ft	195.00 ml/min
9/13/2022 9:19 AM	10:00	5.32 pH	19.95 °C	862.42 µS/cm	0.17 mg/L	0.87 NTU	167.7 mV	6.33 ft	195.00 ml/min
9/13/2022 9:24 AM	15:00	5.33 pH	19.95 °C	861.14 µS/cm	0.15 mg/L	0.68 NTU	123.8 mV	6.35 ft	195.00 ml/min
9/13/2022 9:29 AM	20:00	5.33 pH	19.92 °C	860.39 µS/cm	0.13 mg/L	0.41 NTU	115.1 mV	6.35 ft	195.00 ml/min
9/13/2022 9:34 AM	25:00	5.34 pH	19.92 °C	860.83 µS/cm	0.12 mg/L	0.17 NTU	110.4 mV	6.35 ft	195.00 ml/min

Samples

Sample ID:	Description:
B-54	

Low-Flow Test Report:

Test Date / Time: 9/14/2022 12:03:32 PM

Project: Plant McDonough

Operator Name: M. Mann

Location Name: B-63 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 36 ft Total Depth: 46.15 ft Initial Depth to Water: 30.46 ft	Pump Type: bladder Tubing Type: Polyethylene Pump Intake From TOC: 41 ft Estimated Total Volume Pumped: 11681.667 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.92 ft	Instrument Used: Aqua TROLL 400 Serial Number: 851413
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Test Notes:

Weather Conditions:

Sunny

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/14/2022 12:03 PM	00:00	5.80 pH	32.29 °C	283.55 µS/cm	2.10 mg/L	111.00 NTU	42.7 mV	30.46 ft	350.00 ml/min
9/14/2022 12:08 PM	04:50	5.33 pH	21.91 °C	334.46 µS/cm	0.20 mg/L	72.90 NTU	74.0 mV	31.35 ft	300.00 ml/min
9/14/2022 12:13 PM	09:50	5.34 pH	21.64 °C	339.74 µS/cm	0.31 mg/L	33.40 NTU	78.6 mV	31.29 ft	200.00 ml/min
9/14/2022 12:18 PM	14:50	5.33 pH	21.75 °C	334.56 µS/cm	0.49 mg/L	22.50 NTU	81.0 mV	31.29 ft	200.00 ml/min
9/14/2022 12:23 PM	19:50	5.32 pH	21.72 °C	333.13 µS/cm	0.46 mg/L	17.00 NTU	84.3 mV	31.27 ft	200.00 ml/min
9/14/2022 12:35 PM	32:17	5.34 pH	21.68 °C	331.12 µS/cm	0.43 mg/L	12.30 NTU	86.7 mV	31.32 ft	200.00 ml/min
9/14/2022 12:40 PM	37:17	5.35 pH	21.74 °C	333.36 µS/cm	0.43 mg/L	7.47 NTU	86.9 mV	31.34 ft	200.00 ml/min
9/14/2022 12:45 PM	42:17	5.33 pH	21.69 °C	331.22 µS/cm	0.44 mg/L	6.90 NTU	86.8 mV	31.37 ft	200.00 ml/min
9/14/2022 12:50 PM	47:17	5.33 pH	21.73 °C	334.89 µS/cm	0.41 mg/L	5.70 NTU	86.9 mV	31.38 ft	200.00 ml/min
9/14/2022 12:55 PM	52:17	5.31 pH	21.62 °C	331.42 µS/cm	0.39 mg/L	4.81 NTU	86.9 mV	31.38 ft	200.00 ml/min

Samples

Sample ID:	Description:
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B-63	
FB-5	

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 9/13/2022 1:29:48 PM

Project: SCS Plant McDonough

Operator Name: Duane Fulton

Location Name: B-64 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 20.48 ft Total Depth: 30.48 ft Initial Depth to Water: 6.65 ft	Pump Type: Alexis Peri Pump Tubing Type: LDPE Pump Intake From TOC: 25 ft Estimated Total Volume Pumped: 4500 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.35 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883533
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Test Notes:

Weather Conditions:

Clear, 82

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/13/2022 1:29 PM	00:00	5.14 pH	25.15 °C	1,246.6 µS/cm	3.50 mg/L	4.07 NTU	248.5 mV	6.85 ft	200.00 ml/min
9/13/2022 1:34 PM	05:00	5.00 pH	21.67 °C	1,323.9 µS/cm	0.20 mg/L	1.57 NTU	495.3 mV	6.98 ft	100.00 ml/min
9/13/2022 1:39 PM	10:00	4.99 pH	21.42 °C	1,322.3 µS/cm	0.13 mg/L	0.73 NTU	557.7 mV	7.00 ft	100.00 ml/min
9/13/2022 1:44 PM	15:00	5.00 pH	21.33 °C	1,323.5 µS/cm	0.10 mg/L	0.77 NTU	502.6 mV	7.00 ft	100.00 ml/min
9/13/2022 1:49 PM	20:00	5.00 pH	21.19 °C	1,321.1 µS/cm	0.08 mg/L	0.76 NTU	503.9 mV	7.01 ft	100.00 ml/min
9/13/2022 1:54 PM	25:00	5.00 pH	21.13 °C	1,323.4 µS/cm	0.07 mg/L	0.75 NTU	503.4 mV	7.00 ft	100.00 ml/min
9/13/2022 1:59 PM	30:00	5.00 pH	21.10 °C	1,319.9 µS/cm	0.06 mg/L	0.78 NTU	502.1 mV	7.00 ft	100.00 ml/min
9/13/2022 2:04 PM	35:00	5.00 pH	21.11 °C	1,315.3 µS/cm	0.05 mg/L	0.75 NTU	501.4 mV	7.00 ft	100.00 ml/min
9/13/2022 2:09 PM	40:00	5.00 pH	21.01 °C	1,315.2 µS/cm	0.04 mg/L	0.75 NTU	500.5 mV	7.00 ft	100.00 ml/min

Samples

Sample ID:	Description:
B-64	

Low-Flow Test Report:

Test Date / Time: 9/16/2022 9:03:32 AM

Project: SCS Plant McDonough

Operator Name: Duane Fulton

Location Name: B-66 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 47.99 ft Total Depth: 57.99 ft Initial Depth to Water: 21.74 ft	Pump Type: Alexis Peri Pump Tubing Type: LDPE Pump Intake From TOC: 52 ft Estimated Total Volume Pumped: 4060 ml Flow Cell Volume: 90 ml Final Flow Rate: 55 ml/min Final Draw Down: 1.76 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883533
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Test Notes:

Weather Conditions:

Clear, 76

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/16/2022 9:03 AM	00:00	6.65 pH	18.88 °C	781.83 µS/cm	4.12 mg/L	4.26 NTU	1.5 mV	22.01 ft	100.00 ml/min
9/16/2022 9:08 AM	05:00	6.58 pH	18.84 °C	795.39 µS/cm	0.75 mg/L	1.83 NTU	-19.5 mV	22.53 ft	85.00 ml/min
9/16/2022 9:13 AM	10:00	6.59 pH	18.94 °C	796.84 µS/cm	0.41 mg/L	1.14 NTU	-39.3 mV	22.80 ft	66.00 ml/min
9/16/2022 9:18 AM	15:00	6.59 pH	19.03 °C	796.70 µS/cm	0.32 mg/L	1.55 NTU	-24.4 mV	23.01 ft	66.00 ml/min
9/16/2022 9:23 AM	20:00	6.59 pH	19.16 °C	796.77 µS/cm	0.30 mg/L	1.79 NTU	-24.3 mV	23.13 ft	55.00 ml/min
9/16/2022 9:28 AM	25:00	6.59 pH	19.30 °C	794.25 µS/cm	0.29 mg/L	1.83 NTU	-23.8 mV	23.22 ft	55.00 ml/min
9/16/2022 9:33 AM	30:00	6.58 pH	19.37 °C	791.15 µS/cm	0.27 mg/L	1.78 NTU	-23.0 mV	23.30 ft	55.00 ml/min
9/16/2022 9:38 AM	35:00	6.57 pH	19.44 °C	788.89 µS/cm	0.29 mg/L	0.86 NTU	-21.2 mV	23.34 ft	55.00 ml/min
9/16/2022 9:43 AM	40:00	6.58 pH	19.52 °C	787.14 µS/cm	0.34 mg/L	1.87 NTU	-35.6 mV	23.40 ft	55.00 ml/min
9/16/2022 9:48 AM	45:00	6.58 pH	19.61 °C	787.64 µS/cm	0.42 mg/L	1.17 NTU	-18.7 mV	23.41 ft	55.00 ml/min
9/16/2022 9:53 AM	50:00	6.59 pH	19.70 °C	786.18 µS/cm	0.45 mg/L	1.05 NTU	-17.8 mV	23.45 ft	55.00 ml/min
9/16/2022 9:58 AM	55:00	6.59 pH	19.87 °C	788.28 µS/cm	0.49 mg/L	1.07 NTU	-32.1 mV	23.46 ft	55.00 ml/min
9/16/2022 10:03 AM	01:00:00	6.60 pH	19.95 °C	788.78 µS/cm	0.51 mg/L	1.05 NTU	-17.2 mV	23.48 ft	55.00 ml/min

9/16/2022 10:08 AM	01:05:00	6.60 pH	19.97 °C	788.53 µS/cm	0.52 mg/L	1.02 NTU	-30.5 mV	23.50 ft	55.00 ml/min
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Samples

Sample ID:	Description:
B-66	

Low-Flow Test Report:

Test Date / Time: 9/13/2022 9:14:25 AM

Project: Plant McDonough

Operator Name: M. Mann

Location Name: B-76 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 28 ft Total Depth: 38.5 ft Initial Depth to Water: 15.45 ft	Pump Type: Peristaltic Tubing Type: Polyethylene Pump Intake From TOC: 33.5 ft Estimated Total Volume Pumped: 6850 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0.06 ft	Instrument Used: Aqua TROLL 400 Serial Number: 851413
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Test Notes:

Weather Conditions:

Sunny

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/13/2022 9:14 AM	00:00	6.11 pH	20.66 °C	1,222.8 µS/cm	1.15 mg/L	85.20 NTU	83.2 mV	15.45 ft	150.00 ml/min
9/13/2022 9:19 AM	05:00	6.15 pH	20.84 °C	1,277.1 µS/cm	0.24 mg/L	38.50 NTU	70.3 mV	15.58 ft	200.00 ml/min
9/13/2022 9:24 AM	10:00	6.16 pH	21.15 °C	1,276.8 µS/cm	0.17 mg/L	14.30 NTU	61.3 mV	15.57 ft	200.00 ml/min
9/13/2022 9:29 AM	15:00	6.17 pH	21.26 °C	1,279.6 µS/cm	0.14 mg/L	5.52 NTU	56.1 mV	15.59 ft	200.00 ml/min
9/13/2022 9:34 AM	20:00	6.17 pH	21.33 °C	1,280.3 µS/cm	0.12 mg/L	9.09 NTU	53.3 mV	15.61 ft	200.00 ml/min
9/13/2022 9:39 AM	25:00	6.18 pH	21.37 °C	1,277.8 µS/cm	0.10 mg/L	6.04 NTU	50.5 mV	15.56 ft	150.00 ml/min
9/13/2022 9:44 AM	30:00	6.13 pH	21.11 °C	1,246.8 µS/cm	0.11 mg/L	6.88 NTU	48.9 mV	15.59 ft	150.00 ml/min
9/13/2022 9:49 AM	35:00	6.09 pH	21.15 °C	1,225.3 µS/cm	0.12 mg/L	5.11 NTU	49.1 mV	15.53 ft	120.00 ml/min
9/13/2022 9:54 AM	40:00	6.05 pH	21.31 °C	1,206.7 µS/cm	0.12 mg/L	2.51 NTU	49.1 mV	15.51 ft	120.00 ml/min

Samples

Sample ID:	Description:
B-76	

Low-Flow Test Report:

Test Date / Time: 9/13/2022 1:26:24 PM

Project: Plant McDonough

Operator Name: M. Mann

Location Name: B-77 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 33 ft Total Depth: 43.46 ft Initial Depth to Water: 30.7 ft	Pump Type: bladder Tubing Type: Polyethylene Pump Intake From TOC: 38 ft Estimated Total Volume Pumped: 12875 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 2.22 ft	Instrument Used: Aqua TROLL 400 Serial Number: 851413
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Test Notes:

Weather Conditions:

Sunny

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/13/2022 1:26 PM	00:00	6.12 pH	31.72 °C	301.01 µS/cm	2.47 mg/L	40.10 NTU	58.8 mV	30.70 ft	275.00 ml/min
9/13/2022 1:31 PM	05:00	6.36 pH	22.45 °C	323.88 µS/cm	0.18 mg/L	39.00 NTU	11.8 mV	31.75 ft	275.00 ml/min
9/13/2022 1:36 PM	10:00	6.39 pH	22.08 °C	322.42 µS/cm	0.13 mg/L	43.50 NTU	-5.4 mV	32.07 ft	275.00 ml/min
9/13/2022 1:41 PM	15:00	6.38 pH	22.82 °C	310.58 µS/cm	0.16 mg/L	31.40 NTU	-12.7 mV	31.99 ft	275.00 ml/min
9/13/2022 1:46 PM	20:00	6.35 pH	22.57 °C	292.32 µS/cm	0.09 mg/L	21.90 NTU	-13.2 mV	32.15 ft	275.00 ml/min
9/13/2022 1:51 PM	25:00	6.34 pH	21.87 °C	292.27 µS/cm	0.09 mg/L	28.30 NTU	-11.0 mV	32.39 ft	200.00 ml/min
9/13/2022 1:56 PM	30:00	6.32 pH	22.25 °C	289.74 µS/cm	0.08 mg/L	16.40 NTU	-12.6 mV	32.49 ft	200.00 ml/min
9/13/2022 2:01 PM	35:00	6.33 pH	22.29 °C	290.32 µS/cm	0.08 mg/L	12.60 NTU	-11.8 mV	32.61 ft	200.00 ml/min
9/13/2022 2:06 PM	40:00	6.33 pH	22.30 °C	289.81 µS/cm	0.07 mg/L	9.20 NTU	-13.5 mV	32.69 ft	200.00 ml/min
9/13/2022 2:11 PM	45:00	6.34 pH	22.30 °C	290.78 µS/cm	0.06 mg/L	7.17 NTU	-14.2 mV	32.78 ft	200.00 ml/min
9/13/2022 2:16 PM	50:00	6.33 pH	22.31 °C	292.30 µS/cm	0.06 mg/L	5.66 NTU	-14.9 mV	32.86 ft	200.00 ml/min
9/13/2022 2:21 PM	55:00	6.34 pH	22.29 °C	291.54 µS/cm	0.05 mg/L	4.94 NTU	-15.2 mV	32.92 ft	200.00 ml/min

Samples

Sample ID:	Description:
B-77	Extra Rad

Low-Flow Test Report:

Test Date / Time: 9/13/2022 1:53:58 PM

Project: Plant McDonough

Operator Name: Jude Waguespack

Location Name: B-78 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 21.7 ft Total Depth: 31.7 ft Initial Depth to Water: 11.6 ft	Pump Type: peristaltic Tubing Type: LDPE Tubing Inner Diameter: 0.175 cm Tubing Length: 42 m Pump Intake From TOC: 26 ft Estimated Total Volume Pumped: 5000 ml Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 0.15 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 2	+/- 1000 %	+/- 0.3	
9/13/2022 1:53 PM	00:00	4.53 pH	23.26 °C	1,071.4 µS/cm	0.44 mg/L	0.85 NTU	499.8 mV	11.60 ft	250.00 ml/min
9/13/2022 1:58 PM	05:00	4.53 pH	20.27 °C	1,043.5 µS/cm	0.21 mg/L	0.66 NTU	565.5 mV	11.75 ft	250.00 ml/min
9/13/2022 2:03 PM	10:00	4.54 pH	20.04 °C	1,045.6 µS/cm	0.17 mg/L	0.77 NTU	505.2 mV	11.75 ft	250.00 ml/min
9/13/2022 2:08 PM	15:00	4.54 pH	19.90 °C	1,051.0 µS/cm	0.16 mg/L	1.07 NTU	567.1 mV	11.75 ft	250.00 ml/min
9/13/2022 2:13 PM	20:00	4.56 pH	19.81 °C	1,050.7 µS/cm	0.15 mg/L	0.79 NTU	505.6 mV	11.75 ft	250.00 ml/min

Samples

Sample ID:	Description:
B-78	

Low-Flow Test Report:

Test Date / Time: 9/12/2022 9:45:12 AM

Project: Plant McDonough

Operator Name: Jude Waguespack

Location Name: B-79 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 26.38 ft Total Depth: 36.38 ft Initial Depth to Water: 7.7 ft	Pump Type: peristaltic Tubing Type: LDPE Tubing Inner Diameter: 0.175 cm Tubing Length: 42 m Pump Intake From TOC: 31 ft Estimated Total Volume Pumped: 5004.167 ml Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 0.75 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 2	+/- 1000 %	+/- 0.3	
9/12/2022 9:45 AM	00:00	7.29 pH	24.80 °C	0.00 µS/cm	8.14 mg/L	3.53 NTU	132.7 mV	7.70 ft	250.00 ml/min
9/12/2022 9:50 AM	05:00	4.86 pH	21.47 °C	0.50 µS/cm	0.71 mg/L	7.79 NTU	133.5 mV	8.30 ft	250.00 ml/min
9/12/2022 9:54 AM	09:42	4.88 pH	20.62 °C	0.51 µS/cm	0.34 mg/L		143.9 mV	8.30 ft	250.00 ml/min
9/12/2022 9:55 AM	10:01	4.88 pH	20.58 °C	0.51 µS/cm	0.33 mg/L	2.10 NTU	143.6 mV	8.35 ft	250.00 ml/min
9/12/2022 10:00 AM	15:01	4.89 pH	20.51 °C	0.52 µS/cm	0.25 mg/L	0.94 NTU	123.4 mV	8.39 ft	250.00 ml/min
9/12/2022 10:05 AM	20:01	4.92 pH	20.52 °C	0.53 µS/cm	0.22 mg/L	0.62 NTU	119.7 mV	8.45 ft	250.00 ml/min

Samples

Sample ID:	Description:
B-79	

Low-Flow Test Report:

Test Date / Time: 9/16/2022 11:32:15 AM

Project: SCS Plant McDonough

Operator Name: Duane Fulton

Location Name: B-82 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 37.65 ft Total Depth: 47.65 ft Initial Depth to Water: 18.96 ft	Pump Type: Alexis Peri Pump Tubing Type: LDPE Pump Intake From TOC: 42 ft Estimated Total Volume Pumped: 3125 ml Flow Cell Volume: 90 ml Final Flow Rate: 75 ml/min Final Draw Down: 0.66 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883533
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Test Notes:

Weather Conditions:

Clear, 77

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/16/2022 11:32 AM	00:00	5.74 pH	28.31 °C	776.27 µS/cm	3.95 mg/L	3.77 NTU	121.6 mV	19.17 ft	100.00 ml/min
9/16/2022 11:37 AM	05:00	5.08 pH	22.88 °C	830.02 µS/cm	0.75 mg/L	3.65 NTU	233.7 mV	19.49 ft	75.00 ml/min
9/16/2022 11:42 AM	10:00	5.05 pH	22.48 °C	829.67 µS/cm	0.59 mg/L	4.14 NTU	165.1 mV	19.55 ft	75.00 ml/min
9/16/2022 11:47 AM	15:00	5.04 pH	22.29 °C	834.81 µS/cm	0.54 mg/L	2.45 NTU	209.2 mV	19.60 ft	75.00 ml/min
9/16/2022 11:52 AM	20:00	5.04 pH	22.15 °C	831.99 µS/cm	0.50 mg/L	2.27 NTU	150.4 mV	19.62 ft	75.00 ml/min
9/16/2022 11:57 AM	25:00	5.04 pH	22.23 °C	833.79 µS/cm	0.48 mg/L	2.15 NTU	188.8 mV	19.62 ft	75.00 ml/min
9/16/2022 12:02 PM	30:00	5.03 pH	22.55 °C	831.19 µS/cm	0.47 mg/L	1.82 NTU	141.3 mV	19.62 ft	75.00 ml/min
9/16/2022 12:07 PM	35:00	5.02 pH	22.54 °C	826.34 µS/cm	0.46 mg/L	2.01 NTU	132.3 mV	19.62 ft	75.00 ml/min
9/16/2022 12:12 PM	40:00	5.02 pH	22.36 °C	829.57 µS/cm	0.43 mg/L	2.23 NTU	169.7 mV	19.62 ft	75.00 ml/min

Samples

Sample ID:	Description:
B-82	

Low-Flow Test Report:

Test Date / Time: 9/16/2022 10:29:35 AM

Project: Plant McDonough

Operator Name: M. Mann

Location Name: B-88 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 65 ft Total Depth: 75.06 ft Initial Depth to Water: 37.8 ft	Pump Type: bladder Tubing Type: Polyethylene Pump Intake From TOC: 70 ft Estimated Total Volume Pumped: 3000 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.1 ft	Instrument Used: Aqua TROLL 400 Serial Number: 851413
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Test Notes:

Weather Conditions:

Sunny

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/16/2022 10:29 AM	00:00	6.17 pH	22.94 °C	815.44 µS/cm	4.12 mg/L	4.10 NTU	107.5 mV	37.80 ft	200.00 ml/min
9/16/2022 10:34 AM	05:00	5.49 pH	18.96 °C	967.19 µS/cm	0.45 mg/L	3.71 NTU	115.6 mV	37.88 ft	200.00 ml/min
9/16/2022 10:39 AM	10:00	5.46 pH	18.72 °C	977.78 µS/cm	0.47 mg/L	2.78 NTU	120.3 mV	37.91 ft	200.00 ml/min
9/16/2022 10:44 AM	15:00	5.47 pH	18.77 °C	979.56 µS/cm	0.52 mg/L	2.40 NTU	121.4 mV	37.90 ft	200.00 ml/min

Samples

Sample ID:	Description:
B-88	

Low-Flow Test Report:

Test Date / Time: 9/9/2022 9:57:11 AM

Project: Plant McDonough (26)

Operator Name: Cole Mayer

Location Name: B-62 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 29.62 ft Total Depth: 39.62 ft Initial Depth to Water: 15.52 ft	Pump Type: peristaltic Tubing Type: LDPE Pump Intake From TOC: 34 ft Estimated Total Volume Pumped: 9095 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: -0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 884187
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5 %	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/9/2022 9:57 AM	00:00	6.78 pH	23.43 °C	509.32 µS/cm	4.36 mg/L	13.02 NTU	107.4 mV	15.58 ft	100.00 ml/min
9/9/2022 10:02 AM	05:00	6.48 pH	20.58 °C	505.34 µS/cm	0.44 mg/L	3.16 NTU	81.4 mV	15.61 ft	100.00 ml/min
9/9/2022 10:07 AM	10:00	6.48 pH	20.07 °C	491.81 µS/cm	0.26 mg/L	6.67 NTU	73.8 mV	15.61 ft	100.00 ml/min
9/9/2022 10:12 AM	15:00	6.38 pH	19.97 °C	398.62 µS/cm	0.19 mg/L	20.96 NTU	66.6 mV	15.62 ft	100.00 ml/min
9/9/2022 10:17 AM	20:00	6.36 pH	19.78 °C	375.78 µS/cm	0.17 mg/L	19.70 NTU	62.8 mV	15.62 ft	100.00 ml/min
9/9/2022 10:22 AM	25:00	6.30 pH	19.77 °C	334.58 µS/cm	0.17 mg/L	10.82 NTU	58.6 mV	15.62 ft	100.00 ml/min
9/9/2022 10:27 AM	30:00	6.26 pH	19.73 °C	305.81 µS/cm	0.19 mg/L	7.57 NTU	55.4 mV	15.61 ft	100.00 ml/min
9/9/2022 10:32 AM	35:00	6.24 pH	19.87 °C	294.79 µS/cm	0.20 mg/L	6.39 NTU	53.1 mV	15.60 ft	100.00 ml/min
9/9/2022 10:37 AM	40:00	6.23 pH	19.98 °C	284.80 µS/cm	0.21 mg/L	6.85 NTU	51.3 mV	15.60 ft	100.00 ml/min
9/9/2022 10:42 AM	45:00	6.23 pH	20.22 °C	281.88 µS/cm	0.25 mg/L	7.84 NTU	49.7 mV	15.59 ft	100.00 ml/min
9/9/2022 10:47 AM	50:00	6.22 pH	20.28 °C	280.42 µS/cm	0.17 mg/L	8.18 NTU	48.3 mV	15.58 ft	100.00 ml/min
9/9/2022 10:52 AM	55:00	6.23 pH	20.30 °C	277.68 µS/cm	0.16 mg/L	7.20 NTU	47.3 mV	15.57 ft	100.00 ml/min
9/9/2022 10:57 AM	01:00:00	6.23 pH	20.32 °C	275.94 µS/cm	0.16 mg/L	7.25 NTU	46.2 mV	15.56 ft	100.00 ml/min
9/9/2022 11:02 AM	01:05:00	6.22 pH	20.41 °C	274.68 µS/cm	0.15 mg/L	8.09 NTU	45.6 mV	15.55 ft	100.00 ml/min
9/9/2022 11:07 AM	01:10:00	6.23 pH	20.53 °C	274.55 µS/cm	0.16 mg/L	7.18 NTU	44.8 mV	15.54 ft	100.00 ml/min

9/9/2022 11:12 AM	01:15:00	6.23 pH	20.56 °C	272.70 µS/cm	0.16 mg/L	7.22 NTU	44.1 mV	15.54 ft	100.00 ml/min
9/9/2022 11:17 AM	01:20:00	6.22 pH	20.67 °C	271.88 µS/cm	0.13 mg/L	5.95 NTU	43.3 mV	15.54 ft	100.00 ml/min
9/9/2022 11:22 AM	01:25:00	6.22 pH	20.42 °C	271.27 µS/cm	0.12 mg/L	5.74 NTU	42.5 mV	15.52 ft	100.00 ml/min
9/9/2022 11:25 AM	01:30:00	6.22 pH	20.71 °C	270.15 µS/cm	0.12 mg/L	4.84 NTU	41.3 mV	15.51 ft	100.00 ml/min

Samples

Sample ID:	Description:
B-62	

Low-Flow Test Report:

Test Date / Time: 9/9/2022 10:14:14 AM

Project: Plant McDonough

Operator Name: Jude Waguespack

Location Name: B-68 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 8.03 ft Total Depth: 18.03 ft Initial Depth to Water: 4.25 ft	Pump Type: peristaltic Tubing Type: LDPE Tubing Inner Diameter: 0.175 cm Tubing Length: 42 m Pump Intake From TOC: 13 ft Estimated Total Volume Pumped: 7500 ml Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 0.45 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 2	+/- 1000 %	+/- 0.3	
9/9/2022 10:14 AM	00:00	6.26 pH	23.85 °C	0.47 µS/cm	3.83 mg/L	207.00 NTU	32.8 mV	4.25 ft	250.00 ml/min
9/9/2022 10:19 AM	05:00	6.52 pH	19.59 °C	0.49 µS/cm	0.15 mg/L	48.50 NTU	-12.1 mV	4.70 ft	250.00 ml/min
9/9/2022 10:24 AM	10:00	6.56 pH	18.96 °C	0.49 µS/cm	0.10 mg/L	26.00 NTU	-29.5 mV	4.70 ft	250.00 ml/min
9/9/2022 10:29 AM	15:00	6.59 pH	18.88 °C	0.49 µS/cm	0.09 mg/L	14.60 NTU	-28.5 mV	4.70 ft	250.00 ml/min
9/9/2022 10:34 AM	20:00	6.61 pH	19.18 °C	0.49 µS/cm	0.07 mg/L	11.80 NTU	-38.3 mV	4.70 ft	250.00 ml/min
9/9/2022 10:39 AM	25:00	6.62 pH	19.19 °C	0.49 µS/cm	0.07 mg/L	7.90 NTU	-31.8 mV	4.70 ft	250.00 ml/min
9/9/2022 10:44 AM	30:00	6.64 pH	19.09 °C	0.49 µS/cm	0.07 mg/L	4.71 NTU	-40.4 mV	4.70 ft	250.00 ml/min

Samples

Sample ID:	Description:
B-68	

Low-Flow Test Report:

Test Date / Time: 9/8/2022 2:18:20 PM

Project: SCS Plant McDonough

Operator Name: Duane Fulton

Location Name: B-73 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 5.9 ft Total Depth: 15.9 ft Initial Depth to Water: 4.61 ft	Pump Type: Alexis Peri Pump Tubing Type: LDPE Pump Intake From TOC: 10 ft Estimated Total Volume Pumped: 3350 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0.25 ft	Instrument Used: Aqua TROLL 400 Serial Number: 883533
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Test Notes:

Weather Conditions:

Cloudy 82

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 0.5	+/- 5	+/- 10 %	+/- 5	+/- 10	+/- 0.3	
9/8/2022 2:18 PM	00:00	6.79 pH	27.91 °C	399.50 µS/cm	2.67 mg/L	5.48 NTU	36.0 mV	4.75 ft	90.00 ml/min
9/8/2022 2:23 PM	05:00	6.62 pH	22.57 °C	426.42 µS/cm	0.21 mg/L	2.90 NTU	47.1 mV	4.75 ft	90.00 ml/min
9/8/2022 2:28 PM	10:00	6.63 pH	22.18 °C	428.80 µS/cm	0.14 mg/L	0.99 NTU	47.3 mV	4.83 ft	90.00 ml/min
9/8/2022 2:33 PM	15:00	6.63 pH	21.86 °C	429.63 µS/cm	0.12 mg/L	2.04 NTU	54.9 mV	4.85 ft	100.00 ml/min
9/8/2022 2:38 PM	20:00	6.63 pH	21.78 °C	430.65 µS/cm	0.11 mg/L	1.20 NTU	48.2 mV	4.85 ft	100.00 ml/min
9/8/2022 2:43 PM	25:00	6.63 pH	21.73 °C	430.03 µS/cm	0.10 mg/L	0.72 NTU	56.2 mV	4.86 ft	100.00 ml/min
9/8/2022 2:48 PM	30:00	6.63 pH	21.77 °C	430.02 µS/cm	0.09 mg/L	0.30 NTU	48.6 mV	4.85 ft	100.00 ml/min
9/8/2022 2:53 PM	35:00	6.63 pH	21.73 °C	429.75 µS/cm	0.10 mg/L	0.35 NTU	56.7 mV	4.86 ft	100.00 ml/min

Samples

Sample ID:	Description:
B-73	

Low-Flow Test Report:

Test Date / Time: 9/14/2022 10:42:16 AM

Project: Plant McDonough

Operator Name: Jude Waguespack

Location Name: B-74 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 6.3 ft Total Depth: 16.3 ft Initial Depth to Water: 4.53 ft	Pump Type: peristaltic Tubing Type: LDPE Tubing Inner Diameter: 0.175 cm Tubing Length: 42 m Pump Intake From TOC: 11 ft Estimated Total Volume Pumped: 5000 ml Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 1.12 ft	Instrument Used: Aqua TROLL 400 Serial Number: 728541
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Test Notes:

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 10	+/- 5 %	+/- 10 %	+/- 2	+/- 1000 %	+/- 0.3	
9/14/2022 10:42 AM	00:00	6.02 pH	21.47 °C	140.12 µS/cm	0.32 mg/L	0.61 NTU	127.4 mV	4.53 ft	250.00 ml/min
9/14/2022 10:47 AM	05:00	6.02 pH	19.80 °C	151.20 µS/cm	0.16 mg/L	1.34 NTU	119.4 mV	5.54 ft	250.00 ml/min
9/14/2022 10:52 AM	10:00	6.02 pH	19.52 °C	153.69 µS/cm	0.14 mg/L	1.18 NTU	113.0 mV	5.64 ft	250.00 ml/min
9/14/2022 10:57 AM	15:00	6.00 pH	19.43 °C	155.18 µS/cm	0.13 mg/L	0.63 NTU	106.8 mV	5.65 ft	250.00 ml/min
9/14/2022 11:02 AM	20:00	6.01 pH	19.40 °C	157.41 µS/cm	0.14 mg/L	0.49 NTU	102.7 mV	5.65 ft	250.00 ml/min

Samples

Sample ID:	Description:
B-74	

APPENDIX A

Instrument Calibration Forms

Daily Calibration Log

Project Plant McDonough *Include daily mid-day pH check*
 Field Staff J. Waguespack / M. Mann, J. Booth, A. Plowman, D. Fulton

Instrument Calibration

		Date:	9/7/22	9/7/22		
		Time:	7:54	10:15		
Parameter	Units	Standard	AquaTROLL SN 884187 iPad # 80	Mid-Day pH	AquaTROLL SN 728541 iPad # 76	Mid-Day pH
DO	% saturation	100	95.61	-----	101.81	-----
Conductivity	us/cm	4490	4795.7	-----	4416.8	-----
pH	S.U.	4.00	4.08		4.19	
pH	S.U.	7.00	7.12		7.26	
pH	S.U.	10.00	10.15		10.08	
ORP	mV	228.00	221.2	-----	221.7	-----

Turbidity	Units	Standard	Hach SN 1408003447	Hach SN	Hach SN	Hach SN
	NTU	20	19.5			
	NTU	100	99.9			
	NTU	800	794			
	NTU	10.0	9.88			

		Date:	9/8/22	9/9/22		
		Time:	0815	755		
Parameter	Units	Standard	AquaTROLL SN 728541 iPad # 76	Mid-Day pH	AquaTROLL SN 728541 iPad # 76	Mid-Day pH
DO	% saturation	100	107.23	-----	94.15	-----
Conductivity	us/cm	4490	4516.6	-----	4400	-----
pH	S.U.	4.00	3.99		4.03	
pH	S.U.	7.00	7.02		6.99	
pH	S.U.	10.00	9.97		9.95	
ORP	mV	228.00	226.9	-----	229.5	-----

Turbidity	Units	Standard	Hach SN 1408003447	Hach SN	Hach SN 1408003447	Hach SN
	NTU	20	21.7		20.5	
	NTU	100	101		104	
	NTU	800	791		801	
	NTU	10.0	10.2		9.97	

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential; mV - millivolts; NTU - Nphelometric Turbidity Units; NC - Not calibrated

Include daily mid-day pH check

Project Plant McDonough
 Field Staff J. Waguespack, M. Mann, D. Fulton

Instrument Calibration

		Date: <u>9/12/22</u>		Date: <u>09/13/22</u>		
		Time: <u>8:27</u>		Time: <u>10:39</u>		
Parameter	Units	Standard	AquaTROLL SN <u>728541</u> iPad # <u>76</u>	Mid-Day pH	AquaTROLL SN _____ iPad # _____	Mid-Day pH
DO	% saturation	100	<u>99.14</u>	-----	<u>101.52</u>	-----
Conductivity	us/cm	4490	<u>4610</u>	<u>4436.0</u>	<u>4476.1</u>	-----
pH	S.U.	4.00	<u>4.05</u>		<u>4.03</u>	
pH	S.U.	7.00	<u>7.02</u>		<u>7.04</u>	
pH	S.U.	10.00	<u>10.02</u>		<u>10.04</u>	
ORP	mV	228.00	<u>227.1</u>	-----	<u>236.1</u>	-----

Turbidity	Units	Standard	Hach SN <u>19080003447</u>	Hach SN	Hach SN	Hach SN
	NTU	20	<u>19.5</u>			
	NTU	100	<u>98.4</u>			
	NTU	800	<u>800</u>			
	NTU	10.0	<u>9.87</u>	<u>10.1</u>		

		Date: <u>9/15/22</u>		Date: <u>9/16/22</u>		
		Time: <u>7:46</u>		Time: <u>7:47</u>		
Parameter	Units	Standard	AquaTROLL SN <u>728541</u> iPad # <u>76</u>	Mid-Day pH	AquaTROLL SN <u>728541</u> iPad # <u>76</u>	Mid-Day pH
DO	% saturation	100	<u>100.80</u>	-----	<u>100.40</u>	-----
Conductivity	us/cm	4490	<u>4559.7</u>	-----	<u>4443.6</u>	-----
pH	S.U.	4.00	<u>4.04</u>		<u>4.02</u>	
pH	S.U.	7.00	<u>7.02</u>		<u>7.02</u>	
pH	S.U.	10.00	<u>10.04</u>		<u>10.08</u>	
ORP	mV	228.00	<u>231.0</u>	-----	<u>233.7</u>	-----

Turbidity	Units	Standard	Hach SN <u>19080003447</u>	Hach SN	Hach SN <u>19080003447</u>	Hach SN
	NTU	20	<u>19.5</u>		<u>20.2</u>	
	NTU	100	<u>99.5</u>		<u>98.7</u>	
	NTU	800	<u>789</u>		<u>803</u>	
	NTU	10.0	<u>10.6</u>		<u>10.3</u>	

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential; mV - millivolts; NTU - Nephelometric Turbidity Units; NC - Not calibrated

Project Plant McDonough *Include daily mid-day pH check*
 Field Staff J. Waguespack, M. Mann, J. Booth, A. Plowman, D. Fulton

Instrument Calibration

		Date:	9/19/22	9/20/22		
		Time:	8:19	8:40		
Parameter	Units	Standard	AquaTROLL SN <u>728541</u> iPad # <u>76</u>	Mid-Day pH	AquaTROLL SN <u>728541</u> iPad # <u>76</u>	Mid-Day pH
DO	% saturation	100	101.45	-----	99.58	-----
Conductivity	us/cm	4490	4651.9	-----	4415.8	-----
pH	S.U.	4.00	4.04		4.02	
pH	S.U.	7.00	7.02		6.98	
pH	S.U.	10.00	9.99		10.00	
ORP	mV	228.00	218.6	-----	223.7	-----

Turbidity	Units	Standard	Hach SN <u>1408003447</u>	Hach SN	Hach SN <u>1408003447</u>	Hach SN
	NTU	20	20.0		19.1	
	NTU	100	98.1		101	
	NTU	800	796		804	
	NTU	10.0	10.0		10.3	

		Date:				
		Time:				
Parameter	Units	Standard	AquaTROLL SN _____ iPad # _____	Mid-Day pH	AquaTROLL SN _____ iPad # _____	Mid-Day pH
DO	% saturation	100		-----		-----
Conductivity	us/cm	4490		-----		-----
pH	S.U.	4.00				
pH	S.U.	7.00				
pH	S.U.	10.00				
ORP	mV	228.00		-----		-----

Turbidity	Units	Standard	Hach SN	Hach SN	Hach SN	Hach SN
	NTU	20				
	NTU	100				
	NTU	800				
	NTU	10.0				

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential;
 mV - millivolts; NTU - Nphelometric Turbidity Units; NC - Not calibrated

DUANE FULTON

Project Plant McDonough *Include daily mid-day pH check*
 Field Staff J. Waguespack, M. Mann, J. Booth, A. Plowman, D. Fulton

Instrument Calibration

		Date:	09/07/22		09/08/22	
		Time:	06:30		10:06	13:52
Parameter	Units	Standard	AquaTROLL SN 883533 iPad # 111	Mid-Day pH	AquaTROLL SN 883533 iPad # 111	Mid-Day pH
DO	% saturation	100	101	-----	101.97	-----
Conductivity	us/cm	4490	4586.5	-----	4352.5	-----
pH	S.U.	4.00	4.11	4.05	3.99	4.05
pH	S.U.	7.00	7.11	7.05	6.97	6.98
pH	S.U.	10.00	10.11	9.97	9.05	9.98
ORP	mV	228.00	219.4	-----	229.4	-----

Turbidity	Units	Standard	Hach SN	Hach SN	Hach SN	Hach SN
			143F-3911	143F-3911	143F-3911	143F-3911
	NTU	20	0.1	---	0.105	0.03
	NTU	100	99.7	---	111.1	111.98
	NTU	800	794	---	1019.7	1018.9
	NTU	10.0	9.7	---		

		Date:	09/12/22		09/12/22	
		Time:	07:00	12:30	14:50	
Parameter	Units	Standard	AquaTROLL SN 883533 iPad # 111	Mid-Day pH	AquaTROLL SN 883533 iPad # 111	Mid-Day pH
DO	% saturation	100	99.6	-----		-----
Conductivity	us/cm	4490	4412.2	4552.1		-----
pH	S.U.	4.00	3.98	4.05	4.06	
pH	S.U.	7.00	6.98	7.03	6.96	
pH	S.U.	10.00	9.98	10.05	9.96	
ORP	mV	228.00	230.3	-----		-----

Turbidity	Units	Standard	Hach SN	Hach SN	Hach SN
			143F-3911		
	NTU	20	0.05		
	NTU	100	0.96		
	NTU	800	9.92		
	NTU	10.0			

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential; mV - millivolts; NTU - Nephelometric Turbidity Units; NC - Not calibrated

DUANS
FULTON

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Include daily mid-day pH check

Project Plant McDonough
Field Staff J. Waguespack, M. Mann, D. Fulton

Instrument Calibration

		Date:	09/13/22			
		Time:	06:45	15:00		
Parameter	Units	Standard	AquaTROLL SN <u>85353</u> iPad # <u>111</u>	Mid-Day pH	AquaTROLL SN _____ iPad # _____	Mid-Day pH
DO	% saturation	100	99.2	-----		-----
Conductivity	us/cm	4490	4419.0	-----		-----
pH	S.U.	4.00	3.94	4.06		
pH	S.U.	7.00	7.00	7.03		
pH	S.U.	10.00	9.98	9.99		
ORP	mV	228.00	236.2	-----		-----

Turbidity	Units	Standard	LaMotte Hach SN <u>1438-3911</u>	Hach SN	Hach SN	Hach SN
	NTU	20	0.0			
	NTU	100	0.57			
	NTU	800	10.51			
	NTU	1000				

		Date:				
		Time:				
Parameter	Units	Standard	AquaTROLL SN _____ iPad # _____	Mid-Day pH	AquaTROLL SN _____ iPad # _____	Mid-Day pH
DO	% saturation	100		-----		-----
Conductivity	us/cm	4490		-----		-----
pH	S.U.	4.00		-----		-----
pH	S.U.	7.00		-----		-----
pH	S.U.	10.00		-----		-----
ORP	mV	228.00		-----		-----

Turbidity	Units	Standard	Hach SN	Hach SN	Hach SN	Hach SN
	NTU	20				
	NTU	100				
	NTU	800				
	NTU	10.0				

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential; mV - millivolts; NTU - Nphelometric Turbidity Units; NC - Not calibrated.

Project Plant McDonough *Include daily mid-day pH check*
 Field Staff J. Waguespack, M. Mann, J. Booth, A. Plowman, D. Fulton

Instrument Calibration

		Date:	09/15/22			
		Time:	07:20	12:15		
Parameter	Units	Standard	AquaTROLL SN <u>883533</u> iPad # <u>111</u>	Mid-Day pH	AquaTROLL SN <u>883533</u> iPad # <u>111</u>	Mid-Day pH
DO	% saturation	100	28 100.9	-----	99.49	-----
Conductivity	us/cm	4490	4499	-----	4493.8	-----
pH	S.U.	4.00	3.96	4.09	3.90	
pH	S.U.	7.00	6.94	7.06	7.11	
pH	S.U.	10.00	9.98	10.05	10.23	
ORP	mV	228.00	231	-----	227.8	-----

Turbidity	Units	Standard	La Motte Hach SN <u>1438-3911</u>	La Motte Hach SN <u>1438-2911</u>	Hach SN	Hach SN
	NTU	20	0.25	0.34		
	NTU	100	1.03	1.03		
	NTU	800	9.85	10.34		
	NTU	10.0	—			

		Date:				
		Time:				
Parameter	Units	Standard	AquaTROLL SN _____ iPad # _____	Mid-Day pH	AquaTROLL SN _____ iPad # _____	Mid-Day pH
DO	% saturation	100		-----		-----
Conductivity	us/cm	4490		-----		-----
pH	S.U.	4.00				
pH	S.U.	7.00				
pH	S.U.	10.00				
ORP	mV	228.00		-----		-----

Turbidity	Units	Standard	Hach SN	Hach SN	Hach SN	Hach SN
	NTU	20				
	NTU	100				
	NTU	800				
	NTU	10.0				

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential; mV - millivolts; NTU - Nphelometric Turbidity Units; NC - Not calibrated

Project Plant McDonough **Include daily mid-day pH check**
 Field Staff J. Waguespack, M. Mann, J. Booth, A. Plowman, D. Fulton

Instrument Calibration

		Date: 09/08/2022		Date: 09/09/2022		
		Time: 10:59		Time: 07:55		
Parameter	Units	Standard	AquaTROLL SN 851413 iPad # 55	Mid-Day pH	AquaTROLL SN 851413 iPad # 55	Mid-Day pH
DO	% saturation	100	108.89	-----	98.50	-----
Conductivity	us/cm	4490	4655.7	-----	4456.1	-----
pH	S.U.	4.00	4.13		4.03	
pH	S.U.	7.00	7.00		7.00	
pH	S.U.	10.00	10.00		10.06	
ORP	mV	228.00	226.8	-----	218.0	-----

Turbidity	Units	Standard	Hach SN 21010000165	Hach SN	Hach SN 21010000165	Hach SN
	NTU	20	19.2		20.0	
	NTU	100	100		101	
	NTU	800	859		806	
	NTU	10.0	9.89		9.94	

		Date: 09/12/2022		Date: 09/19/2022		
		Time: 07:40		Time: 07:42		
Parameter	Units	Standard	AquaTROLL SN 851413 iPad # 55	Mid-Day pH	AquaTROLL SN 851413 iPad # 55	Mid-Day pH
DO	% saturation	100	101.76	-----	102.54	-----
Conductivity	us/cm	4490	4421.2	-----	4449.6	-----
pH	S.U.	4.00	4.00		4.05	
pH	S.U.	7.00	6.98		7.00	
pH	S.U.	10.00	9.93		10.00	
ORP	mV	228.00	222.4	-----	220.8	-----

Turbidity	Units	Standard	Hach SN 21010000165	Hach SN	Hach SN 21010000165	Hach SN
	NTU	20	20.6		19.5	
	NTU	100	100		99.7	
	NTU	800	796		799	
	NTU	10.0	9.58		10.2	

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential; mV - millivolts; NTU - Nphelometric Turbidity Units; NC - Not calibrated

Include daily mid-day pH check

Project Plant McDonough
 Field Staff J. Waguespack, M. Mann, D. Fulton

Instrument Calibration

		Date:	09/13/22	09/14/22		
		Time:	07:24	07:30		
Parameter	Units	Standard	AquaTROLL SN 85143 iPad # 55	Mid-Day pH	AquaTROLL SN 85143 iPad # 55	Mid-Day pH
DO	% saturation	100	94.24	-----	101.51	-----
Conductivity	us/cm	4490	4427.8	-----	4481.1	-----
pH	S.U.	4.00	4.01		4.03	
pH	S.U.	7.00	6.99		7.02	
pH	S.U.	10.00	9.99		10.06	
ORP	mV	228.00	225.7	-----	224.8	-----

Turbidity	Units	Standard	Hach SN 21010D000165	Hach SN	Hach SN 21010D000165	Hach SN
	NTU	20	19.9		19.8	
	NTU	100	101		100	
	NTU	800	807		802	
	NTU	10.0	9.66		9.98	

		Date:	09/15/22	09/16/22		
		Time:	07:27	07:22		
Parameter	Units	Standard	AquaTROLL SN 85143 iPad # 55	Mid-Day pH	AquaTROLL SN 85143 iPad # 55	Mid-Day pH
DO	% saturation	100	100.63	-----	99.10	-----
Conductivity	us/cm	4490	4452.6	-----	4465.3	-----
pH	S.U.	4.00	4.02		4.03	
pH	S.U.	7.00	6.99		6.99	
pH	S.U.	10.00	9.96		9.97	
ORP	mV	228.00	218.2	-----	221.8	-----

Turbidity	Units	Standard	Hach SN 21010D000165	Hach SN	Hach SN 21010D000165	Hach SN
	NTU	20	19.5		20.2	
	NTU	100	98.6		99.8	
	NTU	800	800		794	
	NTU	10.0	10.1		10.2	

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential; mV - millivolts; NTU - Nphelometric Turbidity Units; NC - Not calibrated

Project Plant McDonough **Include daily mid-day pH check**
 Field Staff J. Waguespack, M. Mann, J. Booth, A. Plowman, D. Fulton

COLE MAYER

Instrument Calibration

Parameter	Units	Standard	Date: 9-7-22		Date: 9-8-2022	
			AquaTROLL SN 843249 iPad # _____	Mid-Day pH	AquaTROLL SN 884187 iPad # 80	Mid-Day pH
DO	% saturation	100		-----	105.57	-----
Conductivity	us/cm	4490	4765	-----	4037.6	-----
pH	S.U.	4.00	4.10		3.87	
pH	S.U.	7.00	7.06		7.02	
pH	S.U.	10.00			10.00	
ORP	mV	228.00		-----	231.3	-----

Turbidity	Units	Standard	Hach SN 7007-1416	Hach SN	Hach SN 7007-1416	Hach SN	
	NTU	20	1.16			1.83	
	NTU	100					
	NTU	800					
	NTU	10.0		7.43		9.43	

Parameter	Units	Standard	Date: 9-9-2022		Date: _____	
			AquaTROLL SN 884187 iPad # 80	Mid-Day pH	AquaTROLL SN _____ iPad # _____	Mid-Day pH
DO	% saturation	100	100.08	-----		-----
Conductivity	us/cm	4490	4610	-----		-----
pH	S.U.	4.00	4.04			
pH	S.U.	7.00	7.02			
pH	S.U.	10.00	9.99			
ORP	mV	228.00	226.0	-----		-----

Turbidity	Units	Standard	Hach SN 7007-1416	Hach SN	Hach SN	Hach SN
	NTU	20	0.94			
	NTU	100				
	NTU	800				
	NTU	10.0		8.90		

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential; mV - millivolts; NTU - Nphelometric Turbidity Units; NC - Not calibrated

AquaTroll Unit malfunctioning (9-7-2022) SN 843285

Include daily mid-day pH check

Project Plant McDonough
 Field Staff J. Waguespack, M. Mann, D. Fulton

COLE MAYER

Instrument Calibration

		Date:	04/13/2022	04/14/2022		
		Time:	0740	0730		
Parameter	Units	Standard	AquaTROLL SN 884187 iPad # 80	Mid-Day pH	AquaTROLL SN 884187 iPad # 80	Mid-Day pH
DO	% saturation	100	99.76	-----	100.65	-----
Conductivity	us/cm	4490	4484.5	-----	4510	-----
pH	S.U.	4.00	4.06		4.02	
pH	S.U.	7.00	6.99		7.02	
pH	S.U.	10.00	10.06		9.99	
ORP	mV	228.00	239.2	-----	233.1	-----

Turbidity	Units	Standard	Hach SN 2007-1416	Hach SN	Hach SN 2007-1416	Hach SN
	NTU	1	1.28		1.27	
	NTU	100				
	NTU	800				
	NTU	10.0	10.0		10.04	

		Date:	04/14/2022	04/15/2022		
		Time:	0745	0725		
Parameter	Units	Standard	AquaTROLL SN 728541 iPad # 76	Mid-Day pH	AquaTROLL SN 884187 iPad # 80	Mid-Day pH
DO	% saturation	100	97.66	-----	98.51	-----
Conductivity	us/cm	4490	4512.0	-----	4480	-----
pH	S.U.	4.00	4.01		4.02	
pH	S.U.	7.00	7.02		7.02	
pH	S.U.	10.00	9.98		10.03	
ORP	mV	228.00	223.6	-----	227.0	-----

Turbidity	Units	Standard	Hach SN 140861024447	Hach SN	Hach SN	Hach SN
	NTU	20	20.6	1 NTU	1.55	
	NTU	100	102			
	NTU	800	804			
	NTU	10.0	10.2	10 NTU	9.63	

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential;
 mV - millivolts; NTU - Nephelometric Turbidity Units; NC - Not calibrated

Project Plant McDonough *Include daily mid-day pH check*
 Field Staff J. Waguespack, M. Mann, J. Booth, A. Plowman, D. Fulton

Cole Mayer

Instrument Calibration

		Date:	09/16/2022			
		Time:	0725			
Parameter	Units	Standard	AquaTROLL SN <u>8584187</u> iPad # <u>80</u>	Mid-Day pH	AquaTROLL SN _____ iPad # _____	Mid-Day pH
DO	% saturation	100	100.84	-----		-----
Conductivity	us/cm	4490	4449.2	-----		-----
pH	S.U.	4.00	4.02			
pH	S.U.	7.00	7.01			
pH	S.U.	10.00	10.04			
ORP	mV	228.00	226.3	-----		-----

Turbidity	Units	Standard	Hach SN <u>7007-1416</u>	Hach SN	Hach SN	Hach SN
	NTU	20	1.7			
	NTU	100				
	NTU	800				
	NTU	10.0	10.0			

		Date:				
		Time:				
Parameter	Units	Standard	AquaTROLL SN _____ iPad # _____	Mid-Day pH	AquaTROLL SN _____ iPad # _____	Mid-Day pH
DO	% saturation	100		-----		-----
Conductivity	us/cm	4490		-----		-----
pH	S.U.	4.00				
pH	S.U.	7.00				
pH	S.U.	10.00				
ORP	mV	228.00		-----		-----

Turbidity	Units	Standard	Hach SN	Hach SN	Hach SN	Hach SN
	NTU	20				
	NTU	100				
	NTU	800				
	NTU	10.0				

Notes: DO - Dissolved Oxygen; us/cm - microsiemens/centimeter; ORP - oxidation-reduction potential; mV - millivolts; NTU - Nephelometric Turbidity Units; NC - Not calibrated

APPENDIX B

Analytical Results, Data Validation Summary and
Laboratory Accreditation

APPENDIX B

Analytical Results

November 10, 2022

Andrea McClure
WSP/Golder
5170 Peachtree Road
Building 100, Suite 300
Atlanta, GA 30341

RE: Project: McDonough Upgradient Wells-Revised Report
Pace Project No.: 92624376

Dear Andrea McClure:

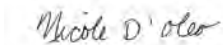
Enclosed are the analytical results for sample(s) received by the laboratory between September 08, 2022 and September 09, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Stephen Benda, Southern Company
Noelia Gangi, Georgia Power
Daniela Herrera, Golder
Ben Hodges, Georgia Power
Kristen Jurinko
Laura Midkiff, Georgia Power
Karim Minkara, Golder Associates - Atlanta

J. Shelby Mobley, Southern Company
Charles Norton, Southern Company
Ms. Lauren Petty, Southern Company
Dawn Prell, Golder Associates Inc.
Michael Smilley, Georgia Power
Yong Cheng Soo, WSP/Golder
Tina Sullivan, ERM



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: McDonough Upgradient Wells-Revised Report

Pace Project No.: 92624376

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001

South Carolina Drinking Water Cert. #: 99006003

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Louisiana DoH Drinking Water #: LA029

Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: McDonough Upgradient Wells-Revised Report

Pace Project No.: 92624376

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92624376001	DGWA-70A	Water	09/07/22 09:35	09/08/22 09:45
92624376002	DGWA-71	Water	09/07/22 10:24	09/08/22 09:45
92624376003	DGWA-53	Water	09/08/22 13:28	09/09/22 15:50

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SAMPLE ANALYTE COUNT

Project: McDonough Upgradient Wells-Revised Report
Pace Project No.: 92624376

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92624376001	DGWA-70A	EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	JCM	3
92624376002	DGWA-71	EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	JCM	3
92624376003	DGWA-53	EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville
PASI-C = Pace Analytical Services - Charlotte
PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: McDonough Upgradient Wells-Revised Report
Pace Project No.: 92624376

Sample: DGWA-70A		Lab ID: 92624376001		Collected: 09/07/22 09:35		Received: 09/08/22 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/08/22 13:35		
pH	5.60	Std. Units			1		09/08/22 13:35		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.025	1	09/21/22 12:19	09/21/22 20:31	7439-89-6	
Potassium	1.6	mg/L	0.20	0.15	1	09/21/22 12:19	09/21/22 20:31	7440-09-7	
Sodium	3.4	mg/L	1.0	0.58	1	09/21/22 12:19	09/21/22 20:31	7440-23-5	
Calcium	5.9	mg/L	1.0	0.12	1	09/21/22 12:19	09/21/22 20:31	7440-70-2	
Magnesium	2.3	mg/L	0.050	0.012	1	09/21/22 12:19	09/21/22 20:31	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/21/22 13:49	09/24/22 15:49	7440-36-0	
Arsenic	0.0024J	mg/L	0.0050	0.0022	1	09/21/22 13:49	09/24/22 15:49	7440-38-2	
Barium	0.039	mg/L	0.0050	0.00067	1	09/21/22 13:49	09/24/22 15:49	7440-39-3	
Beryllium	0.000084J	mg/L	0.00050	0.000054	1	09/21/22 13:49	09/24/22 15:49	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/21/22 13:49	09/24/22 15:49	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/21/22 13:49	09/24/22 15:49	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/21/22 13:49	09/24/22 15:49	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/21/22 13:49	09/24/22 15:49	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/21/22 13:49	09/24/22 15:49	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	09/21/22 13:49	09/24/22 15:49	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	09/21/22 13:49	09/24/22 15:49	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/21/22 13:49	09/24/22 15:49	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/21/22 13:49	09/24/22 15:49	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/22/22 14:00	09/22/22 17:40	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	34.0	mg/L	25.0	10.0	1		09/09/22 15:04		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	27.6	mg/L	5.0	5.0	1		09/14/22 16:12		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/14/22 16:12		
Alkalinity, Total as CaCO3	27.6	mg/L	5.0	5.0	1		09/14/22 16:12		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.1	mg/L	1.0	0.60	1		09/09/22 23:55	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: McDonough Upgradient Wells-Revised Report

Pace Project No.: 92624376

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: DGWA-70A									
Lab ID: 92624376001									
Collected: 09/07/22 09:35									
Received: 09/08/22 09:45									
Matrix: Water									
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.061J	mg/L	0.10	0.050	1		09/09/22 23:55	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		09/09/22 23:55	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: McDonough Upgradient Wells-Revised Report
Pace Project No.: 92624376

Sample: **DGWA-71** Lab ID: **92624376002** Collected: 09/07/22 10:24 Received: 09/08/22 09:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/08/22 13:36		
pH	5.65	Std. Units			1		09/08/22 13:36		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.025	1	09/21/22 12:19	09/21/22 20:36	7439-89-6	
Potassium	0.76	mg/L	0.20	0.15	1	09/21/22 12:19	09/21/22 20:36	7440-09-7	
Sodium	8.1	mg/L	1.0	0.58	1	09/21/22 12:19	09/21/22 20:36	7440-23-5	
Calcium	6.4	mg/L	1.0	0.12	1	09/21/22 12:19	09/21/22 20:36	7440-70-2	
Magnesium	0.87	mg/L	0.050	0.012	1	09/21/22 12:19	09/21/22 20:36	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/21/22 13:49	09/24/22 15:55	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/21/22 13:49	09/24/22 15:55	7440-38-2	
Barium	0.025	mg/L	0.0050	0.00067	1	09/21/22 13:49	09/24/22 15:55	7440-39-3	
Beryllium	0.000075J	mg/L	0.00050	0.000054	1	09/21/22 13:49	09/24/22 15:55	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/21/22 13:49	09/24/22 15:55	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/21/22 13:49	09/24/22 15:55	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/21/22 13:49	09/24/22 15:55	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/21/22 13:49	09/24/22 15:55	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/21/22 13:49	09/24/22 15:55	7439-92-1	
Lithium	0.0012J	mg/L	0.030	0.00073	1	09/21/22 13:49	09/24/22 15:55	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	09/21/22 13:49	09/24/22 15:55	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/21/22 13:49	09/24/22 15:55	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/21/22 13:49	09/24/22 15:55	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	0.00013J	mg/L	0.00020	0.00013	1	09/22/22 14:00	09/22/22 17:48	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	82.0	mg/L	25.0	10.0	1		09/09/22 15:04		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	16.0	mg/L	5.0	5.0	1		09/14/22 16:28		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/14/22 16:28		
Alkalinity, Total as CaCO3	16.0	mg/L	5.0	5.0	1		09/14/22 16:28		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	8.2	mg/L	1.0	0.60	1		09/10/22 00:09	16887-00-6	

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ANALYTICAL RESULTS

Project: McDonough Upgradient Wells-Revised Report

Pace Project No.: 92624376

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: DGWA-71 Lab ID: 92624376002 Collected: 09/07/22 10:24 Received: 09/08/22 09:45 Matrix: Water									
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Fluoride	0.056J	mg/L	0.10	0.050	1		09/10/22 00:09	16984-48-8	
Sulfate	7.0	mg/L	1.0	0.50	1		09/10/22 00:09	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: McDonough Upgradient Wells-Revised Report
Pace Project No.: 92624376

Sample: DGWA-53	Lab ID: 92624376003	Collected: 09/08/22 13:28	Received: 09/09/22 15:50	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/09/22 17:33		
pH	6.32	Std. Units			1		09/09/22 17:33		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	5.4	mg/L	0.040	0.025	1	09/21/22 12:19	09/21/22 21:24	7439-89-6	
Sodium	7.3	mg/L	1.0	0.58	1	09/21/22 12:19	09/21/22 21:24	7440-23-5	
Calcium	17.2	mg/L	1.0	0.12	1	09/21/22 12:19	09/21/22 21:24	7440-70-2	
Magnesium	5.8	mg/L	0.050	0.012	1	09/21/22 12:19	09/21/22 21:24	7439-95-4	
Potassium	3.6	mg/L	0.20	0.15	1	09/21/22 12:19	09/22/22 21:10	7440-09-7	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/21/22 13:49	09/24/22 16:13	7440-36-0	
Arsenic	0.0029J	mg/L	0.0050	0.0022	1	09/21/22 13:49	09/24/22 16:13	7440-38-2	
Barium	0.077	mg/L	0.0050	0.00067	1	09/21/22 13:49	09/24/22 16:13	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/21/22 13:49	09/24/22 16:13	7440-41-7	
Boron	0.054	mg/L	0.040	0.0086	1	09/21/22 13:49	09/26/22 14:25	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/21/22 13:49	09/24/22 16:13	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/21/22 13:49	09/24/22 16:13	7440-47-3	
Cobalt	0.012	mg/L	0.0050	0.00039	1	09/21/22 13:49	09/24/22 16:13	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/21/22 13:49	09/24/22 16:13	7439-92-1	
Lithium	0.0083J	mg/L	0.030	0.00073	1	09/21/22 13:49	09/24/22 16:13	7439-93-2	
Molybdenum	0.027	mg/L	0.010	0.00074	1	09/21/22 13:49	09/24/22 16:13	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/21/22 13:49	09/24/22 16:13	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/21/22 13:49	09/24/22 16:13	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/22/22 14:00	09/22/22 17:51	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	129	mg/L	25.0	10.0	1		09/14/22 12:26		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	78.6	mg/L	5.0	5.0	1		09/14/22 17:49		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/14/22 17:49		
Alkalinity, Total as CaCO ₃	78.6	mg/L	5.0	5.0	1		09/14/22 17:49		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.6	mg/L	1.0	0.60	1		09/13/22 19:42	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: McDonough Upgradient Wells-Revised Report

Pace Project No.: 92624376

Sample: DGWA-53 **Lab ID: 92624376003** Collected: 09/08/22 13:28 Received: 09/09/22 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.11	mg/L	0.10	0.050	1		09/13/22 19:42	16984-48-8	
Sulfate	12.0	mg/L	1.0	0.50	1		09/13/22 19:42	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: McDonough Upgradient Wells-Revised Report

Pace Project No.: 92624376

QC Batch:	724698	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples:	92624376001, 92624376002, 92624376003		

METHOD BLANK: 3775652 Matrix: Water

Associated Lab Samples: 92624376001, 92624376002, 92624376003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	09/21/22 19:48	
Iron	mg/L	ND	0.040	0.025	09/21/22 19:48	
Magnesium	mg/L	ND	0.050	0.012	09/21/22 19:48	
Potassium	mg/L	ND	0.20	0.15	09/21/22 19:48	
Sodium	mg/L	ND	1.0	0.58	09/21/22 19:48	

LABORATORY CONTROL SAMPLE: 3775653

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	
Iron	mg/L	1	1.0	101	80-120	
Magnesium	mg/L	1	1.0	104	80-120	
Potassium	mg/L	1	1.0	103	80-120	
Sodium	mg/L	1	1.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3775654 3775655

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92624373001 Result	Spike Conc.	Spike Conc.	Result						
Calcium	mg/L	73.2	1	1	71.7	72.8	-152	-37	75-125	2	20 M1
Iron	mg/L	1.9	1	1	2.9	2.9	101	100	75-125	0	20
Magnesium	mg/L	25.2	1	1	25.7	25.7	49	52	75-125	0	20 M1
Potassium	mg/L	8.2	1	1	9.0	9.1	75	90	75-125	2	20
Sodium	mg/L	19.9	1	1	20.3	20.6	38	68	75-125	1	20 M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: McDonough Upgradient Wells-Revised Report
Pace Project No.: 92624376

QC Batch: 724800 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92624376001, 92624376002, 92624376003

METHOD BLANK: 3776150 Matrix: Water
Associated Lab Samples: 92624376001, 92624376002, 92624376003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	09/24/22 14:20	
Arsenic	mg/L	ND	0.0050	0.0022	09/24/22 14:20	
Barium	mg/L	ND	0.0050	0.00067	09/24/22 14:20	
Beryllium	mg/L	ND	0.00050	0.000054	09/24/22 14:20	
Boron	mg/L	ND	0.040	0.0086	09/24/22 14:20	
Cadmium	mg/L	ND	0.00050	0.00011	09/24/22 14:20	
Chromium	mg/L	ND	0.0050	0.0011	09/24/22 14:20	
Cobalt	mg/L	ND	0.0050	0.00039	09/24/22 14:20	
Lead	mg/L	ND	0.0010	0.00089	09/24/22 14:20	
Lithium	mg/L	ND	0.030	0.00073	09/24/22 14:20	
Molybdenum	mg/L	ND	0.010	0.00074	09/24/22 14:20	
Selenium	mg/L	ND	0.0050	0.0014	09/24/22 14:20	
Thallium	mg/L	ND	0.0010	0.00018	09/24/22 14:20	

LABORATORY CONTROL SAMPLE: 3776151

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	105	80-120	
Arsenic	mg/L	0.1	0.10	102	80-120	
Barium	mg/L	0.1	0.099	99	80-120	
Beryllium	mg/L	0.1	0.10	102	80-120	
Boron	mg/L	1	1.1	107	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.10	104	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.10	100	80-120	
Lithium	mg/L	0.1	0.098	98	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	
Selenium	mg/L	0.1	0.10	101	80-120	
Thallium	mg/L	0.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3776152 3776153

Parameter	Units	92625866027 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	106	109	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	99	101	75-125	2	20	

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QUALITY CONTROL DATA

Project: McDonough Upgradient Wells-Revised Report

Pace Project No.: 92624376

Parameter	Units	3776152		3776153		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Barium	mg/L	14.6 ug/L	0.1	0.1	0.12	0.12	102	102	75-125	0	20		
Beryllium	mg/L	ND	0.1	0.1	0.10	0.10	104	102	75-125	1	20		
Boron	mg/L	393 ug/L	1	1	1.6	1.6	116	116	75-125	0	20		
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	101	102	75-125	1	20		
Chromium	mg/L	22.8 ug/L	0.1	0.1	0.13	0.14	112	118	75-125	4	20		
Cobalt	mg/L	0.44J ug/L	0.1	0.1	0.098	0.10	98	101	75-125	3	20		
Lead	mg/L	ND	0.1	0.1	0.095	0.098	94	98	75-125	4	20		
Lithium	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	1	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.11	100	105	75-125	5	20		
Selenium	mg/L	ND	0.1	0.1	0.098	0.10	98	100	75-125	2	20		
Thallium	mg/L	ND	0.1	0.1	0.095	0.099	95	99	75-125	4	20		

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QUALITY CONTROL DATA

Project: McDonough Upgradient Wells-Revised Report
Pace Project No.: 92624376

QC Batch: 724426 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92624376001, 92624376002, 92624376003

METHOD BLANK: 3774367 Matrix: Water
Associated Lab Samples: 92624376001, 92624376002, 92624376003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	09/22/22 17:16	

LABORATORY CONTROL SAMPLE: 3774368

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3774369 3774370

Parameter	Units	92624373001		3774370		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	0.00014J	0.0025	0.0025	0.0025	93	93	75-125	1	20	

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QUALITY CONTROL DATA

Project: McDonough Upgradient Wells-Revised Report

Pace Project No.: 92624376

QC Batch: 722447	Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92624376001, 92624376002

METHOD BLANK: 3764210 Matrix: Water

Associated Lab Samples: 92624376001, 92624376002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10.0	09/09/22 14:58	

LABORATORY CONTROL SAMPLE: 3764211

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	382	96	80-120	

SAMPLE DUPLICATE: 3764212

Parameter	Units	92623815001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	351	346	1	10	

SAMPLE DUPLICATE: 3764213

Parameter	Units	92624372006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	102	107	5	10	

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QUALITY CONTROL DATA

Project: McDonough Upgradient Wells-Revised Report

Pace Project No.: 92624376

QC Batch: 722879	Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92624376003

METHOD BLANK: 3766430 Matrix: Water

Associated Lab Samples: 92624376003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10.0	09/14/22 12:25	

LABORATORY CONTROL SAMPLE: 3766431

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	383	96	80-120	

SAMPLE DUPLICATE: 3766432

Parameter	Units	92624372008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	261	266	2	10	

SAMPLE DUPLICATE: 3766433

Parameter	Units	92624840016 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	238	250	5	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: McDonough Upgradient Wells-Revised Report
Pace Project No.: 92624376

QC Batch: 723206 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92624376001, 92624376002, 92624376003

METHOD BLANK: 3768028 Matrix: Water
Associated Lab Samples: 92624376001, 92624376002, 92624376003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	09/14/22 14:56	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	09/14/22 14:56	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	09/14/22 14:56	

LABORATORY CONTROL SAMPLE: 3768029

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.2	100	80-120	

LABORATORY CONTROL SAMPLE: 3768030

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.8	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3768031 3768032

Parameter	Units	92625359004		3768031		3768032		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Alkalinity, Total as CaCO3	mg/L	324	50	50	353	349	58	51	80-120	1	25 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3768033 3768034

Parameter	Units	92624372011		3768033		3768034		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Alkalinity, Total as CaCO3	mg/L	134	50	50	193	185	118	102	80-120	4	25

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QUALITY CONTROL DATA

Project: McDonough Upgradient Wells-Revised Report
Pace Project No.: 92624376

QC Batch: 722303 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92624376001, 92624376002

METHOD BLANK: 3763468 Matrix: Water
Associated Lab Samples: 92624376001, 92624376002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/09/22 22:31	
Fluoride	mg/L	ND	0.10	0.050	09/09/22 22:31	
Sulfate	mg/L	ND	1.0	0.50	09/09/22 22:31	

LABORATORY CONTROL SAMPLE: 3763469

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.6	101	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	50.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3763470 3763471

Parameter	Units	92624373001		MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	MSD Result	% Rec	% Rec							
Chloride	mg/L	16.4	50	50	68.2	69.0	103	105	90-110	1	10				
Fluoride	mg/L	0.11	2.5	2.5	2.4	2.5	93	94	90-110	1	10				
Sulfate	mg/L	263	50	50	311	309	96	92	90-110	1	10				

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QUALITY CONTROL DATA

Project: McDonough Upgradient Wells-Revised Report

Pace Project No.: 92624376

QC Batch:	722843	Analysis Method:	EPA 300.0 Rev 2.1 1993
QC Batch Method:	EPA 300.0 Rev 2.1 1993	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Asheville

Associated Lab Samples: 92624376003

METHOD BLANK: 3766296 Matrix: Water

Associated Lab Samples: 92624376003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/13/22 12:35	
Fluoride	mg/L	ND	0.10	0.050	09/13/22 12:35	
Sulfate	mg/L	ND	1.0	0.50	09/13/22 12:35	

LABORATORY CONTROL SAMPLE: 3766297

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.4	101	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	50.8	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3766298 3766299

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92624945004	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	938	50	50	975	975	73	74	90-110	0	10	M1	
Fluoride	mg/L	ND	2.5	2.5	3.3J	3.8J	132	151	90-110		10	M1	
Sulfate	mg/L	3180	50	50	3170	3160	-30	-43	90-110	0	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3766300 3766301

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92624372011	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	5.4	50	50	57.1	58.0	103	105	90-110	2	10		
Fluoride	mg/L	0.082J	2.5	2.5	2.4	2.4	92	92	90-110	0	10		
Sulfate	mg/L	96.6	50	50	150	153	106	113	90-110	2	10	M1	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: McDonough Upgradient Wells-Revised Report

Pace Project No.: 92624376

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: McDonough Upgradient Wells-Revised Report
Pace Project No.: 92624376

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92624376001	DGWA-70A				
92624376002	DGWA-71				
92624376003	DGWA-53				
92624376001	DGWA-70A	EPA 3010A	724698	EPA 6010D	724853
92624376002	DGWA-71	EPA 3010A	724698	EPA 6010D	724853
92624376003	DGWA-53	EPA 3010A	724698	EPA 6010D	724853
92624376001	DGWA-70A	EPA 3005A	724800	EPA 6020B	724886
92624376002	DGWA-71	EPA 3005A	724800	EPA 6020B	724886
92624376003	DGWA-53	EPA 3005A	724800	EPA 6020B	724886
92624376001	DGWA-70A	EPA 7470A	724426	EPA 7470A	725130
92624376002	DGWA-71	EPA 7470A	724426	EPA 7470A	725130
92624376003	DGWA-53	EPA 7470A	724426	EPA 7470A	725130
92624376001	DGWA-70A	SM 2540C-2015	722447		
92624376002	DGWA-71	SM 2540C-2015	722447		
92624376003	DGWA-53	SM 2540C-2015	722879		
92624376001	DGWA-70A	SM 2320B-2011	723206		
92624376002	DGWA-71	SM 2320B-2011	723206		
92624376003	DGWA-53	SM 2320B-2011	723206		
92624376001	DGWA-70A	EPA 300.0 Rev 2.1 1993	722303		
92624376002	DGWA-71	EPA 300.0 Rev 2.1 1993	722303		
92624376003	DGWA-53	EPA 300.0 Rev 2.1 1993	722843		

REPORT OF LABORATORY ANALYSIS

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	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: November 15, 2021 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.08	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

Georgia Power

Project #:

WO#: 92624376



Courier: Commercial Fed Ex UPS USPS Client Pace Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 9/8/22
JM

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 214 Type of Ice: Wet Blue None

Cooler Temp: 2.1 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 2.1

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4. <u>10 Day TAT</u>
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>WG</u>	
Headspace in VOA Vials (>5.6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



Document Name:
Sample Condition Upon Receipt (SCUR)

Document Revised: November 15, 2021
Page 2 of 2

Document No.:
F-CAR-CS-033-Rev.08

Issuing Authority:
Pace Carolinas Quality Office

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

WO# : 92624376
 PM: NMG
 Due Date: 09/22/22
 CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFLU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2SO3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (3 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)			
1	2	1			✓																									
2	2	1			✓																									
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

BPIN
2
2

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately

Section A Required Client Information: Company: Georgia Power - Coal Combustion Residuals Address: 2460 Marier Road Atlanta, GA 30339 Email: laukoer@southernco.com Phone: (470) 620-6175 Fax: Requested Due Date: 10 Day TAT

Section B Required Project Information: Report To: Lauren Coker Copy To: Golder Purchase Order # Project Name: Plant McDonough Upgradient Wells Project #: GL 166346622

Section C Invoice Information: Attention: sccmvo@southernco.com Company Name: Address: Pace Quote: Pace Project Manager: Nicole D'Olivo

Regulatory Agency: State / Location: GA

Page: 1 Of 1

ITEM #	MATRIX CODE CW WW P SL OL WR OT TS	MATERIAL CODE (see vial codes to left)	SAMPLE TYPE (GRAV or COMP)	DATE	TIME	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS	Received on (Y/N)	Custody (Y/N)	Sealed (Y/N)	Cooled (Y/N)	Intact (Y/N)	
3		DGWA-53	G	9/9/22	13:28	Mark Alena / Golder	09/09/22	15:50	Charles Hank	09/22/22	15:50							
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		
15																		

4376
pH = 6.32, Fe2 = 3.0 mg/L

DATE Signed:

Document Name: Sample Condition Upon Receipt (SCUR)
Document No.: F-CAR-CS-033-Rev.08
Issuing Authority: Face Analytical
Page 1 of 2
Document Revised: November 15, 2021
Face Analytical

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition
 Upon Receipt

Client Name: Georgia Power

Courier: Commercial Fed ex USPS Client

Custody Seal Present? Yes No

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer: IR gun ID: 230

Cooler Temp: 2.4 **Correction Factor:** 0.0

Cooler Temp Corrected (°C): 2.4 **Add/Subtract (°C):** 0.0

Temp should be above freezing to 5°C Samples out of temp or terra. Samples on ice, cooling process has begun

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

Date/Initials Person Examining Contents: 9/19/22 JM

Comments/Discrepancy:

Chain of Custody Present?	Samples Arrived within Hold Time?	Short Hold Time Analysis (<72 hr.)?	Rush Turn Around Time Requested?	Sufficient Volume?	Correct Containers Used?	-Pace Containers Used?	Containers Intact?	Dissolved analysis: Samples Field Filtered?	Sample Labels Match COC?	-Includes Date/Time/ID/Analysis Matrix: Matrix:	Headspace in VOA Vials (>5-6mm)?	Trip Blank Present?	Trip Blank Custody Seals Present?
<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	W4	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes
<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No		<input type="checkbox"/> No	<input type="checkbox"/> No	<input type="checkbox"/> No

COMMENTS/SAMPLE DISCREPANCY Field Data Required? Yes No

CLIENT NOTIFICATION/RESOLUTION Lot ID of split containers:

Person contacted: Date/Time:

Project Manager SCURF Review:

Project Manager SRF Review:

Date:

Date:

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #
-----------	----------------------	-----------------	----------------------------	----------------------------	------------------------------	-------

pH Adjustment Log for Preserved Samples

Item#	1	2	3	4	5	6	7	8	9	10	11	12
BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)												
BP3U-250 mL Plastic Unpreserved (N/A)												
BP2U-500 mL Plastic Unpreserved (N/A)												
BP1U-1 liter Plastic Unpreserved (N/A)												
BP45-125 mL Plastic H2SO4 (pH < 2) (Cl-)												
BP3M-250 mL Plastic HNO3 (pH < 2)												
BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)												
BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)												
WGfU-Wide-mouthed Glass Jar Unpreserved												
AG1U-1 liter Amber Unpreserved (N/A) (Cl-)												
AG1H-1 liter Amber HCl (pH < 2)												
AG3U-250 mL Amber Unpreserved (N/A) (Cl-)												
AG1S-1 liter Amber H2SO4 (pH < 2)												
AG3S-250 mL Amber H2SO4 (pH < 2)												
DG94-250 mL Amber NH4Cl (N/A)(Cl-)												
DG9H-40 mL VOA HCl (N/A)												
VG9T-40 mL VOA Na2S2O3 (N/A)												
VG9U-40 mL VOA Unpreserved (N/A)												
DG9V-40 mL VOA H3PO4 (N/A)												
DG9S-40 mL VOA H2SO4 (N/A)												
V/GK (3 vials per kit)-VPH/Gas kit (N/A)												
SPST-125 mL Sterile Plastic (N/A - lab)												
SPZT-250 mL Sterile Plastic (N/A - lab)												
BP1V												
BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)												
AG0U-100 mL Amber Unpreserved (N/A) (Cl-)												
VSGU-20 mL Scintillation vials (N/A)												
DG9U-40 mL Amber Unpreserved vials (N/A)												

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples:
 **Bottom half of box is to list number of bottles
 ***Check all unpreserved Nitrates for chlorine

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHG

Project # _____

DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Page 27 of 27

November 04, 2022

Andrea McClure
WSP/Golder
5170 Peachtree Road
Building 100, Suite 300
Atlanta, GA 30341

RE: Project: McDonough Upgradient Wells Rad-Revised Report
Pace Project No.: 92624378

Dear Andrea McClure:

Enclosed are the analytical results for sample(s) received by the laboratory between September 08, 2022 and September 09, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

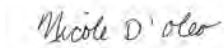
The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

Revision 1: Issued on 11/4/22 to include Radium QC Sheets.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Stephen Benda, Southern Company
Noelia Gangi, Georgia Power
Daniela Herrera, Golder
Ben Hodges, Georgia Power
Kristen Jurinko
Laura Midkiff, Georgia Power
Karim Minkara, Golder Associates - Atlanta

J. Shelby Mobley, Southern Company
Charles Norton, Southern Company
Ms. Lauren Petty, Southern Company
Dawn Prell, Golder Associates Inc.
Michael Smilley, Georgia Power
Yong Cheng Soo, WSP/Golder
Tina Sullivan, ERM



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: McDonough Upgradient Wells Rad-Revised Report
Pace Project No.: 92624378

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: McDonough Upgradient Wells Rad-Revised Report

Pace Project No.: 92624378

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92624378001	DGWA-70A	Water	09/07/22 09:35	09/08/22 09:45
92624378002	DGWA-71	Water	09/07/22 10:24	09/08/22 09:45
92624378003	DGWA-53	Water	09/08/22 13:28	09/09/22 15:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: McDonough Upgradient Wells Rad-Revised Report

Pace Project No.: 92624378

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92624378001	DGWA-70A	EPA 9315	RMS	1	PASI-PA
		EPA 9320	CMC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92624378002	DGWA-71	EPA 9315	RMS	1	PASI-PA
		EPA 9320	CMC	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92624378003	DGWA-53	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough Upgradient Wells Rad-Revised Report

Pace Project No.: 92624378

Sample: DGWA-70A **Lab ID: 92624378001** Collected: 09/07/22 09:35 Received: 09/08/22 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.115 ± 0.101 (0.182) C:97% T:NA	pCi/L	09/27/22 09:19	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.389 ± 0.508 (1.08) C:70% T:94%	pCi/L	09/23/22 19:06	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.504 ± 0.609 (1.26)	pCi/L	09/27/22 14:32	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough Upgradient Wells Rad-Revised Report

Pace Project No.: 92624378

Sample: DGWA-71 **Lab ID: 92624378002** Collected: 09/07/22 10:24 Received: 09/08/22 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.169 ± 0.115 (0.181) C:99% T:NA	pCi/L	09/27/22 09:19	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.419 ± 0.516 (1.09) C:71% T:86%	pCi/L	09/23/22 19:06	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.588 ± 0.631 (1.27)	pCi/L	09/27/22 14:32	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough Upgradient Wells Rad-Revised Report

Pace Project No.: 92624378

Sample: DGWA-53 **Lab ID: 92624378003** Collected: 09/08/22 13:28 Received: 09/09/22 15:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.878 ± 0.244 (0.129) C:93% T:NA	pCi/L	10/02/22 10:26	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.814 ± 0.382 (0.636) C:74% T:92%	pCi/L	09/28/22 12:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.69 ± 0.626 (0.765)	pCi/L	10/03/22 12:21	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough Upgradient Wells Rad-Revised Report

Pace Project No.: 92624378

QC Batch: 533110

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92624378003

METHOD BLANK: 2586601

Matrix: Water

Associated Lab Samples: 92624378003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.00759 ± 0.0468 (0.133) C:88% T:NA	pCi/L	10/02/22 10:24	

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

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough Upgradient Wells Rad-Revised Report

Pace Project No.: 92624378

QC Batch: 532087

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92624378001, 92624378002

METHOD BLANK: 2581306

Matrix: Water

Associated Lab Samples: 92624378001, 92624378002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.122 ± 0.122 (0.241) C:95% T:NA	pCi/L	09/27/22 08:34	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough Upgradient Wells Rad-Revised Report

Pace Project No.: 92624378

QC Batch: 533111

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92624378003

METHOD BLANK: 2586603

Matrix: Water

Associated Lab Samples: 92624378003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.798 ± 0.368 (0.604) C:81% T:85%	pCi/L	09/28/22 11:36	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough Upgradient Wells Rad-Revised Report

Pace Project No.: 92624378

QC Batch: 532089

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92624378001, 92624378002

METHOD BLANK: 2581322

Matrix: Water

Associated Lab Samples: 92624378001, 92624378002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.391 ± 0.413 (0.858) C:74% T:78%	pCi/L	09/23/22 16:00	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: McDonough Upgradient Wells Rad-Revised Report

Pace Project No.: 92624378

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: McDonough Upgradient Wells Rad-Revised Report

Pace Project No.: 92624378

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92624378001	DGWA-70A	EPA 9315	532087		
92624378002	DGWA-71	EPA 9315	532087		
92624378003	DGWA-53	EPA 9315	533110		
92624378001	DGWA-70A	EPA 9320	532089		
92624378002	DGWA-71	EPA 9320	532089		
92624378003	DGWA-53	EPA 9320	533111		
92624378001	DGWA-70A	Total Radium Calculation	535756		
92624378002	DGWA-71	Total Radium Calculation	535756		
92624378003	DGWA-53	Total Radium Calculation	536982		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: Georgia Power

Project #:

WO#: 92624378



Courier: Commercial Fed Ex Pace UPS USPS Other: Client

Date/Initials Person Examining Contents: 9/8/22
JM

Custody Seal Present? Yes No Seals Intact? Yes No

Biological Tissue Frozen? Yes No N/A

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer: IR Gun ID: 214 Type of Ice: Wet Blue None

Cooler Temp: 2.1 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 2.1

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	<u>10 DAY TAT</u>
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Includes Date/Time/ID/Analysis Matrix: <u>WG</u>			
Headspace in VOA Vials (>5.6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



Document Name:
Sample Condition Upon Receipt (SCUR)
 Document No.:
F-CAR-CS-033-Rev.08

Document Revised: November 15, 2021
 Page 2 of 2
 Issuing Authority:
 Face Analytical Quality Control

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

Project #

WO#: 92624378

PM: NMG

Due Date: 09/29/22

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGfU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (3 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SPST-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)			
1		2	1			✓																								
2		2	1			✓																		2						
3																								2						
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pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #


Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: Georgia Power - Coal Combustion Residuals Address: 2480 Manor Road Atlanta, GA 30339 Email: laucoker@souththermo.com Phone: (470) 820-6176 Fax: Requested Due Date: 10 Day TAT										Section B Required Project Information: Report To: Lauren Colker Copy To: Gobler Purchase Order #: Project Name: Plant McDonough Upgradient Wells Project #: GL168848621										Section C Invoice Information: Attention: acsinvclss@souththermo.com Company Name: Address: Pace Quote: Pace Project Manager: Nicole D'Oleo Regulatory Agency: State / Location: GA										Page: 1 Of 1																																		
SAMPLE ID One Character per box. (A-Z, 0-9, /, .) Sample ids must be unique																																																																
MATRIX Drinking Water Waste Water Surface Water Groundwater Other Thiamine		CODE DWW WWT WFW SL OL WV AR OT TS		MATRX CODE (see valid codes to left) WG WG								SAMPLE TYPE (G=GRAB C=COMP) G G				SAMPLE TEMP AT COLLECTION				DATE 9/7/2022 9/7/2022				TIME 8:35 10:24				PRESERVATIVES H2SO4 Unpreserved - Ice HNO3 + Ice HCl NaOH + Zn Acetate Na2S2O3 Methanol Other		ANALYSES TEST Y/N	Requested Analytes Filtered (Y/N) App III/IV Total Metals Cl, F, SO4, TDS Radon 226/228 Mg, Na, K CO3+HCO2 Fe Total, Fe 3+											Residual Chlorine (Y/N) pH = 5.80, Fe2 = 0.0 mg/L pH = 5.65, Fe2 = 0.0 mg/L		ADDITIONAL COMMENTS Jude WAGVESPAC 9/8/22 8:40 9/8/22 8:140			RELINQUISHED BY / AFFILIATION Jude WAGVESPAC			ACCEPTED BY / AFFILIATION Jude WAGVESPAC			DATE 9/8/22 8:40 9/8/22 8:140		TIME 8:40 8:140		EMP In C				Recorded on (Y/N) Custody (Y/N) Label (Y/N) Samples (Y/N)			

	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: November 15, 2021
	Document No.: F-CAR-CS-033-Rev.08	Page 1 of 2
		Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt Courier: <input type="checkbox"/> Commercial <input type="checkbox"/> Fed Ex <input type="checkbox"/> Pace <input type="checkbox"/> UPS <input type="checkbox"/> USPS <input type="checkbox"/> Other: _____ <input checked="" type="checkbox"/> Client	Client Name: <u>Georgia Power</u>	Project #: <div style="border: 1px solid black; height: 40px; width: 100%;"></div>
---	--------------------------------------	---

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 9/9/22 JM

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer: IR Gun ID: 230 Type of Ice: Wet Blue None

Biological Tissue Frozen? Yes No N/A

Cooler Temp: 2.4 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 5°C
 Samples out of temp or ter a. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 2.4

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?
 Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? -Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>WJ</u>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted:

Date/Time:

Project Manager SCURF Review:

Date:

Project Manager SRF Review:

Date:



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH4)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)			
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pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

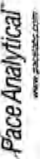
Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: Georgia Power - Coal Combustion Residuals	Report To: Lauren Colker	Report To: Lauren Colker	Attention: scmcvoo@southernco.com	Company Name:	
Address: 2460 Manier Road	Copy To: Colker	Copy To: Colker	Company Name:	Address:	
Atlanta, GA 30339		Purchase Order #:		Face Project Manager:	
Email: laucoker@southernco.com		Project Name: Plant McDonough Upgradient Walls		Face Project Manager:	
Phone: (470) 620-6176		Project #: CL16684622		Face Profile #:	
Requested Due Date: 10 Day TAT					

Regulatory Agency:	
State / Location:	GA

ITEM #	MATRIX	MATRIX CODE	SAMPLE TYPE	DATE	TIME	REMOVED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS	Received on	Ice	Sealed	Cooled	Samples	Temp	
																			Requested Analytals Filtered (Y/N)
3	DGWA-53	WG	G	9/8/2022	13:28	Mark Mann/Golder	09/09/22	15:50	Charles Hank	09/09/22	15:50								
4																			
5																			
6																			
7																			
8																			
9																			
10																			
11																			
12																			
13																			
14																			
15																			

ADDITIONAL COMMENTS:	
DATE SIGNED:	

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: RMS
Date: 9/20/2022
Worklist: 68887
Matrix: DW

Method Blank Assessment	
MB Sample ID	2596601
MB Concentration:	0.008
M/B Counting Uncertainty:	0.047
MB MDC:	0.133
MB Numerical Performance Indicator:	0.32
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS# (Y or N)?	N
		LCS#68887	LCS#68887
Count Date:		10/27/2022	
Spike I.D.:		19-033	
Decay Corrected Spike Concentration (pCi/mL):		24.023	
Volume Used (mL):		0.10	
Aliquot Volume (L, g, F):		0.505	
Target Conc. (pCi/L, g, F):		4.760	
Uncertainty (Calculated):		0.057	
Result (pCi/L, g, F):		3.983	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):		0.431	
Numerical Performance Indicator:		-3.46	
Percent Recovery:		83.89%	
Status vs Numerical Indicator:		N/A	
Status vs Recovery:		Pass	
Upper % Recovery Limits:		125%	
Lower % Recovery Limits:		75%	

Duplicate Sample Assessment		92624632001	92624632002
Sample I.D.:		92624632001	92624632002
Duplicate Sample I.D.:		92624632001DUP	
Sample Result (pCi/L, g, F):		0.124	0.124
Duplicate Result (pCi/L, g, F):		0.091	0.091
Sample Result Counting Uncertainty (pCi/L, g, F):		0.071	0.187
Duplicate Counting Uncertainty (pCi/L, g, F):		0.074	0.104
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):		See Below ##	See Below ##
Duplicate Numerical Performance Indicator:		0.874	-0.888
Duplicate Status vs Numerical Indicator:		53.80%	40.52%
Duplicate Status vs RPD:		N/A	N/A
Duplicate Status vs RPD:		Fail***	Fail***
% RPD Limit:		25%	25%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

***Batch must be prepared to be unacceptable precision. N/A

Am 10/3/22

Am 10/3/22

Sample Matrix Spike Control Assessment		MS/MSD 1	MS/MSD 2
Sample Collection Date:			
Sample I.D.:			
Sample MS I.D.:			
Sample MSD I.D.:			
Spike I.D.:			
MS/MSD Decay Corrected Spike Concentration (pCi/mL):			
Spike Volume Used in MS (mL):			
Spike Volume Used in MSD (mL):			
MS Aliquot (L, g, F):			
MS Target Conc. (pCi/L, g, F):			
MSD Aliquot (L, g, F):			
MSD Target Conc. (pCi/L, g, F):			
MS Spike Uncertainty (calculated):			
MSD Spike Uncertainty (calculated):			
Sample Result Counting Uncertainty (pCi/L, g, F):			
Sample Matrix Spike Result:			
Sample Matrix Spike Duplicate Result:			
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):			
MS Numerical Performance Indicator:			
MSD Numerical Performance Indicator:			
MS Percent Recovery:			
MSD Percent Recovery:			
MS Status vs Numerical Indicator:			
MSD Status vs Numerical Indicator:			
MS Status vs Recovery:			
MSD Status vs Recovery:			
MS/MSD Upper % Recovery Limits:			
MS/MSD Lower % Recovery Limits:			

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	
% RPD Limit:	

Am 10/3/22

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 9/14/2022
Worklist: 68823
Matrix: WT

Method Blank Assessment	
MB Sample ID	2591322
MB concentration:	0.391
MB 2 Sigma CSU:	0.413
MB MDC:	0.858
MB Numerical Performance Indicator:	1.86
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCS (Y or N)?	
	LCS68823	LCS68823
Count Date:	9/23/2022	9/23/2022
Spike I.D.:	20-030	20-030
Decay Corrected Spike Concentration (pCi/mL):	30.094	30.094
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.812	0.815
Target Conc. (pCi/L, g, F):	3.707	3.693
Uncertainty (Calculated):	0.182	0.181
Result (pCi/L, g, F):	3.342	3.360
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.875	0.865
Numerical Performance Indicator:	-0.80	-0.74
Percent Recovery:	90.14%	90.99%
Status vs Numerical Indicator:	N/A	Pass
Upper % Recovery Limits:	Pass	135%
Lower % Recovery Limits:	50%	60%

Duplicate Sample Assessment	Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D.:	Sample I.D.
Duplicate Sample I.D.:	Sample MS I.D.
Sample Result (pCi/L, g, F):	Sample MSD I.D.
Sample Result 2 Sigma CSU (pCi/L, g, F):	Sample Matrix Spike Result:
Sample Duplicate Result (pCi/L, g, F):	Sample Matrix Spike Duplicate Result:
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):
Are sample and/or duplicate results below RL?	Duplicate Numerical Performance Indicator:
Duplicate Numerical Performance Indicator:	(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs Numerical Indicator:
Duplicate Status vs RPD:	MS/MSD Duplicate Status vs RPD:
% RPD Limit:	% RPD Limit:

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Signature

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 9/19/2022
Worklist: 68888
Matrix: WT



Method Blank Assessment

MB Sample ID: 2586603
 MB concentration: 0.798
 MB 2 Sigma CSU: 0.368
 MB MDC: 0.804
 MB Numerical Performance Indicator: 4.25
 MB Status vs Numerical Indicator: Fail*
 MB Status vs MDC: See Comment*

Count Date:	LCS (Y or N)?	Y
9/28/2022	LCS068888	
22-029		22-029
19.913		19.913
0.20		0.20
0.809		0.809
4.927		4.925
0.355		0.355
5.626		5.197
1.255		1.158
1.05		0.44
114.19%		105.52%
N/A		N/A
Pass		Pass
135%		135%
60%		60%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample I.D.: Sample MS I.D.: Sample MSD I.D.: Spike I.D.: MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): Spike Volume Used in MSD (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated): Sample Result: Sample Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Result: Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): MS Numerical Performance Indicator: MSD Numerical Performance Indicator: MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:		

Laboratory Control Sample Assessment	Duplicate Sample Assessment
LCS (Y or N)? LCS068888 Count Date: Spike I.D.: Decay Corrected Spike Concentration (pCi/mL): Volume Used (mL): Aliquot Volume (L, g, F): Target Conc. (pCi/L, g, F): Uncertainty (Calculated): Result (pCi/L, g, F): LCS/LCSD 2 Sigma CSU (pCi/L, g, F): Numerical Performance Indicator: Percent Recovery: Status vs Numerical Indicator: Upper % Recovery Limits: Lower % Recovery Limits:	Sample I.D.: Duplicate Sample I.D.: Sample Result (pCi/L, g, F): Sample Duplicate Result (pCi/L, g, F): Sample Result 2 Sigma CSU (pCi/L, g, F): Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F): Are sample and/or duplicate results below RL? Duplicate Numerical Performance Indicator: Duplicate Numerical Performance Indicator: Duplicate RPD: Duplicate Status vs Numerical Indicator: Duplicate Status vs RPD: % RPD Limit:

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D.: Sample MS I.D.: Sample MSD I.D.: Sample Matrix Spike Result: Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): Duplicate Numerical Performance Indicator: Duplicate Numerical Performance Indicator: (Based on the Percent Recoveries) MS/MSD Duplicate RPD: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPD: % RPD Limit:

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:
*The method blank result is below the reporting limit for this analysis and is acceptable.

Handwritten signature and date: 9/29/22

November 10, 2022

Andrea McClure
WSP/Golder
5170 Peachtree Road
Building 100, Suite 300
Atlanta, GA 30341

RE: Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

Dear Andrea McClure:

Enclosed are the analytical results for sample(s) received by the laboratory between September 08, 2022 and September 13, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

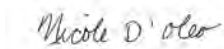
The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

Revision 1: Issued on 11/10/22 to remove Manganese.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Stephen Benda, Southern Company
Noelia Gangi, Georgia Power
Daniela Herrera, Golder
Ben Hodges, Georgia Power
Kristen Jurinko

Laura Midkiff, Georgia Power
Karim Minkara, Golder Associates - Atlanta
J. Shelby Mobley, Southern Company
Charles Norton, Southern Company
Ms. Lauren Petty, Southern Company
Dawn Prell, Golder Associates Inc.



REPORT OF LABORATORY ANALYSIS

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November 10, 2022

Page 2

cc: Michael Smilley, Georgia Power
Yong Cheng Soo, WSP/Golder
Tina Sullivan, ERM



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant McDonough AP-1-Revised Report

Pace Project No.: 92624372

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001

South Carolina Drinking Water Cert. #: 99006003

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Louisiana DoH Drinking Water #: LA029

Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92624372001	DGWC-39	Water	09/07/22 14:44	09/08/22 09:45
92624372002	DGWC-40	Water	09/07/22 12:13	09/08/22 09:45
92624372003	DGWC-68A	Water	09/07/22 15:10	09/08/22 09:45
92624372004	FB-1	Water	09/07/22 15:15	09/08/22 09:45
92624372005	DUP-1	Water	09/07/22 00:00	09/08/22 09:45
92624372006	DGWC-69	Water	09/07/22 11:50	09/08/22 09:45
92624372007	DGWC-67	Water	09/08/22 11:00	09/09/22 15:50
92624372008	DGWC-121	Water	09/08/22 12:55	09/09/22 15:50
92624372009	EB-1	Water	09/08/22 11:30	09/09/22 15:50
92624372010	FB-2	Water	09/08/22 13:00	09/09/22 15:50
92624372011	DGWC-37	Water	09/09/22 11:38	09/09/22 15:50
92624372012	DGWC-38	Water	09/12/22 12:12	09/13/22 10:30
92624372013	FB-3	Water	09/12/22 12:10	09/13/22 10:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92624372001	DGWC-39	EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
92624372002	DGWC-40	EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92624372003	DGWC-68A	SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
92624372004	FB-1	SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	DRB	5
		EPA 6020B	CW1	13
92624372005	DUP-1	EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	DRB	5
92624372006	DGWC-69	EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	JCM	3
92624372007	DGWC-67	EPA 6010D	DRB	5

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SAMPLE ANALYTE COUNT

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92624372008	DGWC-121	EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
92624372009	EB-1	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
92624372010	FB-2	SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	5
92624372011	DGWC-37	EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
92624372012	DGWC-38	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
92624372013	FB-3	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	5
		EPA 6020B	CW1	13

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SAMPLE ANALYTE COUNT

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville
PASI-C = Pace Analytical Services - Charlotte
PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

Sample: DGWC-39		Lab ID: 92624372001		Collected: 09/07/22 14:44		Received: 09/08/22 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/08/22 13:38		
pH	6.43	Std. Units			1		09/08/22 13:38		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	12.3	mg/L	0.040	0.025	1	09/21/22 17:50	09/22/22 18:37	7439-89-6	
Potassium	2.9	mg/L	0.20	0.15	1	09/21/22 17:50	09/22/22 18:37	7440-09-7	
Sodium	13.6	mg/L	1.0	0.58	1	09/21/22 17:50	09/22/22 18:37	7440-23-5	
Calcium	92.5	mg/L	1.0	0.12	1	09/21/22 17:50	09/22/22 18:37	7440-70-2	
Magnesium	22.4	mg/L	0.050	0.012	1	09/21/22 17:50	09/22/22 18:37	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/22/22 18:15	09/24/22 17:43	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/22/22 18:15	09/24/22 17:43	7440-38-2	
Barium	0.099	mg/L	0.0050	0.00067	1	09/22/22 18:15	09/24/22 17:43	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/22/22 18:15	09/24/22 17:43	7440-41-7	
Boron	3.3	mg/L	0.040	0.0086	1	09/22/22 18:15	09/24/22 17:43	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/22/22 18:15	09/24/22 17:43	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/22/22 18:15	09/24/22 17:43	7440-47-3	
Cobalt	0.0065	mg/L	0.0050	0.00039	1	09/22/22 18:15	09/24/22 17:43	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/22/22 18:15	09/24/22 17:43	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	09/22/22 18:15	09/24/22 17:43	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	09/22/22 18:15	09/24/22 17:43	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/22/22 18:15	09/24/22 17:43	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/22/22 18:15	09/24/22 17:43	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/22/22 14:00	09/22/22 18:01	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	449	mg/L	25.0	10.0	1		09/09/22 14:58		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	256	mg/L	5.0	5.0	1		09/13/22 15:15		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/13/22 15:15		
Alkalinity, Total as CaCO3	256	mg/L	5.0	5.0	1		09/13/22 15:15		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	8.2	mg/L	1.0	0.60	1		09/09/22 20:39	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough AP-1-Revised Report

Pace Project No.: 92624372

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: DGWC-39									
Lab ID: 92624372001									
Collected: 09/07/22 14:44									
Received: 09/08/22 09:45									
Matrix: Water									
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.11	mg/L	0.10	0.050	1		09/09/22 20:39	16984-48-8	
Sulfate	146	mg/L	3.0	1.5	3		09/10/22 01:50	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

Sample: DGWC-40		Lab ID: 92624372002		Collected: 09/07/22 12:13		Received: 09/08/22 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/08/22 13:38		
pH	4.54	Std. Units			1		09/08/22 13:38		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.025	1	09/21/22 17:50	09/22/22 18:42	7439-89-6	
Potassium	5.9	mg/L	0.20	0.15	1	09/21/22 17:50	09/22/22 18:42	7440-09-7	
Sodium	19.2	mg/L	1.0	0.58	1	09/21/22 17:50	09/22/22 18:42	7440-23-5	
Calcium	44.8	mg/L	1.0	0.12	1	09/21/22 17:50	09/22/22 18:42	7440-70-2	
Magnesium	19.4	mg/L	0.050	0.012	1	09/21/22 17:50	09/22/22 18:42	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/22/22 18:15	09/24/22 18:06	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/22/22 18:15	09/24/22 18:06	7440-38-2	
Barium	0.016	mg/L	0.0050	0.00067	1	09/22/22 18:15	09/24/22 18:06	7440-39-3	
Beryllium	0.0031	mg/L	0.00050	0.000054	1	09/22/22 18:15	09/24/22 18:06	7440-41-7	
Boron	0.84	mg/L	0.040	0.0086	1	09/22/22 18:15	09/24/22 18:06	7440-42-8	
Cadmium	0.00081	mg/L	0.00050	0.00011	1	09/22/22 18:15	09/24/22 18:06	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/22/22 18:15	09/24/22 18:06	7440-47-3	
Cobalt	0.037	mg/L	0.0050	0.00039	1	09/22/22 18:15	09/24/22 18:06	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/22/22 18:15	09/24/22 18:06	7439-92-1	
Lithium	0.0023J	mg/L	0.030	0.00073	1	09/22/22 18:15	09/24/22 18:06	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	09/22/22 18:15	09/24/22 18:06	7439-98-7	
Selenium	0.0018J	mg/L	0.0050	0.0014	1	09/22/22 18:15	09/24/22 18:06	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/22/22 18:15	09/24/22 18:06	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/22/22 14:00	09/22/22 18:04	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	339	mg/L	25.0	10.0	1		09/09/22 14:58		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/13/22 13:10		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/13/22 13:10		
Alkalinity, Total as CaCO ₃	ND	mg/L	5.0	5.0	1		09/13/22 13:10		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	15.0	mg/L	1.0	0.60	1		09/09/22 20:53	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough AP-1-Revised Report

Pace Project No.: 92624372

Sample: DGWC-40 **Lab ID: 92624372002** Collected: 09/07/22 12:13 Received: 09/08/22 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.14	mg/L	0.10	0.050	1		09/09/22 20:53	16984-48-8	
Sulfate	203	mg/L	4.0	2.0	4		09/10/22 02:05	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

Sample: DGWC-68A	Lab ID: 92624372003	Collected: 09/07/22 15:10	Received: 09/08/22 09:45	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/08/22 13:39		
pH	6.62	Std. Units			1		09/08/22 13:39		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	0.097	mg/L	0.040	0.025	1	09/21/22 17:50	09/22/22 18:47	7439-89-6	
Potassium	3.8	mg/L	0.20	0.15	1	09/21/22 17:50	09/22/22 18:47	7440-09-7	
Sodium	9.6	mg/L	1.0	0.58	1	09/21/22 17:50	09/22/22 18:47	7440-23-5	
Calcium	53.5	mg/L	1.0	0.12	1	09/21/22 17:50	09/22/22 18:47	7440-70-2	
Magnesium	17.6	mg/L	0.050	0.012	1	09/21/22 17:50	09/22/22 18:47	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/22/22 18:15	09/24/22 18:12	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/22/22 18:15	09/24/22 18:12	7440-38-2	
Barium	0.098	mg/L	0.0050	0.00067	1	09/22/22 18:15	09/24/22 18:12	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/22/22 18:15	09/24/22 18:12	7440-41-7	
Boron	2.0	mg/L	0.040	0.0086	1	09/22/22 18:15	09/24/22 18:12	7440-42-8	
Cadmium	0.00020J	mg/L	0.00050	0.00011	1	09/22/22 18:15	09/24/22 18:12	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/22/22 18:15	09/24/22 18:12	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/22/22 18:15	09/24/22 18:12	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/22/22 18:15	09/24/22 18:12	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	09/22/22 18:15	09/24/22 18:12	7439-93-2	
Molybdenum	0.20	mg/L	0.010	0.00074	1	09/22/22 18:15	09/24/22 18:12	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/22/22 18:15	09/24/22 18:12	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/22/22 18:15	09/24/22 18:12	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/22/22 14:00	09/22/22 18:06	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	256	mg/L	25.0	10.0	1		09/09/22 14:58		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	201	mg/L	5.0	5.0	1		09/13/22 13:14		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/13/22 13:14		
Alkalinity, Total as CaCO ₃	201	mg/L	5.0	5.0	1		09/13/22 13:14		M1
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.1	mg/L	1.0	0.60	1		09/09/22 21:07	16887-00-6	

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ANALYTICAL RESULTS

Project: Plant McDonough AP-1-Revised Report

Pace Project No.: 92624372

Sample: DGWC-68A **Lab ID: 92624372003** Collected: 09/07/22 15:10 Received: 09/08/22 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.11	mg/L	0.10	0.050	1		09/09/22 21:07	16984-48-8	
Sulfate	36.5	mg/L	1.0	0.50	1		09/09/22 21:07	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

Sample: FB-1		Lab ID: 92624372004		Collected: 09/07/22 15:15	Received: 09/08/22 09:45	Matrix: Water			
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Iron	ND	mg/L	0.040	0.025	1	09/21/22 17:50	09/22/22 19:16	7439-89-6	
Potassium	ND	mg/L	0.20	0.15	1	09/21/22 17:50	09/22/22 19:16	7440-09-7	
Sodium	ND	mg/L	1.0	0.58	1	09/21/22 17:50	09/22/22 19:16	7440-23-5	
Calcium	ND	mg/L	1.0	0.12	1	09/21/22 17:50	09/22/22 19:16	7440-70-2	
Magnesium	ND	mg/L	0.050	0.012	1	09/21/22 17:50	09/22/22 19:16	7439-95-4	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00078	1	09/22/22 18:15	09/24/22 18:18	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/22/22 18:15	09/24/22 18:18	7440-38-2	
Barium	0.0023J	mg/L	0.0050	0.00067	1	09/22/22 18:15	09/24/22 18:18	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/22/22 18:15	09/24/22 18:18	7440-41-7	
Boron	0.031J	mg/L	0.040	0.0086	1	09/22/22 18:15	09/24/22 18:18	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/22/22 18:15	09/24/22 18:18	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/22/22 18:15	09/24/22 18:18	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/22/22 18:15	09/24/22 18:18	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/22/22 18:15	09/24/22 18:18	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	09/22/22 18:15	09/24/22 18:18	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	09/22/22 18:15	09/24/22 18:18	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/22/22 18:15	09/24/22 18:18	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/22/22 18:15	09/24/22 18:18	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	09/22/22 14:00	09/22/22 18:09	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		09/09/22 14:58		
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/13/22 13:42		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/13/22 13:42		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		09/13/22 13:42		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		09/09/22 21:21	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/09/22 21:21	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		09/09/22 21:21	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

Sample: DUP-1		Lab ID: 92624372005		Collected: 09/07/22 00:00	Received: 09/08/22 09:45	Matrix: Water			
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Iron	ND	mg/L	0.040	0.025	1	09/21/22 17:50	09/22/22 19:20	7439-89-6	
Potassium	5.6	mg/L	0.20	0.15	1	09/21/22 17:50	09/22/22 19:20	7440-09-7	
Sodium	18.4	mg/L	1.0	0.58	1	09/21/22 17:50	09/22/22 19:20	7440-23-5	
Calcium	42.9	mg/L	1.0	0.12	1	09/21/22 17:50	09/22/22 19:20	7440-70-2	
Magnesium	18.6	mg/L	0.050	0.012	1	09/21/22 17:50	09/22/22 19:20	7439-95-4	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00078	1	09/22/22 18:15	09/24/22 18:24	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/22/22 18:15	09/24/22 18:24	7440-38-2	
Barium	0.015	mg/L	0.0050	0.00067	1	09/22/22 18:15	09/24/22 18:24	7440-39-3	
Beryllium	0.0032	mg/L	0.00050	0.000054	1	09/22/22 18:15	09/24/22 18:24	7440-41-7	
Boron	0.79	mg/L	0.040	0.0086	1	09/22/22 18:15	09/24/22 18:24	7440-42-8	
Cadmium	0.00078	mg/L	0.00050	0.00011	1	09/22/22 18:15	09/24/22 18:24	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/22/22 18:15	09/24/22 18:24	7440-47-3	
Cobalt	0.036	mg/L	0.0050	0.00039	1	09/22/22 18:15	09/24/22 18:24	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/22/22 18:15	09/24/22 18:24	7439-92-1	
Lithium	0.0022J	mg/L	0.030	0.00073	1	09/22/22 18:15	09/24/22 18:24	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	09/22/22 18:15	09/24/22 18:24	7439-98-7	
Selenium	0.0017J	mg/L	0.0050	0.0014	1	09/22/22 18:15	09/24/22 18:24	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/22/22 18:15	09/24/22 18:24	7440-28-0	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	09/22/22 14:00	09/22/22 18:12	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	344	mg/L	25.0	10.0	1		09/09/22 14:58		
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville							
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/13/22 13:47		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/13/22 13:47		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		09/13/22 13:47		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	15.0	mg/L	1.0	0.60	1		09/09/22 21:35	16887-00-6	
Fluoride	0.14	mg/L	0.10	0.050	1		09/09/22 21:35	16984-48-8	
Sulfate	247	mg/L	4.0	2.0	4		09/12/22 18:15	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

Sample: DGWC-69		Lab ID: 92624372006		Collected: 09/07/22 11:50		Received: 09/08/22 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/08/22 13:39		
pH	6.20	Std. Units			1		09/08/22 13:39		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	0.075	mg/L	0.040	0.025	1	09/21/22 17:50	09/22/22 19:25	7439-89-6	
Potassium	2.8	mg/L	0.20	0.15	1	09/21/22 17:50	09/22/22 19:25	7440-09-7	
Sodium	9.6	mg/L	1.0	0.58	1	09/21/22 17:50	09/22/22 19:25	7440-23-5	
Calcium	13.1	mg/L	1.0	0.12	1	09/21/22 17:50	09/22/22 19:25	7440-70-2	
Magnesium	3.4	mg/L	0.050	0.012	1	09/21/22 17:50	09/22/22 19:25	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/22/22 18:15	09/24/22 18:42	7440-36-0	
Arsenic	0.024	mg/L	0.0050	0.0022	1	09/22/22 18:15	09/24/22 18:42	7440-38-2	
Barium	0.065	mg/L	0.0050	0.00067	1	09/22/22 18:15	09/24/22 18:42	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/22/22 18:15	09/24/22 18:42	7440-41-7	
Boron	0.23	mg/L	0.040	0.0086	1	09/22/22 18:15	09/24/22 18:42	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/22/22 18:15	09/24/22 18:42	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/22/22 18:15	09/24/22 18:42	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/22/22 18:15	09/24/22 18:42	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/22/22 18:15	09/24/22 18:42	7439-92-1	
Lithium	0.0025J	mg/L	0.030	0.00073	1	09/22/22 18:15	09/24/22 18:42	7439-93-2	
Molybdenum	0.0067J	mg/L	0.010	0.00074	1	09/22/22 18:15	09/24/22 18:42	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/22/22 18:15	09/24/22 18:42	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/22/22 18:15	09/24/22 18:42	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/22/22 14:00	09/22/22 18:19	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	102	mg/L	25.0	10.0	1		09/09/22 14:58		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	54.2	mg/L	5.0	5.0	1		09/13/22 14:01		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/13/22 14:01		
Alkalinity, Total as CaCO ₃	54.2	mg/L	5.0	5.0	1		09/13/22 14:01		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.9	mg/L	1.0	0.60	1		09/09/22 21:49	16887-00-6	

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ANALYTICAL RESULTS

Project: Plant McDonough AP-1-Revised Report

Pace Project No.: 92624372

Sample: DGWC-69 **Lab ID: 92624372006** Collected: 09/07/22 11:50 Received: 09/08/22 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.11	mg/L	0.10	0.050	1		09/09/22 21:49	16984-48-8	
Sulfate	11.6	mg/L	1.0	0.50	1		09/09/22 21:49	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

Sample: DGWC-67 **Lab ID: 92624372007** Collected: 09/08/22 11:00 Received: 09/09/22 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer				1		09/09/22 17:28		
pH	6.21	Std. Units			1		09/09/22 17:28		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Iron	ND	mg/L	0.040	0.025	1	09/21/22 17:50	09/22/22 19:30	7439-89-6	
Potassium	3.8	mg/L	0.20	0.15	1	09/21/22 17:50	09/22/22 19:30	7440-09-7	
Sodium	10.8	mg/L	1.0	0.58	1	09/21/22 17:50	09/22/22 19:30	7440-23-5	
Calcium	47.4	mg/L	1.0	0.12	1	09/21/22 17:50	09/22/22 19:30	7440-70-2	
Magnesium	18.5	mg/L	0.050	0.012	1	09/21/22 17:50	09/22/22 19:30	7439-95-4	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	09/22/22 18:15	09/24/22 18:48	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/22/22 18:15	09/24/22 18:48	7440-38-2	
Barium	0.082	mg/L	0.0050	0.00067	1	09/22/22 18:15	09/24/22 18:48	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/22/22 18:15	09/24/22 18:48	7440-41-7	
Boron	4.3	mg/L	0.040	0.0086	1	09/22/22 18:15	09/24/22 18:48	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/22/22 18:15	09/24/22 18:48	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/22/22 18:15	09/24/22 18:48	7440-47-3	
Cobalt	0.0010J	mg/L	0.0050	0.00039	1	09/22/22 18:15	09/24/22 18:48	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/22/22 18:15	09/24/22 18:48	7439-92-1	
Lithium	0.0048J	mg/L	0.030	0.00073	1	09/22/22 18:15	09/24/22 18:48	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	09/22/22 18:15	09/24/22 18:48	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/22/22 18:15	09/24/22 18:48	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/22/22 18:15	09/24/22 18:48	7440-28-0	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	09/22/22 14:00	09/22/22 18:22	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	252	mg/L	25.0	10.0	1		09/14/22 11:31		
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2320B Alkalinity

Analytical Method: SM 2320B-2011
Pace Analytical Services - Asheville

Alkalinity,Bicarbonate (CaCO3)	99.1	mg/L	5.0	5.0	1		09/13/22 14:52		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/13/22 14:52		
Alkalinity, Total as CaCO3	99.1	mg/L	5.0	5.0	1		09/13/22 14:52		

300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	8.9	mg/L	1.0	0.60	1		09/13/22 16:04	16887-00-6	
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough AP-1-Revised Report

Pace Project No.: 92624372

Sample: DGWC-67 **Lab ID: 92624372007** Collected: 09/08/22 11:00 Received: 09/09/22 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.096J	mg/L	0.10	0.050	1		09/13/22 16:04	16984-48-8	
Sulfate	117	mg/L	2.0	1.0	2		09/14/22 19:58	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

Sample: DGWC-121	Lab ID: 92624372008	Collected: 09/08/22 12:55	Received: 09/09/22 15:50	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/09/22 17:28		
pH	6.32	Std. Units			1		09/09/22 17:28		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	3.3	mg/L	0.040	0.025	1	09/21/22 17:50	09/22/22 19:35	7439-89-6	
Potassium	3.7	mg/L	0.20	0.15	1	09/21/22 17:50	09/22/22 19:35	7440-09-7	
Sodium	10.8	mg/L	1.0	0.58	1	09/21/22 17:50	09/22/22 19:35	7440-23-5	
Calcium	45.0	mg/L	1.0	0.12	1	09/21/22 17:50	09/22/22 19:35	7440-70-2	
Magnesium	12.7	mg/L	0.050	0.012	1	09/21/22 17:50	09/22/22 19:35	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/22/22 18:15	09/24/22 18:54	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/22/22 18:15	09/24/22 18:54	7440-38-2	
Barium	0.042	mg/L	0.0050	0.00067	1	09/22/22 18:15	09/24/22 18:54	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/22/22 18:15	09/24/22 18:54	7440-41-7	
Boron	2.1	mg/L	0.040	0.0086	1	09/22/22 18:15	09/24/22 18:54	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/22/22 18:15	09/24/22 18:54	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/22/22 18:15	09/24/22 18:54	7440-47-3	
Cobalt	0.0019J	mg/L	0.0050	0.00039	1	09/22/22 18:15	09/24/22 18:54	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/22/22 18:15	09/24/22 18:54	7439-92-1	
Lithium	0.010J	mg/L	0.030	0.00073	1	09/22/22 18:15	09/24/22 18:54	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	09/22/22 18:15	09/24/22 18:54	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/22/22 18:15	09/24/22 18:54	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/22/22 18:15	09/24/22 18:54	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/22/22 14:00	09/22/22 18:27	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	261	mg/L	25.0	10.0	1		09/14/22 12:25		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	111	mg/L	5.0	5.0	1		09/13/22 15:01		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/13/22 15:01		
Alkalinity, Total as CaCO ₃	111	mg/L	5.0	5.0	1		09/13/22 15:01		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.5	mg/L	1.0	0.60	1		09/13/22 16:19	16887-00-6	

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ANALYTICAL RESULTS

Project: Plant McDonough AP-1-Revised Report

Pace Project No.: 92624372

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: DGWC-121 Lab ID: 92624372008 Collected: 09/08/22 12:55 Received: 09/09/22 15:50 Matrix: Water									
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.093J	mg/L	0.10	0.050	1		09/13/22 16:19	16984-48-8	
Sulfate	84.8	mg/L	1.0	0.50	1		09/13/22 16:19	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

Sample: EB-1		Lab ID: 92624372009		Collected: 09/08/22 11:30		Received: 09/09/22 15:50		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	ND	mg/L	0.040	0.025	1	09/21/22 17:50	09/22/22 19:39	7439-89-6		
Potassium	ND	mg/L	0.20	0.15	1	09/21/22 17:50	09/22/22 19:39	7440-09-7		
Sodium	ND	mg/L	1.0	0.58	1	09/21/22 17:50	09/22/22 19:39	7440-23-5		
Calcium	ND	mg/L	1.0	0.12	1	09/21/22 17:50	09/22/22 19:39	7440-70-2		
Magnesium	ND	mg/L	0.050	0.012	1	09/21/22 17:50	09/22/22 19:39	7439-95-4		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	09/22/22 18:15	09/24/22 19:00	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0022	1	09/22/22 18:15	09/24/22 19:00	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	09/22/22 18:15	09/24/22 19:00	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	09/22/22 18:15	09/24/22 19:00	7440-41-7		
Boron	0.030J	mg/L	0.040	0.0086	1	09/22/22 18:15	09/24/22 19:00	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	09/22/22 18:15	09/24/22 19:00	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	09/22/22 18:15	09/24/22 19:00	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	09/22/22 18:15	09/24/22 19:00	7440-48-4		
Lead	ND	mg/L	0.0010	0.00089	1	09/22/22 18:15	09/24/22 19:00	7439-92-1		
Lithium	ND	mg/L	0.030	0.00073	1	09/22/22 18:15	09/24/22 19:00	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00074	1	09/22/22 18:15	09/24/22 19:00	7439-98-7		
Selenium	ND	mg/L	0.0050	0.0014	1	09/22/22 18:15	09/24/22 19:00	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00018	1	09/22/22 18:15	09/24/22 19:00	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	09/22/22 14:00	09/22/22 18:30	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		09/14/22 11:32			
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/13/22 15:10			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/13/22 15:10			
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		09/13/22 15:10			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		09/13/22 16:33	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		09/13/22 16:33	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		09/13/22 16:33	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

Sample: FB-2		Lab ID: 92624372010		Collected: 09/08/22 13:00	Received: 09/09/22 15:50	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	ND	mg/L	0.040	0.025	1	09/21/22 17:50	09/22/22 19:44	7439-89-6		
Potassium	ND	mg/L	0.20	0.15	1	09/21/22 17:50	09/22/22 19:44	7440-09-7		
Sodium	ND	mg/L	1.0	0.58	1	09/21/22 17:50	09/22/22 19:44	7440-23-5		
Calcium	ND	mg/L	1.0	0.12	1	09/21/22 17:50	09/22/22 19:44	7440-70-2		
Magnesium	ND	mg/L	0.050	0.012	1	09/21/22 17:50	09/22/22 19:44	7439-95-4		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	09/22/22 18:15	09/24/22 19:06	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0022	1	09/22/22 18:15	09/24/22 19:06	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	09/22/22 18:15	09/24/22 19:06	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	09/22/22 18:15	09/24/22 19:06	7440-41-7		
Boron	0.014J	mg/L	0.040	0.0086	1	09/22/22 18:15	09/24/22 19:06	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	09/22/22 18:15	09/24/22 19:06	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	09/22/22 18:15	09/24/22 19:06	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	09/22/22 18:15	09/24/22 19:06	7440-48-4		
Lead	ND	mg/L	0.0010	0.00089	1	09/22/22 18:15	09/24/22 19:06	7439-92-1		
Lithium	ND	mg/L	0.030	0.00073	1	09/22/22 18:15	09/24/22 19:06	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00074	1	09/22/22 18:15	09/24/22 19:06	7439-98-7		
Selenium	ND	mg/L	0.0050	0.0014	1	09/22/22 18:15	09/24/22 19:06	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00018	1	09/22/22 18:15	09/24/22 19:06	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	09/22/22 14:00	09/22/22 18:32	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		09/14/22 11:32			
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/14/22 16:46			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/14/22 16:46			
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		09/14/22 16:46			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		09/13/22 16:48	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		09/13/22 16:48	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		09/13/22 16:48	14808-79-8		

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ANALYTICAL RESULTS

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

Sample: DGWC-37 Lab ID: 92624372011 Collected: 09/09/22 11:38 Received: 09/09/22 15:50 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/09/22 17:28		
pH	6.30	Std. Units			1		09/09/22 17:28		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	0.093	mg/L	0.040	0.025	1	09/21/22 17:50	09/22/22 19:49	7439-89-6	
Potassium	4.4	mg/L	0.20	0.15	1	09/21/22 17:50	09/22/22 19:49	7440-09-7	
Sodium	11.0	mg/L	1.0	0.58	1	09/21/22 17:50	09/22/22 19:49	7440-23-5	
Calcium	66.2	mg/L	1.0	0.12	1	09/21/22 17:50	09/22/22 19:49	7440-70-2	
Magnesium	14.7	mg/L	0.050	0.012	1	09/21/22 17:50	09/22/22 19:49	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/22/22 18:15	09/24/22 19:12	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/22/22 18:15	09/24/22 19:12	7440-38-2	
Barium	0.079	mg/L	0.0050	0.00067	1	09/22/22 18:15	09/24/22 19:12	7440-39-3	
Beryllium	0.000057J	mg/L	0.00050	0.000054	1	09/22/22 18:15	09/24/22 19:12	7440-41-7	
Boron	2.0	mg/L	0.040	0.0086	1	09/22/22 18:15	09/24/22 19:12	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/22/22 18:15	09/24/22 19:12	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/22/22 18:15	09/24/22 19:12	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/22/22 18:15	09/24/22 19:12	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/22/22 18:15	09/24/22 19:12	7439-92-1	
Lithium	0.0019J	mg/L	0.030	0.00073	1	09/22/22 18:15	09/24/22 19:12	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	09/22/22 18:15	09/24/22 19:12	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/22/22 18:15	09/24/22 19:12	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/22/22 18:15	09/24/22 19:12	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/27/22 07:45	09/27/22 11:05	7439-97-6	M1,R1
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	300	mg/L	25.0	10.0	1		09/14/22 11:32		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	134	mg/L	5.0	5.0	1		09/14/22 16:51		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/14/22 16:51		
Alkalinity, Total as CaCO3	134	mg/L	5.0	5.0	1		09/14/22 16:51		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	5.4	mg/L	1.0	0.60	1		09/13/22 17:03	16887-00-6	

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ANALYTICAL RESULTS

Project: Plant McDonough AP-1-Revised Report

Pace Project No.: 92624372

Sample: DGWC-37 **Lab ID: 92624372011** Collected: 09/09/22 11:38 Received: 09/09/22 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.082J	mg/L	0.10	0.050	1		09/13/22 17:03	16984-48-8	
Sulfate	96.6	mg/L	1.0	0.50	1		09/13/22 17:03	14808-79-8	M1

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ANALYTICAL RESULTS

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

Sample: DGWC-38 **Lab ID: 92624372012** Collected: 09/12/22 12:12 Received: 09/13/22 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer						09/19/22 07:49
pH	6.05	Std. Units					09/19/22 07:49

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Iron	0.040	mg/L	0.040	0.025	1	09/21/22 17:50	09/22/22 20:13	7439-89-6
Potassium	4.1	mg/L	0.20	0.15	1	09/21/22 17:50	09/22/22 20:13	7440-09-7
Sodium	12.0	mg/L	1.0	0.58	1	09/21/22 17:50	09/22/22 20:13	7440-23-5
Calcium	87.6	mg/L	1.0	0.12	1	09/21/22 17:50	09/22/22 20:13	7440-70-2
Magnesium	26.4	mg/L	0.050	0.012	1	09/21/22 17:50	09/22/22 20:13	7439-95-4

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	09/22/22 18:15	09/24/22 20:00	7440-36-0
Arsenic	ND	mg/L	0.0050	0.0022	1	09/22/22 18:15	09/24/22 20:00	7440-38-2
Barium	0.027	mg/L	0.0050	0.00067	1	09/22/22 18:15	09/24/22 20:00	7440-39-3
Beryllium	ND	mg/L	0.00050	0.000054	1	09/22/22 18:15	09/24/22 20:00	7440-41-7
Boron	2.8	mg/L	0.20	0.043	5	09/22/22 18:15	09/26/22 14:31	7440-42-8
Cadmium	0.00013J	mg/L	0.00050	0.00011	1	09/22/22 18:15	09/24/22 20:00	7440-43-9
Chromium	ND	mg/L	0.0050	0.0011	1	09/22/22 18:15	09/24/22 20:00	7440-47-3
Cobalt	0.0014J	mg/L	0.0050	0.00039	1	09/22/22 18:15	09/24/22 20:00	7440-48-4
Lead	ND	mg/L	0.0010	0.00089	1	09/22/22 18:15	09/24/22 20:00	7439-92-1
Lithium	0.0030J	mg/L	0.030	0.00073	1	09/22/22 18:15	09/24/22 20:00	7439-93-2
Molybdenum	0.0012J	mg/L	0.010	0.00074	1	09/22/22 18:15	09/24/22 20:00	7439-98-7
Selenium	ND	mg/L	0.0050	0.0014	1	09/22/22 18:15	09/24/22 20:00	7782-49-2
Thallium	ND	mg/L	0.0010	0.00018	1	09/22/22 18:15	09/24/22 20:00	7440-28-0

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	09/27/22 07:45	09/27/22 11:21	7439-97-6
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	468	mg/L	25.0	10.0	1		09/15/22 11:46
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2320B Alkalinity

Analytical Method: SM 2320B-2011
Pace Analytical Services - Asheville

Alkalinity, Bicarbonate (CaCO ₃)	87.1	mg/L	5.0	5.0	1		09/14/22 18:20
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/14/22 18:20
Alkalinity, Total as CaCO ₃	87.1	mg/L	5.0	5.0	1		09/14/22 18:20

300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	8.5	mg/L	1.0	0.60	1		09/15/22 21:16	16887-00-6
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough AP-1-Revised Report

Pace Project No.: 92624372

Sample: DGWC-38 **Lab ID: 92624372012** Collected: 09/12/22 12:12 Received: 09/13/22 10:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.12	mg/L	0.10	0.050	1		09/15/22 21:16	16984-48-8	
Sulfate	234	mg/L	5.0	2.5	5		09/16/22 05:10	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

Sample: FB-3 **Lab ID: 92624372013** Collected: 09/12/22 12:10 Received: 09/13/22 10:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.025	1	09/21/22 17:50	09/22/22 20:17	7439-89-6	
Potassium	ND	mg/L	0.20	0.15	1	09/21/22 17:50	09/22/22 20:17	7440-09-7	
Sodium	ND	mg/L	1.0	0.58	1	09/21/22 17:50	09/22/22 20:17	7440-23-5	
Calcium	ND	mg/L	1.0	0.12	1	09/21/22 17:50	09/22/22 20:17	7440-70-2	
Magnesium	ND	mg/L	0.050	0.012	1	09/21/22 17:50	09/22/22 20:17	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/22/22 18:15	09/24/22 20:06	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/22/22 18:15	09/24/22 20:06	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	09/22/22 18:15	09/24/22 20:06	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/22/22 18:15	09/24/22 20:06	7440-41-7	
Boron	0.023J	mg/L	0.040	0.0086	1	09/22/22 18:15	09/24/22 20:06	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/22/22 18:15	09/24/22 20:06	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/22/22 18:15	09/24/22 20:06	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/22/22 18:15	09/24/22 20:06	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/22/22 18:15	09/24/22 20:06	7439-92-1	
Lithium	ND	mg/L	0.030	0.00073	1	09/22/22 18:15	09/24/22 20:06	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	09/22/22 18:15	09/24/22 20:06	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/22/22 18:15	09/24/22 20:06	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/22/22 18:15	09/24/22 20:06	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/27/22 07:45	09/27/22 11:24	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		09/15/22 11:46		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/14/22 18:29		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/14/22 18:29		
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		09/14/22 18:29		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		09/15/22 21:31	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/15/22 21:31	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		09/15/22 21:31	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough AP-1-Revised Report

Pace Project No.: 92624372

QC Batch:	724852	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92624372001, 92624372002, 92624372003, 92624372004, 92624372005, 92624372006, 92624372007, 92624372008, 92624372009, 92624372010, 92624372011, 92624372012, 92624372013

METHOD BLANK:	3776437	Matrix:	Water
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Associated Lab Samples: 92624372001, 92624372002, 92624372003, 92624372004, 92624372005, 92624372006, 92624372007, 92624372008, 92624372009, 92624372010, 92624372011, 92624372012, 92624372013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	09/22/22 17:49	
Iron	mg/L	ND	0.040	0.025	09/22/22 17:49	
Magnesium	mg/L	ND	0.050	0.012	09/22/22 17:49	
Potassium	mg/L	ND	0.20	0.15	09/22/22 17:49	
Sodium	mg/L	ND	1.0	0.58	09/22/22 17:49	

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.97J	97	80-120	
Iron	mg/L	1	0.97	97	80-120	
Magnesium	mg/L	1	0.97	97	80-120	
Potassium	mg/L	1	0.95	95	80-120	
Sodium	mg/L	1	0.99J	99	80-120	

Parameter	Units	3776441		3776442		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Calcium	mg/L	67.1	1	68.1	1	100	212	75-125	2	20	M1
Iron	mg/L	ND	1	1.0	1	104	105	75-125	1	20	
Magnesium	mg/L	1.0	1	2.1	1	106	107	75-125	1	20	
Potassium	mg/L	2.3	1	3.3	1	103	110	75-125	2	20	
Sodium	mg/L	1.5	1	2.5	1	101	107	75-125	2	20	

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QUALITY CONTROL DATA

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

QC Batch: 725176 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92624372001, 92624372002, 92624372003, 92624372004, 92624372005, 92624372006, 92624372007, 92624372008, 92624372009, 92624372010, 92624372011, 92624372012, 92624372013

METHOD BLANK: 3778147 Matrix: Water
Associated Lab Samples: 92624372001, 92624372002, 92624372003, 92624372004, 92624372005, 92624372006, 92624372007, 92624372008, 92624372009, 92624372010, 92624372011, 92624372012, 92624372013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	09/24/22 17:31	
Arsenic	mg/L	ND	0.0050	0.0022	09/24/22 17:31	
Barium	mg/L	ND	0.0050	0.00067	09/24/22 17:31	
Beryllium	mg/L	ND	0.00050	0.000054	09/24/22 17:31	
Boron	mg/L	ND	0.040	0.0086	09/24/22 17:31	
Cadmium	mg/L	ND	0.00050	0.00011	09/24/22 17:31	
Chromium	mg/L	ND	0.0050	0.0011	09/24/22 17:31	
Cobalt	mg/L	ND	0.0050	0.00039	09/24/22 17:31	
Lead	mg/L	ND	0.0010	0.00089	09/24/22 17:31	
Lithium	mg/L	ND	0.030	0.00073	09/24/22 17:31	
Molybdenum	mg/L	ND	0.010	0.00074	09/24/22 17:31	
Selenium	mg/L	ND	0.0050	0.0014	09/24/22 17:31	
Thallium	mg/L	ND	0.0010	0.00018	09/24/22 17:31	

LABORATORY CONTROL SAMPLE: 3778148

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	104	80-120	
Arsenic	mg/L	0.1	0.10	100	80-120	
Barium	mg/L	0.1	0.098	98	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	1.1	108	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Lead	mg/L	0.1	0.094	94	80-120	
Lithium	mg/L	0.1	0.098	98	80-120	
Molybdenum	mg/L	0.1	0.10	101	80-120	
Selenium	mg/L	0.1	0.097	97	80-120	
Thallium	mg/L	0.1	0.094	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3778149 3778150

Parameter	Units	92624372001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	MSD Result							
Antimony	mg/L	ND	0.1	0.1	0.10	0.11	104	105	75-125	1	20	

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QUALITY CONTROL DATA

Project: Plant McDonough AP-1-Revised Report

Pace Project No.: 92624372

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3778149 3778150												
Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		92624372001 Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	% Rec	% Rec				
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	100	102	75-125	2	20	
Barium	mg/L	0.099	0.1	0.1	0.19	0.19	87	92	75-125	3	20	
Beryllium	mg/L	ND	0.1	0.1	0.098	0.096	98	96	75-125	2	20	
Boron	mg/L	3.3	1	1	4.3	4.4	96	108	75-125	3	20	
Cadmium	mg/L	ND	0.1	0.1	0.097	0.098	97	98	75-125	1	20	
Chromium	mg/L	ND	0.1	0.1	0.098	0.098	98	98	75-125	0	20	
Cobalt	mg/L	0.0065	0.1	0.1	0.10	0.10	95	96	75-125	2	20	
Lead	mg/L	ND	0.1	0.1	0.090	0.093	90	93	75-125	3	20	
Lithium	mg/L	ND	0.1	0.1	0.10	0.10	100	101	75-125	1	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	99	102	75-125	2	20	
Selenium	mg/L	ND	0.1	0.1	0.098	0.10	98	101	75-125	3	20	
Thallium	mg/L	ND	0.1	0.1	0.092	0.095	92	95	75-125	3	20	

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QUALITY CONTROL DATA

Project: Plant McDonough AP-1-Revised Report

Pace Project No.: 92624372

QC Batch: 724426 Analysis Method: EPA 7470A
 QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
 Laboratory: Pace Analytical Services - Peachtree Corners, GA
 Associated Lab Samples: 92624372001, 92624372002, 92624372003, 92624372004, 92624372005, 92624372006, 92624372007, 92624372008, 92624372009, 92624372010

METHOD BLANK: 3774367 Matrix: Water
 Associated Lab Samples: 92624372001, 92624372002, 92624372003, 92624372004, 92624372005, 92624372006, 92624372007, 92624372008, 92624372009, 92624372010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	09/22/22 17:16	

LABORATORY CONTROL SAMPLE: 3774368

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3774369 3774370

Parameter	Units	92624373001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	0.00014J	0.0025	0.0025	0.0025	0.0025	93	93	75-125	1	20	

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QUALITY CONTROL DATA

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

QC Batch: 725890 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92624372011, 92624372012, 92624372013

METHOD BLANK: 3781485 Matrix: Water
Associated Lab Samples: 92624372011, 92624372012, 92624372013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	09/27/22 11:00	

LABORATORY CONTROL SAMPLE: 3781486

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0022	88	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3781487 3781488

Parameter	Units	3781487		3781488		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0023	0.0018	94	71	75-125	28	20	M1,R1

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QUALITY CONTROL DATA

Project: Plant McDonough AP-1-Revised Report

Pace Project No.: 92624372

QC Batch:	722447	Analysis Method:	SM 2540C-2015
QC Batch Method:	SM 2540C-2015	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92624372001, 92624372002, 92624372003, 92624372004, 92624372005, 92624372006

METHOD BLANK: 3764210 Matrix: Water

Associated Lab Samples: 92624372001, 92624372002, 92624372003, 92624372004, 92624372005, 92624372006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10.0	09/09/22 14:58	

LABORATORY CONTROL SAMPLE: 3764211

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	382	96	80-120	

SAMPLE DUPLICATE: 3764212

Parameter	Units	92623815001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	351	346	1	10	

SAMPLE DUPLICATE: 3764213

Parameter	Units	92624372006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	102	107	5	10	

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QUALITY CONTROL DATA

Project: Plant McDonough AP-1-Revised Report

Pace Project No.: 92624372

QC Batch: 722879	Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92624372008

METHOD BLANK: 3766430 Matrix: Water

Associated Lab Samples: 92624372008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10.0	09/14/22 12:25	

LABORATORY CONTROL SAMPLE: 3766431

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	383	96	80-120	

SAMPLE DUPLICATE: 3766432

Parameter	Units	92624372008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	261	266	2	10	

SAMPLE DUPLICATE: 3766433

Parameter	Units	92624840016 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	238	250	5	10	

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QUALITY CONTROL DATA

Project: Plant McDonough AP-1-Revised Report

Pace Project No.: 92624372

QC Batch:	722886	Analysis Method:	SM 2540C-2015
QC Batch Method:	SM 2540C-2015	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92624372007, 92624372009, 92624372010, 92624372011

METHOD BLANK: 3766455 Matrix: Water
Associated Lab Samples: 92624372007, 92624372009, 92624372010, 92624372011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10.0	09/14/22 11:30	

LABORATORY CONTROL SAMPLE: 3766456

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	384	96	80-120	

SAMPLE DUPLICATE: 3766458

Parameter	Units	92624840004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	620000 ug/L	680	9	10	

SAMPLE DUPLICATE: 3767354

Parameter	Units	92624372007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	252	297	16	10	R1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

QC Batch: 723325 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92624372012, 92624372013

METHOD BLANK: 3768875 Matrix: Water
Associated Lab Samples: 92624372012, 92624372013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10.0	09/15/22 11:44	

LABORATORY CONTROL SAMPLE: 3768876

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	374	94	80-120	

SAMPLE DUPLICATE: 3768878

Parameter	Units	92625189005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	87.0	83.0	5	10	

SAMPLE DUPLICATE: 3768892

Parameter	Units	92625181001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	197	193	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

QC Batch: 722880 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92624372001, 92624372002, 92624372003, 92624372004, 92624372005, 92624372006, 92624372007, 92624372008, 92624372009

METHOD BLANK: 3766434 Matrix: Water
Associated Lab Samples: 92624372001, 92624372002, 92624372003, 92624372004, 92624372005, 92624372006, 92624372007, 92624372008, 92624372009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	09/13/22 11:19	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	09/13/22 11:19	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	09/13/22 11:19	

LABORATORY CONTROL SAMPLE: 3766435

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	51.6	103	80-120	

LABORATORY CONTROL SAMPLE: 3766436

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.8	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3766437 3766438

Parameter	Units	92624783002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	85.1	50	50	137	140	104	109	80-120	2	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3766439 3766440

Parameter	Units	92624372003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	201	50	50	267	246	132	91	80-120	8	25 M1	

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QUALITY CONTROL DATA

Project: Plant McDonough AP-1-Revised Report

Pace Project No.: 92624372

QC Batch: 723206

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92624372010, 92624372011, 92624372012, 92624372013

METHOD BLANK: 3768028

Matrix: Water

Associated Lab Samples: 92624372010, 92624372011, 92624372012, 92624372013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	09/14/22 14:56	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	09/14/22 14:56	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	09/14/22 14:56	

LABORATORY CONTROL SAMPLE: 3768029

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.2	100	80-120	

LABORATORY CONTROL SAMPLE: 3768030

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.8	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3768031 3768032

Parameter	Units	92625359004		3768031		3768032		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Alkalinity, Total as CaCO3	mg/L	324	50	50	353	349	58	51	80-120	1	25 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3768033 3768034

Parameter	Units	92624372011		3768033		3768034		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Alkalinity, Total as CaCO3	mg/L	134	50	50	193	185	118	102	80-120	4	25

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

QC Batch: 722301 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92624372001, 92624372002, 92624372003, 92624372004, 92624372005, 92624372006

METHOD BLANK: 3763458 Matrix: Water
Associated Lab Samples: 92624372001, 92624372002, 92624372003, 92624372004, 92624372005, 92624372006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/09/22 16:54	
Fluoride	mg/L	ND	0.10	0.050	09/09/22 16:54	
Sulfate	mg/L	ND	1.0	0.50	09/09/22 16:54	

LABORATORY CONTROL SAMPLE: 3763459

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.1	100	90-110	
Fluoride	mg/L	2.5	2.7	107	90-110	
Sulfate	mg/L	50	50.9	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3763460 3763461

Parameter	Units	92624528001		3763460		3763461		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	1.2	1.2	50	50	51.9	53.1	101	104	90-110	2	10	
Fluoride	mg/L	ND	ND	2.5	2.5	2.4	2.4	95	95	90-110	0	10	
Sulfate	mg/L	1.3	1.3	50	50	52.1	53.1	102	104	90-110	2	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3763462 3763463

Parameter	Units	92624503003		3763462		3763463		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	0.83J	0.83J	50	50	52.3	53.0	103	104	90-110	1	10	
Fluoride	mg/L	ND	ND	2.5	2.5	2.4	2.4	93	96	90-110	3	10	
Sulfate	mg/L	1.4	1.4	50	50	52.8	53.4	103	104	90-110	1	10	

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QUALITY CONTROL DATA

Project: Plant McDonough AP-1-Revised Report

Pace Project No.: 92624372

QC Batch: 722843 Analysis Method: EPA 300.0 Rev 2.1 1993
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
 Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92624372007, 92624372008, 92624372009, 92624372010, 92624372011

METHOD BLANK: 3766296 Matrix: Water
 Associated Lab Samples: 92624372007, 92624372008, 92624372009, 92624372010, 92624372011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/13/22 12:35	
Fluoride	mg/L	ND	0.10	0.050	09/13/22 12:35	
Sulfate	mg/L	ND	1.0	0.50	09/13/22 12:35	

LABORATORY CONTROL SAMPLE: 3766297

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.4	101	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	50.8	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3766298 3766299

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92624945004	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	938	50	50	975	975	73	74	90-110	0	10	M1	
Fluoride	mg/L	ND	2.5	2.5	3.3J	3.8J	132	151	90-110		10	M1	
Sulfate	mg/L	3180	50	50	3170	3160	-30	-43	90-110	0	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3766300 3766301

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92624372011	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	5.4	50	50	57.1	58.0	103	105	90-110	2	10		
Fluoride	mg/L	0.082J	2.5	2.5	2.4	2.4	92	92	90-110	0	10		
Sulfate	mg/L	96.6	50	50	150	153	106	113	90-110	2	10	M1	

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QUALITY CONTROL DATA

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

QC Batch: 723467 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92624372012, 92624372013

METHOD BLANK: 3769521 Matrix: Water
Associated Lab Samples: 92624372012, 92624372013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/15/22 15:11	
Fluoride	mg/L	ND	0.10	0.050	09/15/22 15:11	
Sulfate	mg/L	ND	1.0	0.50	09/15/22 15:11	

LABORATORY CONTROL SAMPLE: 3769522

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.0	98	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	49.3	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3769523 3769524

Parameter	Units	92625147002		MS		MSD		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result						
Chloride	mg/L	94.2	50	50	50	133	134	77	79	90-110	1	10	M1
Fluoride	mg/L	0.49	2.5	2.5	2.5	3.0	3.0	101	102	90-110	1	10	
Sulfate	mg/L	53.6	50	50	50	99.3	100	91	93	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3769525 3769526

Parameter	Units	92625178002		MS		MSD		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result						
Chloride	mg/L	15.0	50	50	50	66.7	67.1	103	104	90-110	1	10	
Fluoride	mg/L	0.40	2.5	2.5	2.5	3.6	3.6	127	128	90-110	1	10	M1
Sulfate	mg/L	508	50	50	50	552	552	88	89	90-110	0	10	M1

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QUALIFIERS

Project: Plant McDonough AP-1-Revised Report

Pace Project No.: 92624372

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough AP-1-Revised Report
Pace Project No.: 92624372

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92624372001	DGWC-39				
92624372002	DGWC-40				
92624372003	DGWC-68A				
92624372006	DGWC-69				
92624372007	DGWC-67				
92624372008	DGWC-121				
92624372011	DGWC-37				
92624372012	DGWC-38				
92624372001	DGWC-39	EPA 3010A	724852	EPA 6010D	724979
92624372002	DGWC-40	EPA 3010A	724852	EPA 6010D	724979
92624372003	DGWC-68A	EPA 3010A	724852	EPA 6010D	724979
92624372004	FB-1	EPA 3010A	724852	EPA 6010D	724979
92624372005	DUP-1	EPA 3010A	724852	EPA 6010D	724979
92624372006	DGWC-69	EPA 3010A	724852	EPA 6010D	724979
92624372007	DGWC-67	EPA 3010A	724852	EPA 6010D	724979
92624372008	DGWC-121	EPA 3010A	724852	EPA 6010D	724979
92624372009	EB-1	EPA 3010A	724852	EPA 6010D	724979
92624372010	FB-2	EPA 3010A	724852	EPA 6010D	724979
92624372011	DGWC-37	EPA 3010A	724852	EPA 6010D	724979
92624372012	DGWC-38	EPA 3010A	724852	EPA 6010D	724979
92624372013	FB-3	EPA 3010A	724852	EPA 6010D	724979
92624372001	DGWC-39	EPA 3005A	725176	EPA 6020B	725367
92624372002	DGWC-40	EPA 3005A	725176	EPA 6020B	725367
92624372003	DGWC-68A	EPA 3005A	725176	EPA 6020B	725367
92624372004	FB-1	EPA 3005A	725176	EPA 6020B	725367
92624372005	DUP-1	EPA 3005A	725176	EPA 6020B	725367
92624372006	DGWC-69	EPA 3005A	725176	EPA 6020B	725367
92624372007	DGWC-67	EPA 3005A	725176	EPA 6020B	725367
92624372008	DGWC-121	EPA 3005A	725176	EPA 6020B	725367
92624372009	EB-1	EPA 3005A	725176	EPA 6020B	725367
92624372010	FB-2	EPA 3005A	725176	EPA 6020B	725367
92624372011	DGWC-37	EPA 3005A	725176	EPA 6020B	725367
92624372012	DGWC-38	EPA 3005A	725176	EPA 6020B	725367
92624372013	FB-3	EPA 3005A	725176	EPA 6020B	725367
92624372001	DGWC-39	EPA 7470A	724426	EPA 7470A	725130
92624372002	DGWC-40	EPA 7470A	724426	EPA 7470A	725130
92624372003	DGWC-68A	EPA 7470A	724426	EPA 7470A	725130
92624372004	FB-1	EPA 7470A	724426	EPA 7470A	725130
92624372005	DUP-1	EPA 7470A	724426	EPA 7470A	725130
92624372006	DGWC-69	EPA 7470A	724426	EPA 7470A	725130
92624372007	DGWC-67	EPA 7470A	724426	EPA 7470A	725130
92624372008	DGWC-121	EPA 7470A	724426	EPA 7470A	725130
92624372009	EB-1	EPA 7470A	724426	EPA 7470A	725130
92624372010	FB-2	EPA 7470A	724426	EPA 7470A	725130
92624372011	DGWC-37	EPA 7470A	725890	EPA 7470A	726012
92624372012	DGWC-38	EPA 7470A	725890	EPA 7470A	726012
92624372013	FB-3	EPA 7470A	725890	EPA 7470A	726012

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough AP-1-Revised Report

Pace Project No.: 92624372

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92624372001	DGWC-39	SM 2540C-2015	722447		
92624372002	DGWC-40	SM 2540C-2015	722447		
92624372003	DGWC-68A	SM 2540C-2015	722447		
92624372004	FB-1	SM 2540C-2015	722447		
92624372005	DUP-1	SM 2540C-2015	722447		
92624372006	DGWC-69	SM 2540C-2015	722447		
92624372007	DGWC-67	SM 2540C-2015	722886		
92624372008	DGWC-121	SM 2540C-2015	722879		
92624372009	EB-1	SM 2540C-2015	722886		
92624372010	FB-2	SM 2540C-2015	722886		
92624372011	DGWC-37	SM 2540C-2015	722886		
92624372012	DGWC-38	SM 2540C-2015	723325		
92624372013	FB-3	SM 2540C-2015	723325		
92624372001	DGWC-39	SM 2320B-2011	722880		
92624372002	DGWC-40	SM 2320B-2011	722880		
92624372003	DGWC-68A	SM 2320B-2011	722880		
92624372004	FB-1	SM 2320B-2011	722880		
92624372005	DUP-1	SM 2320B-2011	722880		
92624372006	DGWC-69	SM 2320B-2011	722880		
92624372007	DGWC-67	SM 2320B-2011	722880		
92624372008	DGWC-121	SM 2320B-2011	722880		
92624372009	EB-1	SM 2320B-2011	722880		
92624372010	FB-2	SM 2320B-2011	723206		
92624372011	DGWC-37	SM 2320B-2011	723206		
92624372012	DGWC-38	SM 2320B-2011	723206		
92624372013	FB-3	SM 2320B-2011	723206		
92624372001	DGWC-39	EPA 300.0 Rev 2.1 1993	722301		
92624372002	DGWC-40	EPA 300.0 Rev 2.1 1993	722301		
92624372003	DGWC-68A	EPA 300.0 Rev 2.1 1993	722301		
92624372004	FB-1	EPA 300.0 Rev 2.1 1993	722301		
92624372005	DUP-1	EPA 300.0 Rev 2.1 1993	722301		
92624372006	DGWC-69	EPA 300.0 Rev 2.1 1993	722301		
92624372007	DGWC-67	EPA 300.0 Rev 2.1 1993	722843		
92624372008	DGWC-121	EPA 300.0 Rev 2.1 1993	722843		
92624372009	EB-1	EPA 300.0 Rev 2.1 1993	722843		
92624372010	FB-2	EPA 300.0 Rev 2.1 1993	722843		
92624372011	DGWC-37	EPA 300.0 Rev 2.1 1993	722843		
92624372012	DGWC-38	EPA 300.0 Rev 2.1 1993	723467		
92624372013	FB-3	EPA 300.0 Rev 2.1 1993	723467		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: Georgia Power

Project # _____

Courier: Commercial Fed Ex UPS USPS Client Pace Other: _____

WO#: 92624372

 92624372

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: _____

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 214 Type of Ice: Wet Blue None

Cooler Temp: 2.1 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 2.1

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States (CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		3.
Rush Turn Around Time Requested?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		4. 10 DAY TAT
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		9.
-Includes Date/Time/ID/Analysis Matrix: <u>WG</u>			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers: _____

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



Document Name:
Sample Condition Upon Receipt (SCUR)
 Document No.:
F-CAR-CS-033-Rev.08

Document Revised: November 15, 2021
 Page 2 of 2
 Issuing Authority:

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project

WO# : 92624372

PM: NMG

Due Date: 09/22/22

CLIENT: GA-GA Power

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic 2N Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2SO3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (3 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
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pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers).



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately

Page: 1 OF 1

Section A
 Required Client Information:
 Company: Georgia Power - Coal Combustion Residuals
 Report To: Lavien Coker
 Address: 2480 Mariner Road
 Atlanta, GA 30038
 Email: RAUCORP@sothernico.com
 Phone: (478) 834-9170 Fax

Section B
 Invoice Information:
 Attention: scfivolost@southernco.com
 Company Name:
 Address:
 State / Location: Regulatory Agency
 ZIP Code:
 State / Location: Santa / Location GA

Section C
 Project Name: Plant McDonough AP-1
 Project # : 10 Day TAT
 Project # : 10 Day TAT
 Requested Due Date:
 Project Profile #:
 Plant Project Manager: Nicole D'Oleo
 Pace Order #: 16884962
 Pace Profile #:

ITEM #	MATRIX Code Description	MATRIX CODE (see code codes to left)	SAMPLE TYPE (G-SL-C-COM)	DATE	TIME	SAMPLE TEMP AT COLLECTION	PRESERVATIVES		Y/N	REQUESTED ANALYTES FILTERED (Y/N)																								
							Unpreserved - Ions	K2SO4		HNO3 + Ions	HCl	NaOH + Zn Acetate	Metaloid	Other	App UV/T Total Metals	Cl, F, SO4, TDS	Radum 226/228	Mg, Na, K	CO3+HCO3	Fe Total, Fe 3+	Residual Chloride (Y/N)													
1	DGWC-38	WG	G	9/7/2022	14:44		3	3							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		pH = 6.43, Fe2 = 0.0 mg/L		
2	DGWC-40	WG	G	9/7/2022	12:13		3	3							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		pH = 4.54, Fe2 = 0.0 mg/L		
3	DGWC-66A	WG	G	9/7/2022	15:10		3	3							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		pH = 6.92, Fe2 = 0.0 mg/L		
4	FB-1	WG	G	9/7/2022	15:15		3	3							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
6	Dup-1	WG	G	9/7/2022			3	3							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
7	DGWC-68	WG	G	9/7/2022	11:50		3	3							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		pH = 6.20, Fe2 = 0.0 mg/L		
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ADDITIONAL COMMENTS
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DATE SIGNED: 9/8/22

	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: November 15, 2021
	Document No.: F-CAR-CS-033-Rev.08	Page 1 of 2 Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt Client Name: Georgica Power Project #: _____

Courier: Fed Ex UPS USPS Client
 Commercial Pace Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer: IR Gun ID: 230 Type of Ice: Wet Blue None

Cooler Temp: 2.4 Correction Factor: Add/Subtract (°C) 0.0

Cooler Temp Corrected (°C): 2.4

Date/Initials Person Examining Contents: 9/9/22 JM

Biological Tissue Frozen? Yes No N/A

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

USDA Regulated Soil (N/A, water sample)
 Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?
 Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

Chain of Custody Present?	Yes	No	N/A	1.	Comments/Discrepancy:
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.	
Sufficient Volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.	
Correct Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Containers Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.	
-Includes Date/Time/ID/Analysis Matrix: <u>WJ</u>					
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10.	
Trip Blank Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

CLIENT NOTIFICATION/RESOLUTION

Lot ID of split containers:

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____
 Project Manager SRF Review: _____ Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples. Project #

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGfU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3.9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1	2	1																											
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pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A			Section B			Section C		
Required Client Information:			Required Project Information:			Invoice Information:		
Company:	Georgia Power - Coal Combustion Residuals	Report To:	Laurin Coker	Altation:	sasinvoices@southenco.com	Page: 1 Of 1		
Address:	2480 Mainer Road Atlanta, GA 30339	Copy To:	Goldier	Company Name:				
Email:	laurcoker@southenco.com	Purchase Order #:		Address:		Regulatory Agency:		
Phone:	(470) 620-6176	Project Name:	Plant McDonough AP-1	Price Project Manager:	Nicole D'Olivo	State / Location:		
Requested Due Date:	11 Day TAT	Project #:	GL16584962	Price Profile #:		GA		

ITEM #	MATRIX	MATERIAL CODE (see vial codes to left)	DATE	TIME	TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES	ANALYSES TEST	Requested Analysis Filtered (Y/N)												Residual Chlorine (Y/N)	pH = 6.21, Fe2 = 0.0 mg/L	pH = 6.32, Fe2 = 2.75 mg/L	pH = 6.30, Fe2 = 0.0 mg/L														
									Cd	Cr	Pb	Mn	Ni	V	Co	Cu	Ag	Ca	Mg	Na					K	Hg	Se	Sr	Zn	As	Ba	Be	Bi	Br	C	F	S	TDS
1	DGWC-67	WG	9/8/2022	11:00		6	Unpreserved - Ice		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
2	DGWC-121	WG	9/8/2022	12:55		6	Unpreserved - Ice		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
3	EB-1	WG	9/8/2022	11:30		6	Unpreserved - Ice		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
4	FB-2	WG	9/8/2022	13:00		6	Unpreserved - Ice		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
6	DGWC-37	WG	9/9/2022	11:38		6	Unpreserved - Ice		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Maria Mann / Goldier	9/8/2022	15:50	Charles Jones	9/12/22	5:50	

Received on:		TEMP in C:	
Ice (Y/N):		Custody (Y/N):	
Sealed Cooler (Y/N):		Sealed Cooler (Y/N):	
Samples (Y/N):		Samples (Y/N):	
Date Signed:			



DC#_ Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: Georgia Power

Project #

WO#: 92624372

PM: NMG

Due Date: 09/22/22

CLIENT: GA-GA Power

Courier: Commercial Fed Ex UPS USPS Client Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 09/13/22 JM

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 083 Type of Ice: Wet Blue None

Cooler Temp: 1.9 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 1.9

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4. NO DATA
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix:	wg	
Headspace in VOA Vials (>5.6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO#: 92624372

PM: NMG

Due Date: 09/22/22

CLIENT: GA-GA Power

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TQC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGfU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9A-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl(N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH4)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
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pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
Required Client Information:
 Company: Georgia Power - Coal Combustion Residuals
 Address: 2460 Mower Road
 Atlanta, GA 30036
 Email: lauracoker@spcfire.mso.com
 Phone: (478) 800-8178
 Fax: _____

Section B
Required Project Information:
 Report To: Lauren Coker
 Copy To: Golder
 Purchase Order #: _____
 Project Name: Plant McDonough AP-1
 Project #: OL196940822
 10 Day TAT

Section C
Invoice Information:
 Attention: acalivovics@scdfirmso.com
 Company Name: _____
 Address: _____
 PACE Quota: _____
 PACE Project Manager: Nicole D'Ono
 State / Location: GA

Regulatory Agency: _____

Requested Analysis Filtered (Y/N)

Item #	MATRIX CODE	MATRIX	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	UNPRESERVED - Ice	H2SO4	HNO3 + Ice	HCl	NaOH + Zn Acetate	MA2S2O3	Mercuric	Other	Y/N	App III/V Total Metals	Cl, F, SO4, TDS	Radium 226/228	Mg, No, K	CO3+HCO3	Fe Total, Fe 3+	Residual Chloride (Y/N)	Requested Analysis Filtered (Y/N)
1	DQWC-38	DW	9/12/2022	12:12		6	3								X	X	X	X	X	X	X		
2	FB-3	WW	9/12/2022	12:10		6	3								X	X	X	X	X	X	X		
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							
13																							
14																							

ADDITIONAL COMMENTS:

9/12/2022 8:10
 9/12/2022 10:30
 L. BAH
 J. DE WAGNER

TEMP h C

Received on: _____
 Sealed: _____
 Cooled: _____
 Initial: _____

DATE SIGNED: 9/19/22

J. DE WAGNER

November 08, 2022

Andrea McClure
WSP/Golder
5170 Peachtree Road
Building 100, Suite 300
Atlanta, GA 30341

RE: Project: McDonough AP-1 Rads
Pace Project No.: 92624384

Dear Andrea McClure:

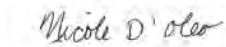
Enclosed are the analytical results for sample(s) received by the laboratory between September 08, 2022 and September 13, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Stephen Benda, Southern Company
Noelia Gangi, Georgia Power
Daniela Herrera, Golder
Ben Hodges, Georgia Power
Kristen Jurinko
Laura Midkiff, Georgia Power
Karim Minkara, Golder Associates - Atlanta
J. Shelby Mobley, Southern Company
Charles Norton, Southern Company
Ms. Lauren Petty, Southern Company

Dawn Prell, Golder Associates Inc.
Michael Smilley, Georgia Power
Yong Cheng Soo, WSP/Golder
Tina Sullivan, ERM



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: McDonough AP-1 Rads
Pace Project No.: 92624384

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: McDonough AP-1 Rads
Pace Project No.: 92624384

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92624384001	DGWC-39	Water	09/07/22 14:44	09/08/22 09:45
92624384002	DGWC-40	Water	09/07/22 12:13	09/08/22 09:45
92624384003	DGWC-68A	Water	09/07/22 15:10	09/08/22 09:45
92624384004	FB-1	Water	09/07/22 15:15	09/08/22 09:45
92624384005	DUP-1	Water	09/07/22 00:00	09/08/22 09:45
92624384006	DGWC-69	Water	09/07/22 11:50	09/08/22 09:45
92624384007	DGWC-67	Water	09/08/22 11:00	09/09/22 15:50
92624384008	DGWC-121	Water	09/08/22 12:55	09/09/22 15:50
92624384009	EB-1	Water	09/08/22 11:30	09/09/22 15:50
92624384010	FB-2	Water	09/08/22 13:00	09/09/22 15:50
92624384011	DGWC-37	Water	09/09/22 11:38	09/09/22 15:50
92624384012	DGWC-38	Water	09/12/22 12:12	09/13/22 10:30
92624384013	FB-3	Water	09/12/22 12:10	09/13/22 10:30

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: McDonough AP-1 Rads
Pace Project No.: 92624384

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92624384001	DGWC-39	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92624384002	DGWC-40	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92624384003	DGWC-68A	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92624384004	FB-1	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92624384005	DUP-1	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92624384006	DGWC-69	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92624384007	DGWC-67	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92624384008	DGWC-121	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92624384009	EB-1	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92624384010	FB-2	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92624384011	DGWC-37	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92624384012	DGWC-38	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92624384013	FB-3	EPA 9315	RMS	1	PASI-PA

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SAMPLE ANALYTE COUNT

Project: McDonough AP-1 Rads

Pace Project No.: 92624384

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1 Rads

Pace Project No.: 92624384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: DGWC-39 Lab ID: 92624384001 Collected: 09/07/22 14:44 Received: 09/08/22 09:45 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.191 ± 0.128 (0.203) C:89% T:NA	pCi/L	09/27/22 08:39	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.446 ± 0.441 (0.900) C:76% T:88%	pCi/L	09/23/22 19:05	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.637 ± 0.569 (1.10)	pCi/L	09/27/22 14:32	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1 Rads

Pace Project No.: 92624384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: DGWC-40 Lab ID: 92624384002 Collected: 09/07/22 12:13 Received: 09/08/22 09:45 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.161 ± 0.130 (0.235) C:87% T:NA	pCi/L	09/27/22 08:39	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.611 ± 0.407 (0.746) C:77% T:91%	pCi/L	09/23/22 19:05	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.772 ± 0.537 (0.981)	pCi/L	09/27/22 14:32	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1 Rads

Pace Project No.: 92624384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: DGWC-68A Lab ID: 92624384003 Collected: 09/07/22 15:10 Received: 09/08/22 09:45 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.174 ± 0.121 (0.189) C:86% T:NA	pCi/L	09/27/22 09:19	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	-0.0436 ± 0.432 (1.02) C:76% T:91%	pCi/L	09/23/22 19:05	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.174 ± 0.553 (1.21)	pCi/L	09/27/22 14:32	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1 Rads

Pace Project No.: 92624384

Sample: FB-1 **Lab ID: 92624384004** Collected: 09/07/22 15:15 Received: 09/08/22 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.147 ± 0.111 (0.190) C:96% T:NA	pCi/L	09/27/22 09:19	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.0194 ± 0.449 (1.05) C:74% T:87%	pCi/L	09/23/22 19:05	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.166 ± 0.560 (1.24)	pCi/L	09/27/22 14:32	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1 Rads

Pace Project No.: 92624384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: DUP-1 Lab ID: 92624384005 Collected: 09/07/22 00:00 Received: 09/08/22 09:45 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0555 ± 0.0830 (0.179) C:92% T:NA	pCi/L	09/27/22 09:19	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.570 ± 0.524 (1.06) C:69% T:91%	pCi/L	09/23/22 19:05	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.626 ± 0.607 (1.24)	pCi/L	09/27/22 14:32	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1 Rads

Pace Project No.: 92624384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: DGWC-69 Lab ID: 92624384006 Collected: 09/07/22 11:50 Received: 09/08/22 09:45 Matrix: Water PWS: Site ID: Sample Type:						
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.751 ± 0.239 (0.207) C:93% T:NA	pCi/L	09/27/22 09:19	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.07 ± 0.578 (1.02) C:72% T:88%	pCi/L	09/23/22 19:05	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.82 ± 0.817 (1.23)	pCi/L	09/27/22 14:32	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1 Rads

Pace Project No.: 92624384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: DGWC-67 Lab ID: 92624384007 Collected: 09/08/22 11:00 Received: 09/09/22 15:50 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.144 ± 0.112 (0.187) C:84% T:NA	pCi/L	10/02/22 10:26	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.555 ± 0.304 (0.519) C:72% T:91%	pCi/L	09/28/22 12:21	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.699 ± 0.416 (0.706)	pCi/L	10/03/22 12:21	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1 Rads

Pace Project No.: 92624384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: DGWC-121 Lab ID: 92624384008 Collected: 09/08/22 12:55 Received: 09/09/22 15:50 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.361 ± 0.166 (0.190) C:78% T:NA	pCi/L	10/02/22 10:26	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	1.64 ± 0.538 (0.671) C:67% T:85%	pCi/L	09/28/22 12:21	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	2.00 ± 0.704 (0.861)	pCi/L	10/03/22 12:21	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1 Rads

Pace Project No.: 92624384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EB-1 Lab ID: 92624384009 Collected: 09/08/22 11:30 Received: 09/09/22 15:50 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	-0.0547 ± 0.0541 (0.202) C:97% T:NA	pCi/L	10/02/22 10:27	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.690 ± 0.378 (0.671) C:74% T:86%	pCi/L	09/28/22 12:21	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.690 ± 0.432 (0.873)	pCi/L	10/03/22 12:21	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1 Rads

Pace Project No.: 92624384

Sample: FB-2 **Lab ID: 92624384010** Collected: 09/08/22 13:00 Received: 09/09/22 15:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.0672 ± 0.0873 (0.182) C:93% T:NA	pCi/L	10/02/22 10:27	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.14 ± 0.483 (0.773) C:66% T:89%	pCi/L	09/28/22 12:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.21 ± 0.570 (0.955)	pCi/L	10/03/22 12:21	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1 Rads

Pace Project No.: 92624384

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: DGWC-37 Lab ID: 92624384011 Collected: 09/09/22 11:38 Received: 09/09/22 15:50 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0526 ± 0.0678 (0.135) C:91% T:NA	pCi/L	10/02/22 10:27	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.666 ± 0.385 (0.691) C:67% T:87%	pCi/L	09/28/22 12:22	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.719 ± 0.453 (0.826)	pCi/L	10/03/22 12:21	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1 Rads

Pace Project No.: 92624384

Sample: DGWC-38 **Lab ID: 92624384012** Collected: 09/12/22 12:12 Received: 09/13/22 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.103 ± 0.0806 (0.120) C:94% T:NA	pCi/L	10/12/22 20:08	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.376 ± 0.306 (0.596) C:78% T:82%	pCi/L	10/10/22 15:45	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.479 ± 0.387 (0.716)	pCi/L	10/14/22 17:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1 Rads

Pace Project No.: 92624384

Sample: FB-3 **Lab ID: 92624384013** Collected: 09/12/22 12:10 Received: 09/13/22 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0204 ± 0.0552 (0.137) C:99% T:NA	pCi/L	10/12/22 20:08	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.679 ± 0.518 (1.04) C:72% T:85%	pCi/L	10/10/22 15:50	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.699 ± 0.573 (1.18)	pCi/L	10/14/22 17:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP-1 Rads

Pace Project No.: 92624384

QC Batch: 535922

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92624384012, 92624384013

METHOD BLANK: 2600355

Matrix: Water

Associated Lab Samples: 92624384012, 92624384013

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0438 ± 0.0695 (0.152) C:94% T:NA	pCi/L	10/12/22 20:23	

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

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP-1 Rads

Pace Project No.: 92624384

QC Batch: 535924

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92624384012, 92624384013

METHOD BLANK: 2600360

Matrix: Water

Associated Lab Samples: 92624384012, 92624384013

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.590 ± 0.382 (0.710) C:71% T:92%	pCi/L	10/10/22 13:30	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP-1 Rads

Pace Project No.: 92624384

QC Batch: 533110

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92624384007, 92624384008, 92624384009, 92624384010, 92624384011

METHOD BLANK: 2586601

Matrix: Water

Associated Lab Samples: 92624384007, 92624384008, 92624384009, 92624384010, 92624384011

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.00759 ± 0.0468 (0.133) C:88% T:NA	pCi/L	10/02/22 10:24	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP-1 Rads

Pace Project No.: 92624384

QC Batch: 532087

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92624384001, 92624384002, 92624384003, 92624384004, 92624384005, 92624384006

METHOD BLANK: 2581306

Matrix: Water

Associated Lab Samples: 92624384001, 92624384002, 92624384003, 92624384004, 92624384005, 92624384006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.122 ± 0.122 (0.241) C:95% T:NA	pCi/L	09/27/22 08:34	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP-1 Rads

Pace Project No.: 92624384

QC Batch: 533111

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92624384007, 92624384008, 92624384009, 92624384010, 92624384011

METHOD BLANK: 2586603

Matrix: Water

Associated Lab Samples: 92624384007, 92624384008, 92624384009, 92624384010, 92624384011

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.798 ± 0.368 (0.604) C:81% T:85%	pCi/L	09/28/22 11:36	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP-1 Rads

Pace Project No.: 92624384

QC Batch: 532089

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92624384001, 92624384002, 92624384003, 92624384004, 92624384005, 92624384006

METHOD BLANK: 2581322

Matrix: Water

Associated Lab Samples: 92624384001, 92624384002, 92624384003, 92624384004, 92624384005, 92624384006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.391 ± 0.413 (0.858) C:74% T:78%	pCi/L	09/23/22 16:00	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: McDonough AP-1 Rads

Pace Project No.: 92624384

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: McDonough AP-1 Rads
Pace Project No.: 92624384

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92624384001	DGWC-39	EPA 9315	532087		
92624384002	DGWC-40	EPA 9315	532087		
92624384003	DGWC-68A	EPA 9315	532087		
92624384004	FB-1	EPA 9315	532087		
92624384005	DUP-1	EPA 9315	532087		
92624384006	DGWC-69	EPA 9315	532087		
92624384007	DGWC-67	EPA 9315	533110		
92624384008	DGWC-121	EPA 9315	533110		
92624384009	EB-1	EPA 9315	533110		
92624384010	FB-2	EPA 9315	533110		
92624384011	DGWC-37	EPA 9315	533110		
92624384012	DGWC-38	EPA 9315	535922		
92624384013	FB-3	EPA 9315	535922		
92624384001	DGWC-39	EPA 9320	532089		
92624384002	DGWC-40	EPA 9320	532089		
92624384003	DGWC-68A	EPA 9320	532089		
92624384004	FB-1	EPA 9320	532089		
92624384005	DUP-1	EPA 9320	532089		
92624384006	DGWC-69	EPA 9320	532089		
92624384007	DGWC-67	EPA 9320	533111		
92624384008	DGWC-121	EPA 9320	533111		
92624384009	EB-1	EPA 9320	533111		
92624384010	FB-2	EPA 9320	533111		
92624384011	DGWC-37	EPA 9320	533111		
92624384012	DGWC-38	EPA 9320	535924		
92624384013	FB-3	EPA 9320	535924		
92624384001	DGWC-39	Total Radium Calculation	535756		
92624384002	DGWC-40	Total Radium Calculation	535756		
92624384003	DGWC-68A	Total Radium Calculation	535756		
92624384004	FB-1	Total Radium Calculation	535756		
92624384005	DUP-1	Total Radium Calculation	535756		
92624384006	DGWC-69	Total Radium Calculation	535756		
92624384007	DGWC-67	Total Radium Calculation	536982		
92624384008	DGWC-121	Total Radium Calculation	536982		
92624384009	EB-1	Total Radium Calculation	536982		
92624384010	FB-2	Total Radium Calculation	536982		
92624384011	DGWC-37	Total Radium Calculation	536982		
92624384012	DGWC-38	Total Radium Calculation	540022		
92624384013	FB-3	Total Radium Calculation	540022		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: Georgia Power

Project #: **WO# : 92624384**

 92624384

Courier: Commercial Fed Ex UPS USPS Client Pace Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 9/8/22
JM

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 214 Type of Ice: Wet Blue None

Cooler Temp: 2.1 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 2.1

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4. <u>10 DAY TAT</u>
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>WG</u>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY Field Data Required? Yes No

Lot ID of split containers: _____

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



Document Name:
Sample Condition Upon Receipt (SCUR)
 Document No.:
F-CAR-CS-033-Rev.08

Document Revised: November 15, 2021
 Page 2 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

Project

WO# : 92624384

PM: NMG

Due Date: 09/29/22

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2SO3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (3 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1		2	1																										
2		2	1																										
3		2	1																										
4		2	1																										
5		2	1																										
6		2	1																										
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers).



CHAIN-OF-CUSTODY / Analytical Request Document
 The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A

Requested Client Information:
 Company: Georgia Power - Coal Combustion Residuals
 Address: 2480 BARNER ROAD
 Atlanta, GA 30339
 Email: GAPOWER@SCANANALYTICAL.COM
 Phone: (410) 820-8178
 Fax: 10 Day FAT

Section B

Required Project Information:
 Report To: Laura Collier
 Copy To: Collier
 Project Name: Plant McDonough AP-1
 Project #: QL1084922

Section C

Invoice Information:
 Attention: scanvoice@scananemo.com
 Company Name:
 Address:
 POC Name:
 POC Project Manager: Nicole D'Ono
 POC Profile #:


Regulatory Agency:
 State: GA
 Date / Location:

ITEM #	SAMPLE ID	MATRIX	CODE	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES							ANALYSES TEST					Residual Chlorine (Y/N)
								H2SO4	HNO3 + Ice	HCl	NaOH + Zn Acetate	Na2S2O3	Methanol	Other	App II/IV Total Metals	Cl, F, SO4, TDS	Radium 226/228	Mg, Na, K	CO3+HCO2	
		DMWC-30 One Character per box. (A-Z, 0-9, -) Samples IDs must be unique	DMWC-30 G	9/7/2022	14:44		6 3 3 3													
1	DMWC-30		WG	9/7/2022	14:44		6 3 3 3											pH = 6.43, Fa2 = 6.0 mg/L		
2	DMWC-40		WG	9/7/2022	12:13		6 3 3 3											pH = 4.54, Fa2 = 0.0 mg/L		
3	DMWC-80A		WG	9/7/2022	15:10		6 3 3 3											pH = 6.02, Fa2 = 0.0 mg/L		
4	FB-1		WG	9/7/2022	15:15		6 3 3 3													
6	Dwp-1		WG	9/7/2022	-		6 3 3 3													
7	DMWC-80		WG	9/7/2022	11:50		6 3 3 3											pH = 6.20, Fa2 = 0.0 mg/L		

ADDITIONAL COMMENTS: JUNE LABOR SPEAK

RELINQUISHED BY: J.M. SAMPSON
 DATE: 7/8/22
 TIME: 8:40
 ACCEPTED BY: J.M. SAMPSON
 DATE: 9-5-22
 TIME: 8:40

DATE SIGNED: 9/8/22

	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: November 15, 2021 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.08	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt Client Name: Georgia Power Project #:

Courier: Commercial Fed Ex Pace UPS USPS Other: Client

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 9/9/22 JM

Packing Material: Bubble Wrap Bubble Bags None Other
 Thermometer: IR Gun ID: 230 Type of Ice: Wet Blue None

Biological Tissue Frozen? Yes No N/A

Cooler Temp: 2.4 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 2.4

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

Chain of Custody Present?	Yes	No	N/A	1.	Comments/Discrepancy:
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.	
Sufficient Volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.	
Correct Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Containers Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.	
-Includes Date/Time/ID/Analysis Matrix: <u>WGS</u>					
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10.	
Trip Blank Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

CLIENT NOTIFICATION/RESOLUTION

Lot ID of split containers: _____

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGJU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3.9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1		2	1																										
2		2	1																										
3		2	1																										
4		2	1																										
5		2	1																										
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers)



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: Georgia Power - Civil Combustion Residuals, Address: 2400 Manor Road, Atlanta, GA 30318, Email: jhaddock@scsuhennepoc.com, Phone: (470) 620-6178, Requested Due Date: 10 Day TAT

Section B Required Project Information: Report to: Lauren Collier, Project Name: Plant McDonough AP-1, Project # GL1684662, Requested Due Date: 10 Day TAT

Section C Invoice Information: Attention: scsuhennepoc@scsuhennepoc.com, Address: P.O. Box 1000, McDonough, GA 30252, Project Manager: Nicole D'Onofrio

Page: 1 of 1

Section A Required Client Information: Company: Georgia Power - Civil Combustion Residuals, Address: 2400 Manor Road, Atlanta, GA 30318, Email: jhaddock@scsuhennepoc.com, Phone: (470) 620-6178, Requested Due Date: 10 Day TAT

Section B Required Project Information: Report to: Lauren Collier, Project Name: Plant McDonough AP-1, Project # GL1684662, Requested Due Date: 10 Day TAT

Section C Invoice Information: Attention: scsuhennepoc@scsuhennepoc.com, Address: P.O. Box 1000, McDonough, GA 30252, Project Manager: Nicole D'Onofrio

Regulatory Agency: GA

ITEM #	SAMPLE ID	MATRIX	DATE	TIME	TEMP AT COLLECTION	PRESERVATIVES							ANALYSES TEST							Residual Chlorine (Y/N)				
						Unpreserved - Ice	H2SO4	HNO3 + Ice	HCl	NaOH + Zn Acetate	Na2S2O3	Methanol	Other	App III/IV Total Metals	Cl F SO4 TDS	Radium 226/228	Mg Na K	CO3+HCO2	Fe Total Fe 3+					
1	DGWC-67	DW	9/8/2022	11:00											X	X	X	X	X					
2	DGWC-121	DW	9/8/2022	12:55											X	X	X	X	X					
3	EB-1	DW	9/8/2022	11:30											X	X	X	X	X					
4	FB-2	DW	9/8/2022	13:00											X	X	X	X	X					
6	DGWC-37	DW	9/9/2022	11:38											X	X	X	X	X					
7																								
8																								
9																								
10																								
11																								
12																								
13																								
14																								

ADDITIONAL COMMENTS: Mark from Golder 9/8/22 15:50 Nicole Jones 9/9/22 15:50

REDUNDANT BY / AFFILIATION: DATE: TIME: ACCEPTED BY / AFFILIATION: DATE: TIME:

TEMP in C: Received on Ice (Y/N): Custody Sealed Cooler (Y/N): Samples Intact (Y/N):

DATE signed:



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt:

Client Name:

Georgia Power

Project:

WO#: 92624384

PM: NMG

Due Date: 09/29/22

CLIENT: GA-GA Power

Coupler: Fed-Ex UPS USPS Client Commercial Pace Other:

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 09/13/22 JM

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer:

IR Gun ID: 083 Type of Ice: Wet Blue None

Cooler Temp:

1.9 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 1.9

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4. NO DATA
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: W26	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



DC#_ Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO#: 92624384

PM: NMG

Due Date: 09/29/22

CLIENT: GA-GA Power

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project

Exceptions: VOA, Coliform, TQC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1	2	1			1	1																		2					
2	2	1			1	1																		2					
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A

Section B

Section C

Page: **1** OF **1**

Required Client Information:

Required Project Information:

Invoice Information:

Company: Georgia Power - Coal Combustion Residuals
Address: 2480 Lanier Road
Atlanta, GA 30339
Phone: (478) 800-8176
Email: [E]AUCKER@SOUHTRINCO.COM
Requested Due Date: 10 Dec 2022

Report To: Lauran Colter
Cop To: Golder
Purchase Order #: Plant MacDough AP-1
Project Name: Project #: GL160849822

Address: kashivokas@southern.com
Company Name: Kasha Vokas
Price Quote: Kasha Project Manager
Price Profile #: Nicola D'Onofrio

Regulatory Agency: Georgia
State / Location: GA

ITEM #	MATRIX	SCOPE	MATRIX CODE (see valid codes to left)		DATE	TIME	SAMPLE TEMP AT COLLECTION		PRESERVATIVES							ANALYSES TEST					RESIDUAL CHLORINE (Y/N)								
			WG	Q			# OF CONTAINERS	Unpreserved - Ice	H2SO4	HNO3 + Ice	HCl	NaOH + Zn Acetate	Na2S2O3	Methanol	Other	App. I/IV Total Metals	Cl, F, SO4, TDS	Radium 226/228	Mg, Na, K	CO3+HCO2	Fe Total, Fe 3+								
1	DW-C-38	DRIVING WATER	WG	Q	8/12/2022	12:12			6	3	3																		
2	FB-3	WASTE WATER	WG	Q	8/12/2022	12:10			6	3	3																		
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													
13																													
14																													

ADDITIONAL COMMENTS

ORDERED BY: [Signature]
 DATE: 4/11/22
 TIME: 8:05
 ACCEPTED BY / AFFILIATION: [Signature]
 DATE: 9/22/22
 TIME: 8:10

SAMPLE CONDITIONS

TEMP in C
 Received on ice (Y/N)
 Custody Sealed Cooler (Y/N)
 Samples Intact (Y/N)

DATE Signed: 9/13/22

DE: [Signature]

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 9/30/2022
Worklist: 69073
Matrix: WT



Method Blank Assessment	MB Sample ID 0.590
	MB concentration: 0.382
	M/B 2 Sigma CSU: 0.710
	MB MDC: 3.02
	MB Numerical Performance Indicator: Fail*
	MB Status vs. MDC: Pass

Laboratory Control Sample Assessment	LCS/D (Y or N)?	
	LCS69073	Y
Count Date:	10/10/2022	LCS69073
Spike I.D.:	22-029	22-029
Decay Corrected Spike Concentration (pCi/mL):	19.834	19.834
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.808	0.810
Target Conc. (pCi/L, g, F):	4.907	4.895
Uncertainty (Calculated):	0.353	0.352
Result (pCi/L, g, F):	6.528	6.766
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.362	1.419
Numerical Performance Indicator:	2.23	2.51
Percent Recovery:	133.05%	138.22%
Status vs Numerical Indicator:	N/A	Warning
Status vs Recovery:	Pass	Fall High**
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Duplicate Sample Assessment	Sample I.D.:	LCS69073
	Duplicate Sample I.D.:	LCS69073
	Sample Result (pCi/L, g, F):	6.528
	Sample Result 2 Sigma CSU (pCi/L, g, F):	1.362
	Sample Duplicate Result (pCi/L, g, F):	6.766
	Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.419
	Are sample and/or duplicate results below RL?	NO
	Duplicate Numerical Performance Indicator:	-0.235
	(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	3.81%
	Duplicate Status vs Numerical Indicator:	Pass
	Duplicate Status vs RPD:	Pass
	% RPD Limit:	35%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated):		
Sample Result: Sample Result 2 Sigma CSU (pCi/L, g, F): Matrix Spike Result: Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): MS Numerical Performance Indicator: MSD Numerical Performance Indicator: MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment	Sample I.D. Sample MS I.D. Sample MSD I.D. Sample Matrix Spike Result: Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): Duplicate Numerical Performance Indicator: (Based on the Percent Recoveries) MS/MSD Duplicate RPD: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPD: % RPD Limit:
---	--

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

*If the lowest activity sample in this batch is greater than ten times the blank value, the blank is acceptable; otherwise, this batch must be reprocessed.
**If all sample results are below MDC, the batch is acceptable, otherwise this batch must be reprocessed due to LCS/D failure.

MB activity < MDC, Pass

NI < 3 acceptable for LIS/MSD

Quiliver

10-11-22

Quality Control Sample Performance Assessment

Analyst: **Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226
Analyst: RMS
Date: 9/30/2022
Worklist: 69072
Matrix: DW



Method Blank Assessment	
MB Sample ID	2600355
MB Concentration:	0.044
M/B Counting Uncertainty:	0.069
MB MDC:	0.152
MB Numerical Performance Indicator:	1.24
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS ID	Y or N?
LCS69072	Y
LCS69072	Y
Count Date:	10/12/2022
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.023
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.505
Target Conc. (pCi/L, g, F):	4.758
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	5.119
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.487
Numerical Performance Indicator:	1.44
Percent Recovery:	107.59%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	2600355
Duplicate Sample I.D.:	92624384013
Sample Result (pCi/L, g, F):	0.044
Sample Result Counting Uncertainty (pCi/L, g, F):	0.069
Sample Duplicate Result (pCi/L, g, F):	0.020
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.055
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	0.520
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	73.02%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

***Deterministic resuspended due to unacceptable precision: N/A

LAM 10/13/22

LAM 10/13/22

November 10, 2022

Andrea McClure
WSP/Golder
5170 Peachtree Road
Building 100, Suite 300
Atlanta, GA 30341

RE: Project: McDonough AP-1 Assessment MW-Revised Report
Pace Project No.: 92625181

Dear Andrea McClure:

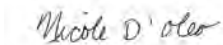
Enclosed are the analytical results for sample(s) received by the laboratory between September 08, 2022 and September 13, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Stephen Benda, Southern Company
Noelia Gangi, Georgia Power
Daniela Herrera, Golder
Ben Hodges, Georgia Power
Kristen Jurinko
Laura Midkiff, Georgia Power
Karim Minkara, Golder Associates - Atlanta

J. Shelby Mobley, Southern Company
Charles Norton, Southern Company
Ms. Lauren Petty, Southern Company
Dawn Prell, Golder Associates Inc.
Michael Smilley, Georgia Power
Yong Cheng Soo, WSP/Golder
Tina Sullivan, ERM



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: McDonough AP-1 Assessment MW-Revised Report

Pace Project No.: 92625181

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001

South Carolina Drinking Water Cert. #: 99006003

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Louisiana DoH Drinking Water #: LA029

Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: McDonough AP-1 Assessment MW-Revised Report

Pace Project No.: 92625181

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92625181001	B-113D	Water	09/12/22 14:11	09/13/22 10:30
92625181002	EB-2	Water	09/12/22 13:40	09/13/22 10:30
92624373001	B-105D	Water	09/07/22 14:54	09/08/22 09:45
92624373002	B-112D	Water	09/07/22 13:05	09/08/22 09:45

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: McDonough AP-1 Assessment MW-Revised Report
Pace Project No.: 92625181

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92625181001	B-113D	EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	CDC	3
92625181002	EB-2	EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	CDC	3
92624373001	B-105D	EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	JCM	3
92624373002	B-112D	EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	JCM	3

PASI-A = Pace Analytical Services - Asheville
PASI-C = Pace Analytical Services - Charlotte
PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: McDonough AP-1 Assessment MW-Revised Report
Pace Project No.: 92625181

Sample: B-113D		Lab ID: 92625181001		Collected: 09/12/22 14:11		Received: 09/13/22 10:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/13/22 13:47		
pH	7.95	Std. Units			1		09/13/22 13:47		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	0.25	mg/L	0.040	0.025	1	09/21/22 17:50	09/22/22 19:54	7439-89-6	
Potassium	4.8	mg/L	0.20	0.15	1	09/21/22 17:50	09/22/22 19:54	7440-09-7	
Sodium	22.2	mg/L	1.0	0.58	1	09/21/22 17:50	09/22/22 19:54	7440-23-5	
Calcium	36.5	mg/L	1.0	0.12	1	09/21/22 17:50	09/22/22 19:54	7440-70-2	
Magnesium	4.8	mg/L	0.050	0.012	1	09/21/22 17:50	09/22/22 19:54	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/22/22 18:15	09/24/22 19:36	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/22/22 18:15	09/24/22 19:36	7440-38-2	
Barium	0.0051	mg/L	0.0050	0.00067	1	09/22/22 18:15	09/24/22 19:36	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/22/22 18:15	09/24/22 19:36	7440-41-7	
Boron	0.048	mg/L	0.040	0.0086	1	09/22/22 18:15	09/24/22 19:36	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/22/22 18:15	09/24/22 19:36	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/22/22 18:15	09/24/22 19:36	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/22/22 18:15	09/24/22 19:36	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/22/22 18:15	09/24/22 19:36	7439-92-1	
Lithium	0.0084J	mg/L	0.030	0.00073	1	09/22/22 18:15	09/24/22 19:36	7439-93-2	
Molybdenum	0.052	mg/L	0.010	0.00074	1	09/22/22 18:15	09/24/22 19:36	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/22/22 18:15	09/24/22 19:36	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/22/22 18:15	09/24/22 19:36	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/27/22 07:45	09/27/22 11:16	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	197	mg/L	25.0	10.0	1		09/15/22 11:46		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	125	mg/L	5.0	5.0	1		09/16/22 16:58		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/16/22 16:58		
Alkalinity, Total as CaCO ₃	125	mg/L	5.0	5.0	1		09/16/22 16:58		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	7.6	mg/L	1.0	0.60	1		09/15/22 19:56	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: McDonough AP-1 Assessment MW-Revised Report

Pace Project No.: 92625181

Sample: B-113D **Lab ID: 92625181001** Collected: 09/12/22 14:11 Received: 09/13/22 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	1.0	mg/L	0.10	0.050	1		09/15/22 19:56	16984-48-8	
Sulfate	35.0	mg/L	1.0	0.50	1		09/15/22 19:56	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: McDonough AP-1 Assessment MW-Revised Report
Pace Project No.: 92625181

Sample: EB-2		Lab ID: 92625181002		Collected: 09/12/22 13:40	Received: 09/13/22 10:30	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	ND	mg/L	0.040	0.025	1	09/21/22 17:50	09/22/22 20:08	7439-89-6		
Potassium	ND	mg/L	0.20	0.15	1	09/21/22 17:50	09/22/22 20:08	7440-09-7		
Sodium	ND	mg/L	1.0	0.58	1	09/21/22 17:50	09/22/22 20:08	7440-23-5		
Calcium	ND	mg/L	1.0	0.12	1	09/21/22 17:50	09/22/22 20:08	7440-70-2		
Magnesium	ND	mg/L	0.050	0.012	1	09/21/22 17:50	09/22/22 20:08	7439-95-4		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	09/22/22 18:15	09/24/22 19:54	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0022	1	09/22/22 18:15	09/24/22 19:54	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	09/22/22 18:15	09/24/22 19:54	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	09/22/22 18:15	09/24/22 19:54	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	09/22/22 18:15	09/24/22 19:54	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	09/22/22 18:15	09/24/22 19:54	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	09/22/22 18:15	09/24/22 19:54	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	09/22/22 18:15	09/24/22 19:54	7440-48-4		
Lead	ND	mg/L	0.0010	0.00089	1	09/22/22 18:15	09/24/22 19:54	7439-92-1		
Lithium	ND	mg/L	0.030	0.00073	1	09/22/22 18:15	09/24/22 19:54	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00074	1	09/22/22 18:15	09/24/22 19:54	7439-98-7		
Selenium	ND	mg/L	0.0050	0.0014	1	09/22/22 18:15	09/24/22 19:54	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00018	1	09/22/22 18:15	09/24/22 19:54	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	09/27/22 07:45	09/27/22 11:19	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		09/15/22 11:46			
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/16/22 17:08			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/16/22 17:08			
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		09/16/22 17:08			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		09/15/22 20:11	16887-00-6		
Fluoride	0.068J	mg/L	0.10	0.050	1		09/15/22 20:11	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		09/15/22 20:11	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: McDonough AP-1 Assessment MW-Revised Report
Pace Project No.: 92625181

Sample: B-105D		Lab ID: 92624373001		Collected: 09/07/22 14:54		Received: 09/08/22 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/08/22 13:36		
pH	6.44	Std. Units			1		09/08/22 13:36		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	1.9	mg/L	0.040	0.025	1	09/21/22 12:19	09/21/22 19:58	7439-89-6	
Potassium	8.2	mg/L	0.20	0.15	1	09/21/22 12:19	09/21/22 19:58	7440-09-7	
Sodium	19.9	mg/L	1.0	0.58	1	09/21/22 12:19	09/21/22 19:58	7440-23-5	M1
Calcium	73.2	mg/L	1.0	0.12	1	09/21/22 12:19	09/21/22 19:58	7440-70-2	M1
Magnesium	25.2	mg/L	0.050	0.012	1	09/21/22 12:19	09/21/22 19:58	7439-95-4	M1
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/21/22 13:49	09/24/22 15:37	7440-36-0	
Arsenic	0.0026J	mg/L	0.0050	0.0022	1	09/21/22 13:49	09/24/22 15:37	7440-38-2	
Barium	0.035	mg/L	0.0050	0.00067	1	09/21/22 13:49	09/24/22 15:37	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/21/22 13:49	09/24/22 15:37	7440-41-7	
Boron	0.87	mg/L	0.20	0.043	5	09/21/22 13:49	09/26/22 14:02	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/21/22 13:49	09/24/22 15:37	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/21/22 13:49	09/24/22 15:37	7440-47-3	
Cobalt	0.0040J	mg/L	0.0050	0.00039	1	09/21/22 13:49	09/24/22 15:37	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/21/22 13:49	09/24/22 15:37	7439-92-1	
Lithium	0.013J	mg/L	0.030	0.00073	1	09/21/22 13:49	09/24/22 15:37	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	09/21/22 13:49	09/24/22 15:37	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/21/22 13:49	09/24/22 15:37	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/21/22 13:49	09/24/22 15:37	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	0.00014J	mg/L	0.00020	0.00013	1	09/22/22 14:00	09/22/22 17:21	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	479	mg/L	25.0	10.0	1		09/09/22 14:58		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	42.0	mg/L	5.0	5.0	1		09/14/22 15:57		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/14/22 15:57		
Alkalinity, Total as CaCO ₃	42.0	mg/L	5.0	5.0	1		09/14/22 15:57		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	16.4	mg/L	1.0	0.60	1		09/09/22 22:59	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: McDonough AP-1 Assessment MW-Revised Report

Pace Project No.: 92625181

Sample: B-105D **Lab ID: 92624373001** Collected: 09/07/22 14:54 Received: 09/08/22 09:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.11	mg/L	0.10	0.050	1		09/09/22 22:59	16984-48-8	
Sulfate	263	mg/L	5.0	2.5	5		09/10/22 02:35	14808-79-8	

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ANALYTICAL RESULTS

Project: McDonough AP-1 Assessment MW-Revised Report
Pace Project No.: 92625181

Sample: B-112D		Lab ID: 92624373002		Collected: 09/07/22 13:05		Received: 09/08/22 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/08/22 13:36		
pH	6.72	Std. Units			1		09/08/22 13:36		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	0.026J	mg/L	0.040	0.025	1	09/21/22 12:19	09/21/22 20:26	7439-89-6	
Potassium	3.1	mg/L	0.20	0.15	1	09/21/22 12:19	09/21/22 20:26	7440-09-7	
Sodium	15.0	mg/L	1.0	0.58	1	09/21/22 12:19	09/21/22 20:26	7440-23-5	
Calcium	26.5	mg/L	1.0	0.12	1	09/21/22 12:19	09/21/22 20:26	7440-70-2	
Magnesium	8.0	mg/L	0.050	0.012	1	09/21/22 12:19	09/21/22 20:26	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/21/22 13:49	09/24/22 15:43	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/21/22 13:49	09/24/22 15:43	7440-38-2	
Barium	0.0026J	mg/L	0.0050	0.00067	1	09/21/22 13:49	09/24/22 15:43	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/21/22 13:49	09/24/22 15:43	7440-41-7	
Boron	0.26	mg/L	0.040	0.0086	1	09/21/22 13:49	09/26/22 14:07	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/21/22 13:49	09/24/22 15:43	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/21/22 13:49	09/24/22 15:43	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/21/22 13:49	09/24/22 15:43	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/21/22 13:49	09/24/22 15:43	7439-92-1	
Lithium	0.0039J	mg/L	0.030	0.00073	1	09/21/22 13:49	09/24/22 15:43	7439-93-2	
Molybdenum	0.028	mg/L	0.010	0.00074	1	09/21/22 13:49	09/24/22 15:43	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/21/22 13:49	09/24/22 15:43	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/21/22 13:49	09/24/22 15:43	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/22/22 14:00	09/22/22 17:32	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	153	mg/L	25.0	10.0	1		09/09/22 15:04		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	106	mg/L	5.0	5.0	1		09/14/22 16:04		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/14/22 16:04		
Alkalinity, Total as CaCO ₃	106	mg/L	5.0	5.0	1		09/14/22 16:04		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.9	mg/L	1.0	0.60	1		09/09/22 23:41	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: McDonough AP-1 Assessment MW-Revised Report

Pace Project No.: 92625181

Sample: B-112D		Lab ID: 92624373002		Collected: 09/07/22 13:05		Received: 09/08/22 09:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Fluoride	0.27	mg/L	0.10	0.050	1		09/09/22 23:41	16984-48-8	
Sulfate	18.2	mg/L	1.0	0.50	1		09/09/22 23:41	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: McDonough AP-1 Assessment MW-Revised Report
Pace Project No.: 92625181

QC Batch: 724698 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92624373001, 92624373002

METHOD BLANK: 3775652 Matrix: Water
Associated Lab Samples: 92624373001, 92624373002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	09/21/22 19:48	
Iron	mg/L	ND	0.040	0.025	09/21/22 19:48	
Magnesium	mg/L	ND	0.050	0.012	09/21/22 19:48	
Potassium	mg/L	ND	0.20	0.15	09/21/22 19:48	
Sodium	mg/L	ND	1.0	0.58	09/21/22 19:48	

LABORATORY CONTROL SAMPLE: 3775653

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	
Iron	mg/L	1	1.0	101	80-120	
Magnesium	mg/L	1	1.0	104	80-120	
Potassium	mg/L	1	1.0	103	80-120	
Sodium	mg/L	1	1.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3775654 3775655

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		92624373001	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Calcium	mg/L	73.2	1	1	71.7	72.8	-152	-37	75-125	2	20	M1	
Iron	mg/L	1.9	1	1	2.9	2.9	101	100	75-125	0	20		
Magnesium	mg/L	25.2	1	1	25.7	25.7	49	52	75-125	0	20	M1	
Potassium	mg/L	8.2	1	1	9.0	9.1	75	90	75-125	2	20		
Sodium	mg/L	19.9	1	1	20.3	20.6	38	68	75-125	1	20	M1	

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QUALITY CONTROL DATA

Project: McDonough AP-1 Assessment MW-Revised Report
Pace Project No.: 92625181

QC Batch: 724852 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92625181001, 92625181002

METHOD BLANK: 3776437 Matrix: Water
Associated Lab Samples: 92625181001, 92625181002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	09/22/22 17:49	
Iron	mg/L	ND	0.040	0.025	09/22/22 17:49	
Magnesium	mg/L	ND	0.050	0.012	09/22/22 17:49	
Potassium	mg/L	ND	0.20	0.15	09/22/22 17:49	
Sodium	mg/L	ND	1.0	0.58	09/22/22 17:49	

LABORATORY CONTROL SAMPLE: 3776438

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.97J	97	80-120	
Iron	mg/L	1	0.97	97	80-120	
Magnesium	mg/L	1	0.97	97	80-120	
Potassium	mg/L	1	0.95	95	80-120	
Sodium	mg/L	1	0.99J	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3776441 3776442

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92622406011 Result	Spike Conc.	Spike Conc.	Result						
Calcium	mg/L	67.1	1	1	68.1	69.3	100	212	75-125	2	20 M1
Iron	mg/L	ND	1	1	1.0	1.1	104	105	75-125	1	20
Magnesium	mg/L	1.0	1	1	2.1	2.1	106	107	75-125	1	20
Potassium	mg/L	2.3	1	1	3.3	3.4	103	110	75-125	2	20
Sodium	mg/L	1.5	1	1	2.5	2.6	101	107	75-125	2	20

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QUALITY CONTROL DATA

Project: McDonough AP-1 Assessment MW-Revised Report
Pace Project No.: 92625181

QC Batch: 724800 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92624373001, 92624373002

METHOD BLANK: 3776150 Matrix: Water
Associated Lab Samples: 92624373001, 92624373002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	09/24/22 14:20	
Arsenic	mg/L	ND	0.0050	0.0022	09/24/22 14:20	
Barium	mg/L	ND	0.0050	0.00067	09/24/22 14:20	
Beryllium	mg/L	ND	0.00050	0.000054	09/24/22 14:20	
Boron	mg/L	ND	0.040	0.0086	09/24/22 14:20	
Cadmium	mg/L	ND	0.00050	0.00011	09/24/22 14:20	
Chromium	mg/L	ND	0.0050	0.0011	09/24/22 14:20	
Cobalt	mg/L	ND	0.0050	0.00039	09/24/22 14:20	
Lead	mg/L	ND	0.0010	0.00089	09/24/22 14:20	
Lithium	mg/L	ND	0.030	0.00073	09/24/22 14:20	
Molybdenum	mg/L	ND	0.010	0.00074	09/24/22 14:20	
Selenium	mg/L	ND	0.0050	0.0014	09/24/22 14:20	
Thallium	mg/L	ND	0.0010	0.00018	09/24/22 14:20	

LABORATORY CONTROL SAMPLE: 3776151

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	105	80-120	
Arsenic	mg/L	0.1	0.10	102	80-120	
Barium	mg/L	0.1	0.099	99	80-120	
Beryllium	mg/L	0.1	0.10	102	80-120	
Boron	mg/L	1	1.1	107	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.10	104	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.10	100	80-120	
Lithium	mg/L	0.1	0.098	98	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	
Selenium	mg/L	0.1	0.10	101	80-120	
Thallium	mg/L	0.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3776152 3776153

Parameter	Units	92625866027 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	106	109	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	99	101	75-125	2	20	

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QUALITY CONTROL DATA

Project: McDonough AP-1 Assessment MW-Revised Report
Pace Project No.: 92625181

Parameter	Units	3776152		3776153		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92625866027 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	14.6 ug/L	0.1	0.1	0.12	0.12	102	102	75-125	0	20		
Beryllium	mg/L	ND	0.1	0.1	0.10	0.10	104	102	75-125	1	20		
Boron	mg/L	393 ug/L	1	1	1.6	1.6	116	116	75-125	0	20		
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	101	102	75-125	1	20		
Chromium	mg/L	22.8 ug/L	0.1	0.1	0.13	0.14	112	118	75-125	4	20		
Cobalt	mg/L	0.44J ug/L	0.1	0.1	0.098	0.10	98	101	75-125	3	20		
Lead	mg/L	ND	0.1	0.1	0.095	0.098	94	98	75-125	4	20		
Lithium	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	1	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.11	100	105	75-125	5	20		
Selenium	mg/L	ND	0.1	0.1	0.098	0.10	98	100	75-125	2	20		
Thallium	mg/L	ND	0.1	0.1	0.095	0.099	95	99	75-125	4	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: McDonough AP-1 Assessment MW-Revised Report
Pace Project No.: 92625181

QC Batch: 725176 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92625181001, 92625181002

METHOD BLANK: 3778147 Matrix: Water

Associated Lab Samples: 92625181001, 92625181002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	09/24/22 17:31	
Arsenic	mg/L	ND	0.0050	0.0022	09/24/22 17:31	
Barium	mg/L	ND	0.0050	0.00067	09/24/22 17:31	
Beryllium	mg/L	ND	0.00050	0.000054	09/24/22 17:31	
Boron	mg/L	ND	0.040	0.0086	09/24/22 17:31	
Cadmium	mg/L	ND	0.00050	0.00011	09/24/22 17:31	
Chromium	mg/L	ND	0.0050	0.0011	09/24/22 17:31	
Cobalt	mg/L	ND	0.0050	0.00039	09/24/22 17:31	
Lead	mg/L	ND	0.0010	0.00089	09/24/22 17:31	
Lithium	mg/L	ND	0.030	0.00073	09/24/22 17:31	
Molybdenum	mg/L	ND	0.010	0.00074	09/24/22 17:31	
Selenium	mg/L	ND	0.0050	0.0014	09/24/22 17:31	
Thallium	mg/L	ND	0.0010	0.00018	09/24/22 17:31	

LABORATORY CONTROL SAMPLE: 3778148

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	104	80-120	
Arsenic	mg/L	0.1	0.10	100	80-120	
Barium	mg/L	0.1	0.098	98	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	1.1	108	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Lead	mg/L	0.1	0.094	94	80-120	
Lithium	mg/L	0.1	0.098	98	80-120	
Molybdenum	mg/L	0.1	0.10	101	80-120	
Selenium	mg/L	0.1	0.097	97	80-120	
Thallium	mg/L	0.1	0.094	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3778149 3778150

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92624372001	Result	Spike Conc.	Spike Conc.								
Antimony	mg/L	ND	0.1	0.1	0.10	0.11	104	105	75-125	1	20		
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	100	102	75-125	2	20		

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QUALITY CONTROL DATA

Project: McDonough AP-1 Assessment MW-Revised Report

Pace Project No.: 92625181

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3778149 3778150													
Parameter	Units	92624372001		MSD		MSD		% Rec		Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Barium	mg/L	0.099	0.1	0.1	0.19	0.19	87	92	75-125	3	20		
Beryllium	mg/L	ND	0.1	0.1	0.098	0.096	98	96	75-125	2	20		
Boron	mg/L	3.3	1	1	4.3	4.4	96	108	75-125	3	20		
Cadmium	mg/L	ND	0.1	0.1	0.097	0.098	97	98	75-125	1	20		
Chromium	mg/L	ND	0.1	0.1	0.098	0.098	98	98	75-125	0	20		
Cobalt	mg/L	0.0065	0.1	0.1	0.10	0.10	95	96	75-125	2	20		
Lead	mg/L	ND	0.1	0.1	0.090	0.093	90	93	75-125	3	20		
Lithium	mg/L	ND	0.1	0.1	0.10	0.10	100	101	75-125	1	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	99	102	75-125	2	20		
Selenium	mg/L	ND	0.1	0.1	0.098	0.10	98	101	75-125	3	20		
Thallium	mg/L	ND	0.1	0.1	0.092	0.095	92	95	75-125	3	20		

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QUALITY CONTROL DATA

Project: McDonough AP-1 Assessment MW-Revised Report
Pace Project No.: 92625181

QC Batch: 724426 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92624373001, 92624373002

METHOD BLANK: 3774367 Matrix: Water
Associated Lab Samples: 92624373001, 92624373002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	09/22/22 17:16	

LABORATORY CONTROL SAMPLE: 3774368

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3774369 3774370

Parameter	Units	92624373001		3774370		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	0.00014J	0.0025	0.0025	0.0025	93	93	75-125	1	20	

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QUALITY CONTROL DATA

Project: McDonough AP-1 Assessment MW-Revised Report
Pace Project No.: 92625181

QC Batch: 725890	Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A	Analysis Description: 7470 Mercury
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92625181001, 92625181002

METHOD BLANK: 3781485 Matrix: Water
Associated Lab Samples: 92625181001, 92625181002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	09/27/22 11:00	

LABORATORY CONTROL SAMPLE: 3781486

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0022	88	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3781487 3781488

Parameter	Units	92624372011		3781488		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Mercury	mg/L	ND	0.0025	0.0025	0.0023	0.0018	94	71	75-125	28	20	M1,R1

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QUALITY CONTROL DATA

Project: McDonough AP-1 Assessment MW-Revised Report
Pace Project No.: 92625181

QC Batch: 722447 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92624373001, 92624373002

METHOD BLANK: 3764210 Matrix: Water
Associated Lab Samples: 92624373001, 92624373002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10.0	09/09/22 14:58	

LABORATORY CONTROL SAMPLE: 3764211

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	382	96	80-120	

SAMPLE DUPLICATE: 3764212

Parameter	Units	92623815001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	351	346	1	10	

SAMPLE DUPLICATE: 3764213

Parameter	Units	92624372006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	102	107	5	10	

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QUALITY CONTROL DATA

Project: McDonough AP-1 Assessment MW-Revised Report

Pace Project No.: 92625181

QC Batch: 723325	Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92625181001, 92625181002

METHOD BLANK: 3768875 Matrix: Water

Associated Lab Samples: 92625181001, 92625181002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10.0	09/15/22 11:44	

LABORATORY CONTROL SAMPLE: 3768876

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	374	94	80-120	

SAMPLE DUPLICATE: 3768878

Parameter	Units	92625189005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	87.0	83.0	5	10	

SAMPLE DUPLICATE: 3768892

Parameter	Units	92625181001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	197	193	2	10	

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QUALITY CONTROL DATA

Project: McDonough AP-1 Assessment MW-Revised Report
Pace Project No.: 92625181

QC Batch: 723206 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92624373001, 92624373002

METHOD BLANK: 3768028 Matrix: Water
Associated Lab Samples: 92624373001, 92624373002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	09/14/22 14:56	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	09/14/22 14:56	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	09/14/22 14:56	

LABORATORY CONTROL SAMPLE: 3768029

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.2	100	80-120	

LABORATORY CONTROL SAMPLE: 3768030

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.8	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3768031 3768032

Parameter	Units	92625359004		3768031		3768032		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					
Alkalinity, Total as CaCO3	mg/L	324	324	50	50	353	349	58	51	80-120	1	25 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3768033 3768034

Parameter	Units	92624372011		3768033		3768034		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					
Alkalinity, Total as CaCO3	mg/L	134	134	50	50	193	185	118	102	80-120	4	25

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QUALITY CONTROL DATA

Project: McDonough AP-1 Assessment MW-Revised Report
Pace Project No.: 92625181

QC Batch: 723613 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92625181001, 92625181002

METHOD BLANK: 3770309 Matrix: Water
Associated Lab Samples: 92625181001, 92625181002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	09/16/22 13:22	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	09/16/22 13:22	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	09/16/22 13:22	

LABORATORY CONTROL SAMPLE: 3770310

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	52.1	104	80-120	

LABORATORY CONTROL SAMPLE: 3770311

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	51.6	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3770314 3770315

Parameter	Units	92625683004		3770314		3770315		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					
Alkalinity, Total as CaCO3	mg/L	190	190	50	50	247	262	114	144	80-120	6	25 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3771994 3771995

Parameter	Units	92625683003		3771994		3771995		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					
Alkalinity, Total as CaCO3	mg/L	ND	ND	50	50	54.9	54.9	104	103	80-120	0	25

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QUALITY CONTROL DATA

Project: McDonough AP-1 Assessment MW-Revised Report
Pace Project No.: 92625181

QC Batch: 722303 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92624373001, 92624373002

METHOD BLANK: 3763468 Matrix: Water
Associated Lab Samples: 92624373001, 92624373002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/09/22 22:31	
Fluoride	mg/L	ND	0.10	0.050	09/09/22 22:31	
Sulfate	mg/L	ND	1.0	0.50	09/09/22 22:31	

LABORATORY CONTROL SAMPLE: 3763469

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.6	101	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	50.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3763470 3763471

Parameter	Units	92624373001		3763470		3763471		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
Chloride	mg/L	16.4	50	50	68.2	69.0	103	105	90-110	1	10		
Fluoride	mg/L	0.11	2.5	2.5	2.4	2.5	93	94	90-110	1	10		
Sulfate	mg/L	263	50	50	311	309	96	92	90-110	1	10		

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QUALITY CONTROL DATA

Project: McDonough AP-1 Assessment MW-Revised Report

Pace Project No.: 92625181

QC Batch: 723467 Analysis Method: EPA 300.0 Rev 2.1 1993
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
 Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92625181001, 92625181002

METHOD BLANK: 3769521 Matrix: Water

Associated Lab Samples: 92625181001, 92625181002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/15/22 15:11	
Fluoride	mg/L	ND	0.10	0.050	09/15/22 15:11	
Sulfate	mg/L	ND	1.0	0.50	09/15/22 15:11	

LABORATORY CONTROL SAMPLE: 3769522

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.0	98	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	49.3	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3769523 3769524

Parameter	Units	92625147002		MS		MSD		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result						
Chloride	mg/L	94.2	50	50	50	133	134	77	79	90-110	1	10	M1
Fluoride	mg/L	0.49	2.5	2.5	2.5	3.0	3.0	101	102	90-110	1	10	
Sulfate	mg/L	53.6	50	50	50	99.3	100	91	93	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3769525 3769526

Parameter	Units	92625178002		MS		MSD		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Conc.	Result	Result						
Chloride	mg/L	15.0	50	50	50	66.7	67.1	103	104	90-110	1	10	
Fluoride	mg/L	0.40	2.5	2.5	2.5	3.6	3.6	127	128	90-110	1	10	M1
Sulfate	mg/L	508	50	50	50	552	552	88	89	90-110	0	10	M1

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QUALIFIERS

Project: McDonough AP-1 Assessment MW-Revised Report
Pace Project No.: 92625181

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: McDonough AP-1 Assessment MW-Revised Report

Pace Project No.: 92625181

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92624373001	B-105D				
92624373002	B-112D				
92625181001	B-113D				
92624373001	B-105D	EPA 3010A	724698	EPA 6010D	724853
92624373002	B-112D	EPA 3010A	724698	EPA 6010D	724853
92625181001	B-113D	EPA 3010A	724852	EPA 6010D	724979
92625181002	EB-2	EPA 3010A	724852	EPA 6010D	724979
92624373001	B-105D	EPA 3005A	724800	EPA 6020B	724886
92624373002	B-112D	EPA 3005A	724800	EPA 6020B	724886
92625181001	B-113D	EPA 3005A	725176	EPA 6020B	725367
92625181002	EB-2	EPA 3005A	725176	EPA 6020B	725367
92624373001	B-105D	EPA 7470A	724426	EPA 7470A	725130
92624373002	B-112D	EPA 7470A	724426	EPA 7470A	725130
92625181001	B-113D	EPA 7470A	725890	EPA 7470A	726012
92625181002	EB-2	EPA 7470A	725890	EPA 7470A	726012
92624373001	B-105D	SM 2540C-2015	722447		
92624373002	B-112D	SM 2540C-2015	722447		
92625181001	B-113D	SM 2540C-2015	723325		
92625181002	EB-2	SM 2540C-2015	723325		
92624373001	B-105D	SM 2320B-2011	723206		
92624373002	B-112D	SM 2320B-2011	723206		
92625181001	B-113D	SM 2320B-2011	723613		
92625181002	EB-2	SM 2320B-2011	723613		
92624373001	B-105D	EPA 300.0 Rev 2.1 1993	722303		
92624373002	B-112D	EPA 300.0 Rev 2.1 1993	722303		
92625181001	B-113D	EPA 300.0 Rev 2.1 1993	723467		
92625181002	EB-2	EPA 300.0 Rev 2.1 1993	723467		

REPORT OF LABORATORY ANALYSIS

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Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

Georgia Power

Project

WO# : 92625181



92625181

Courier: Commercial Fed Ex Pace UPS USPS Other: Client

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 9/8/22 Jm

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 214 Type of Ice: Wet Blue None

Cooler Temp: 2.1 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 2.1

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States, CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4. <u>10 DAY TAT</u>
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix:	<u>WG</u>	
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHG

**Bottom half of box is to list number of bottles

Proje

WO# : 92625181

PM: NMG

Due Date: 11/12/22

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (3 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	B P/W	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)			
1		2	1																												
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pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A

Requested Client Information:
 Company: Georgia Power - Coal Combustion Products
 Address: 2400 Meter Road
 Atlanta, GA 30339
 Email: lancobler@scdlhaer.com

Requested Date: 10 Day TAT

Section B

Requested Project Information:
 Report To: Lauren Colter
 Copy To: Colter
 Purchase Order #: Plant McDonough AP-1
 Project Name: Plant McDonough AP-1 Assessment
 Project #: Q11682982

Section C

Invoice Information:
 Analyst: scdlhaer@scdlhaer.com
 Company Name: scdlhaer@southemco.com
 Address: [blank]
 Paid Quote: [blank]
 Paid Project Manager: Nicole D'Oliva
 Paid Profile #: [blank]

ITEM #	MATRIX	CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analyte Filtered (Y/N)	Residual Chlorine (Y/N)
1	B-109D	DISTING WATER OR WASTE WATER PACIFIC CR M OT TR	B-109D	G	9/7/2022	14:54		0 3 3	H2SO4 HNO3 + ICS HCl NaOH + Zn Acetate Na2S2O3 Methanol Other	App IUV Total Metals Cl, F, SO4, TDS Radium 226/228 Mg, Na, K CO3+HCO2 Fe Total, Fe 3+	X X X X X X X	pH = 6.44, Fa2 = 0.0 mg/L pH = 6.72, Fa2 = 0.0 mg/L
2	B-112D		B-112D	G	9/7/2022	13:05		0 3 3			X X X X X X X	
3												
4												
5												
6												
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12												
13												
14												

TEMP in C	
Received on Ice (Y/N)	
Custody Sealed Cooler (Y/N)	
Samples Intact (Y/N)	

ADDITIONAL COMMENTS

SUBE WATERSPACE

SAC: SCAPRA 9/8/22 8:40

ACCEPTED BY / APPLICATION: [Signature] 9/8/22 8:40

DATE SIGNED: 9/8/22



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

Georgia Power

Project #

WO#: 92625181

PM: NMG

Due Date: 11/12/22

CLIENT: GA-GA Power

Courier: Commercial Fed-Ex UPS USPS Client Pace Other:

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 09/13/22 JM

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 083 Type of Ice: Wet Blue None

Cooler Temp: 1.9 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 1.9

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4. 10 DAY TAT
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix:	WGA	
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO# : 92625181

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Proj

PM: NMG

Due Date: 11/12/22

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

CLIENT: GA-GA Power

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)			
1	2	1			1	1																								
2	2	1			1	1																								
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pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
 Required Client Information:
 Company: Georgia Power - Coal Combustion Residuals
 Address: 2480 Manor Road
 Atlanta, GA 30339
 Email: blanchard@scdhecmr.com
 Phone: (470) 820-6178 Fax
 Requested Due Date: 10 Day TAT

Section B
 Required Project Information:
 Report To: Lauren Colker
 Copy To: Golfer
 Purchase Order #:
 Project Name: Plant MCD AP-1 Assessment
 Monitoring Well Network
 Project #: QL18849822
 Pica Profile #:
 Section C
 Invoice Information:
 Address: achirovices@southernco.com
 Company Name:
 Address:
 POC Name:
 POC Project Manager: Nicole D'Ono
 Pica Profile #:
 Regulatory Agency:
 State / Location:
 GA

Page: 1 of 1

ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	SAMPLE TEMP AT COLLECTION	PRESERVATIVES							ANALYSES TEST	Y/N	Residual Chlorine (Y/N)	pH = 7.05, Fe2 = 0.0 mg/L
						# OF CONTAINERS	Unpreserved - Ice	H2SO4	HNO3 + Ice	HCl	NaOH + Zn Acetate	Na2S2O3				
1	B-113D	G	9/12/2022	14:11		6	3	3								
2	EB-2	G	9/12/2022	13:40		6	3	3								
3																
4																
5																
6																
7																
8																
9																
10																
11																
12																
13																
14																

ADDITIONAL COMMENTS: *AN.../sample*

DATE SIGNED: *JDE MAQUESPICK* 9/13/22

TEMP in C

Received on ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

November 09, 2022

Andrea McClure
WSP/Golder
5170 Peachtree Road
Building 100, Suite 300
Atlanta, GA 30341

RE: Project: McDonough AP-1 Assessment RADs-Revised Report
Pace Project No.: 92625217

Dear Andrea McClure:

Enclosed are the analytical results for sample(s) received by the laboratory between September 08, 2022 and September 13, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

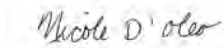
The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

Revision 1: Issued on 11/4/22 to include Radium QC Sheets and to update the samples included in this report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Stephen Benda, Southern Company
Noelia Gangi, Georgia Power
Daniela Herrera, Golder
Ben Hodges, Georgia Power
Kristen Jurinko
Laura Midkiff, Georgia Power
Karim Minkara, Golder Associates - Atlanta

J. Shelby Mobley, Southern Company
Charles Norton, Southern Company
Ms. Lauren Petty, Southern Company
Dawn Prell, Golder Associates Inc.
Michael Smilley, Georgia Power
Yong Cheng Soo, WSP/Golder
Tina Sullivan, ERM



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: McDonough AP-1 Assessment RADs-Revised Report
Pace Project No.: 92625217

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: McDonough AP-1 Assessment RADs-Revised Report

Pace Project No.: 92625217

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92625217001	B-113D	Water	09/12/22 14:11	09/13/22 10:30
92625217002	EB-2	Water	09/12/22 13:40	09/13/22 10:30
92624383001	B-105D	Water	09/07/22 14:54	09/08/22 09:45
92624383002	B-112D	Water	09/07/22 13:05	09/08/22 09:45

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: McDonough AP-1 Assessment RADs-Revised Report
Pace Project No.: 92625217

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92625217001	B-113D	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92625217002	EB-2	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92624383001	B-105D	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92624383002	B-112D	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1 Assessment RADs-Revised Report

Pace Project No.: 92625217

Sample: B-113D **Lab ID: 92625217001** Collected: 09/12/22 14:11 Received: 09/13/22 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.145 ± 0.104 (0.168) C:90% T:NA	pCi/L	10/12/22 20:23	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.295 ± 0.398 (0.847) C:64% T:87%	pCi/L	10/10/22 13:30	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.440 ± 0.502 (1.02)	pCi/L	10/14/22 17:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1 Assessment RADs-Revised Report
Pace Project No.: 92625217

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: EB-2 Lab ID: 92625217002 Collected: 09/12/22 13:40 Received: 09/13/22 10:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.0973 ± 0.0890 (0.160) C:90% T:NA	pCi/L	10/12/22 20:23	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	-0.0739 ± 0.405 (0.963) C:63% T:91%	pCi/L	10/10/22 13:31	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.0973 ± 0.494 (1.12)	pCi/L	10/14/22 17:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1 Assessment RADs-Revised Report

Pace Project No.: 92625217

Sample: B-105D **Lab ID: 92624383001** Collected: 09/07/22 14:54 Received: 09/08/22 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.883 ± 0.271 (0.245) C:92% T:NA	pCi/L	09/27/22 08:36	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	2.17 ± 0.787 (1.17) C:78% T:86%	pCi/L	09/23/22 19:04	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	3.05 ± 1.06 (1.42)	pCi/L	09/27/22 14:32	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1 Assessment RADs-Revised Report

Pace Project No.: 92625217

Sample: B-112D **Lab ID: 92624383002** Collected: 09/07/22 13:05 Received: 09/08/22 09:45 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.265 ± 0.148 (0.208) C:85% T:NA	pCi/L	09/27/22 08:38	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.490 ± 0.529 (1.10) C:79% T:85%	pCi/L	09/23/22 19:04	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.755 ± 0.677 (1.31)	pCi/L	09/27/22 14:32	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP-1 Assessment RADs-Revised Report

Pace Project No.: 92625217

QC Batch: 535922

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92625217001, 92625217002

METHOD BLANK: 2600355

Matrix: Water

Associated Lab Samples: 92625217001, 92625217002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0438 ± 0.0695 (0.152) C:94% T:NA	pCi/L	10/12/22 20:23	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP-1 Assessment RADs-Revised Report

Pace Project No.: 92625217

QC Batch: 535924	Analysis Method: EPA 9320
QC Batch Method: EPA 9320	Analysis Description: 9320 Radium 228
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92625217001, 92625217002

METHOD BLANK: 2600360 Matrix: Water

Associated Lab Samples: 92625217001, 92625217002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.590 ± 0.382 (0.710) C:71% T:92%	pCi/L	10/10/22 13:30	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP-1 Assessment RADs-Revised Report

Pace Project No.: 92625217

QC Batch:	532087	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92624383001, 92624383002

METHOD BLANK:	2581306	Matrix:	Water
---------------	---------	---------	-------

Associated Lab Samples: 92624383001, 92624383002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.122 ± 0.122 (0.241) C:95% T:NA	pCi/L	09/27/22 08:34	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP-1 Assessment RADs-Revised Report

Pace Project No.: 92625217

QC Batch: 533110

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples:

METHOD BLANK: 2586601

Matrix: Water

Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.00759 ± 0.0468 (0.133) C:88% T:NA	pCi/L	10/02/22 10:24	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP-1 Assessment RADs-Revised Report

Pace Project No.: 92625217

QC Batch: 532089

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92624383001, 92624383002

METHOD BLANK: 2581322

Matrix: Water

Associated Lab Samples: 92624383001, 92624383002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.391 ± 0.413 (0.858) C:74% T:78%	pCi/L	09/23/22 16:00	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP-1 Assessment RADs-Revised Report

Pace Project No.: 92625217

QC Batch: 533111	Analysis Method: EPA 9320
QC Batch Method: EPA 9320	Analysis Description: 9320 Radium 228
	Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples:

METHOD BLANK: 2586603 Matrix: Water

Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.798 ± 0.368 (0.604) C:81% T:85%	pCi/L	09/28/22 11:36	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: McDonough AP-1 Assessment RADs-Revised Report

Pace Project No.: 92625217

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: McDonough AP-1 Assessment RADs-Revised Report
Pace Project No.: 92625217

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92624383001	B-105D	EPA 9315	532087		
92624383002	B-112D	EPA 9315	532087		
92625217001	B-113D	EPA 9315	535922		
92625217002	EB-2	EPA 9315	535922		
92624383001	B-105D	EPA 9320	532089		
92624383002	B-112D	EPA 9320	532089		
92625217001	B-113D	EPA 9320	535924		
92625217002	EB-2	EPA 9320	535924		
92624383001	B-105D	Total Radium Calculation	535756		
92624383002	B-112D	Total Radium Calculation	535756		
92625217001	B-113D	Total Radium Calculation	540022		
92625217002	EB-2	Total Radium Calculation	540022		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: Georgia Power

Project #: **WO#: 92625217**



Courier: Commercial Fed Ex UPS USPS Client Pace Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 7/8/22 Jm

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 214 Type of Ice: Wet Blue None

Cooler Temp: 2.1 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 2.1

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States, CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4. <u>10 DAY TAT</u>
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>WG</u>	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers: _____

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



Document Name:
Sample Condition Upon Receipt (SCUR)
 Document No :
 F-CAR-CS-033-Rev.08

Document Revised: November 15, 2021
 Page 2 of 2
 Issuing Authority:

WO# : 92625217
PM: NMG **Due Date: 10/04/22**
CLIENT: GA-GA Power

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic 2N Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA N2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (3 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1		21			12																								
2		21			12																			2					
3																								2					
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A		Section B		Section C	
Required Client Information:		Required Project Information:		Invoice Information:	
Company: Georgia Power - Coal Combustion Residuals	Report To: Laurin Coker	Attention: scmlindse@pacanalytical.com	Address: scmlindse@pacanalytical.com	Company Name:	
Address: 2460 Mainw Road	City: Atlanta, GA 30338	Phone: (478) 820-4178	Requested Date: 10 Day TAT	Project #: GL1689482	Project Name: Pant MacDonough AP-1 Assessment
Email: laurincoker@pacanalytical.com	Phone: (478) 820-4178	Purchase Order #:	State / Location: GA	Face Project Manager: Nicole D'Olivo	Requested Analytical Filtered (Y/N):
Requested Date: 10 Day TAT	Project #: GL1689482	Face Profile #:	Regulatory Agency:		

ITEM #	MATRIX	CODE	DATE	TIME	# OF CONTAINERS	Preservatives							Request Analytical Filtered (Y/N)	Residual Chlorine (Y/N)	
						Unpreserved - ICS	H2SO4	HNO3 + ICS	HCl	NaOH + Zn Acetate	Na2S2O3	Methanol			Other
1	B-108D	WG	9/7/2022	14:54	8	3	3	3							
2	B-112D	WG	9/7/2022	13:05	0	3	3								
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															

ADDITIONAL COMMENTS

RELINQUISHED BY / AFFILIATION

DATE

TIME

ACCEPTED BY / AFFILIATION

DATE

TIME

SAMPLE CONDITIONS

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples intact (Y/N)

DATE Signed: 7/8/22



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

Georgia Power

Project #:

WO#: 92625217

PM: NMG Due Date: 10/04/22

CLIENT: GA-GA Power

Courier: Commercial Fed-Ex Pace UPS USPS Other: Client

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 09/13/22 JM

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer:

IR Gun ID: 083 Type of Ice: Wet Blue None

Cooler Temp: 1.9 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 1.9

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	NO DATA
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.	
Sample Labels Match CDC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Includes Date/Time/ID/Analysis Matrix: W6			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



DC#_ Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO# : 92625217

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project

PM: NMG

Due Date: 10/04/22

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

CLIENT: GA-GA Power

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SPST-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)			
1	2	1			1	1																								
2	2	1			1	1																								
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers).



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Requested Client Information:
 Company: Georgia Power - Coal Combustion Residuals
 Address: 2480 Manor Road
 Atlanta, GA 30339

Section B Requested Project Information:
 Report To: Laurin Collier
 Copy To: Collier

Section C Invoice Information:
 Address: acshirovics@scstatebank.com
 Company Name: acshirovics@scstatebank.com

Requested Due Date: 10 Day TAT

Section A Requested Client Information:
 Email: jlaboon@pacanalytical.com
 Phone: (470) 920-9176
 Fax: [Blank]

Section B Requested Project Information:
 Purchase Order #: [Blank]
 Project Name: Plant MCO-AS-1 Assessment Monitoring Well Network
 Project #: Q110849022

Section C Invoice Information:
 Address: [Blank]
 Company Name: [Blank]
 Project Manager: Nicole D'Olivo
 Price Profile #: [Blank]

Regulatory Agency: State / Louisiana
 State: GA

ITEM #	MATRIX	DATE	TIME	SAMPLE TEMP AT COLLECTION	PRESERVATIVES							ANALYSES TEST	Residual Chloride (Y/N)	pH = 7.85, Fe2 = 0.0 mg/L	
					# OF CONTAINERS	Unpreserved - Ice	H2SO4	HNO3 + Ice	HCl	NaOH + Zn Acetate	H2SO3				Methanol
1	B-11SD	9/12/2022	14:11		6	3	3								
2	EB-2	9/12/2022	13:40		6	3	3								
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															

ADDITIONAL COMMENTS: [Blank]

RELIEVER(S) BY / AFFILIATION: J.M. Sample

DATE: 9/13/22

TIME: 8:05

ACCEPTED BY / AFFILIATION: J.M. BAH

DATE: 9/13/22

TIME: 8:10

TEMP in C: [Blank]

Received on Ice (Y/N): [Blank]

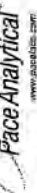
Custody Sealed Cooler (Y/N): [Blank]

Samples Intact (Y/N): [Blank]

DATE Signed: 9/13/22

JUDE MAQUESPAC

Quality Control Sample Performance Assessment



Analyst: **Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226
Analyst: RMS
Date: 9/30/2022
Worklist: 69072
Matrix: DW

Method Blank Assessment	
MB Sample ID	2600355
MB Concentration:	0.044
M/B Counting Uncertainty:	0.069
MB MDC:	0.152
MB Numerical Performance Indicator:	1.24
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS69072	10/12/2022
LCS69072	10/12/2022
Count Date:	19-033
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.023
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.505
Target Conc. (pCi/L, g, F):	4.758
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	5.119
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.487
Numerical Performance Indicator:	1.44
Percent Recovery:	107.59%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	2600355
Duplicate Sample I.D.:	92624384013
Sample Result (pCi/L, g, F):	0.044
Sample Result Counting Uncertainty (pCi/L, g, F):	0.069
Sample Duplicate Result (pCi/L, g, F):	0.020
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.055
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	0.520
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	73.02%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

***Determinations resuppressed due to unacceptable precision: N/A

LAM 10/13/22

[Handwritten Signature]

Sample Matrix Spike Control Assessment	
Sample Collection Date:	MS/MSD 1
Sample I.D.:	MS/MSD 2
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
M/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
MS Spike Uncertainty (calculated):	
MSD Spike Uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	
M/MSD Upper % Recovery Limits:	
M/MSD Lower % Recovery Limits:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	
% RPD Limit:	

LAM 10/13/22

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 9/30/2022
Worklist: 69073
Matrix: WT



Method Blank Assessment	MB Sample ID 0.590
	MB concentration: 0.382
	M/B 2 Sigma CSU: 0.710
	MB MDC: 3.02
	MB Numerical Performance Indicator: Fail*
	MB Status vs. MDC: Pass

Laboratory Control Sample Assessment	LCS/D (Y or N)?	
	LCS69073	Y
Count Date:	10/10/2022	LCS69073
Spike I.D.:	22-029	22-029
Decay Corrected Spike Concentration (pCi/mL):	19.834	19.834
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.808	0.810
Target Conc. (pCi/L, g, F):	4.907	4.895
Uncertainty (Calculated):	0.353	0.352
Result (pCi/L, g, F):	6.528	6.766
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.362	1.419
Numerical Performance Indicator:	2.23	2.51
Percent Recovery:	133.05%	138.22%
Status vs Numerical Indicator:	N/A	Warning
Status vs Recovery:	Pass	Fall High**
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Duplicate Sample Assessment	Sample I.D.:	LCS69073
	Duplicate Sample I.D.:	LCS69073
	Sample Result (pCi/L, g, F):	6.528
	Sample Result 2 Sigma CSU (pCi/L, g, F):	1.362
	Sample Duplicate Result (pCi/L, g, F):	6.766
	Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.419
	Are sample and/or duplicate results below RL?	NO
	Duplicate Numerical Performance Indicator:	-0.235
	(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	3.81%
	Duplicate Status vs Numerical Indicator:	Pass
	Duplicate Status vs RPD:	Pass
	% RPD Limit:	35%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample I.D. Sample MS I.D. Sample MSD I.D. Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated):		
Sample Result: Sample Result 2 Sigma CSU (pCi/L, g, F): Matrix Spike Result: Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): MS Numerical Performance Indicator: MSD Numerical Performance Indicator: MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment	Sample I.D. Sample MS I.D. Sample MSD I.D. Sample Matrix Spike Result: Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): Duplicate Numerical Performance Indicator: (Based on the Percent Recoveries) MS/MSD Duplicate RPD: MS/MSD Duplicate Status vs Numerical Indicator: MS/MSD Duplicate Status vs RPD: % RPD Limit:
---	--

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

*If the lowest activity sample in this batch is greater than ten times the blank value, the blank is acceptable; otherwise, this batch must be reprocessed.
**If all sample results are below MDC, the batch is acceptable, otherwise this batch must be reprocessed due to LCS/D failure.

MB activity < MDC, Pass

QC 10/11/22

NI < 3 acceptable for LIS/MSD

10-11-22

1 of 1

November 29, 2022

Andrea McClure
WSP/Golder
5170 Peachtree Road
Building 100, Suite 300
Atlanta, GA 30341

RE: Project: McDonough AP-1 Assessment-Revised Report
Pace Project No.: 92624373

Dear Andrea McClure:

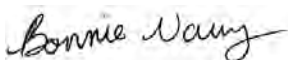
Enclosed are the analytical results for sample(s) received by the laboratory on September 09, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Bonnie Vang
bonnie.vang@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Stephen Benda, Southern Company
Noelia Gangi, Georgia Power
Daniela Herrera, Golder
Ben Hodges, Georgia Power
Kristen Jurinko
Laura Midkiff, Georgia Power
Karim Minkara, Golder Associates - Atlanta
J. Shelby Mobley, Southern Company

Charles Norton, Southern Company
Ms. Lauren Petty, Southern Company
Dawn Prell, Golder Associates Inc.
Michael Smilley, Georgia Power
Yong Cheng Soo, WSP/Golder
Tina Sullivan, ERM



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: McDonough AP-1 Assessment-Revised Report
Pace Project No.: 92624373

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006
9800 Kinsey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001
South Carolina Drinking Water Cert. #: 99006003
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Louisiana DoH Drinking Water #: LA029
Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381
South Carolina Certification #: 98011001

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SAMPLE SUMMARY

Project: McDonough AP-1 Assessment-Revised Report

Pace Project No.: 92624373

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92624373003	B-100	Water	09/08/22 11:05	09/09/22 15:50
92624373004	B-62	Water	09/09/22 11:25	09/09/22 15:50

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SAMPLE ANALYTE COUNT

Project: McDonough AP-1 Assessment-Revised Report

Pace Project No.: 92624373

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92624373003	B-100	EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	CDC	3
92624373004	B-62	EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: McDonough AP-1 Assessment-Revised Report

Pace Project No.: 92624373

Sample: B-100		Lab ID: 92624373003		Collected: 09/08/22 11:05		Received: 09/09/22 15:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/09/22 17:31		
pH	5.24	Std. Units			1		09/09/22 17:31		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	25.0	mg/L	0.040	0.025	1	09/21/22 12:19	09/21/22 21:14	7439-89-6	
Sodium	27.0	mg/L	1.0	0.58	1	09/21/22 12:19	09/21/22 21:14	7440-23-5	
Calcium	46.0	mg/L	1.0	0.12	1	09/21/22 12:19	09/21/22 21:14	7440-70-2	
Potassium	1.2	mg/L	0.20	0.15	1	09/21/22 12:19	09/22/22 20:51	7440-09-7	
Magnesium	46.3	mg/L	0.050	0.012	1	09/21/22 12:19	09/22/22 20:51	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/21/22 13:49	09/24/22 16:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/21/22 13:49	09/24/22 16:01	7440-38-2	
Barium	0.021	mg/L	0.0050	0.00067	1	09/21/22 13:49	09/24/22 16:01	7440-39-3	
Beryllium	0.00058	mg/L	0.00050	0.000054	1	09/21/22 13:49	09/24/22 16:01	7440-41-7	
Boron	0.24	mg/L	0.040	0.0086	1	09/21/22 13:49	09/26/22 14:13	7440-42-8	
Cadmium	0.00027J	mg/L	0.00050	0.00011	1	09/21/22 13:49	09/24/22 16:01	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/21/22 13:49	09/24/22 16:01	7440-47-3	
Cobalt	0.028	mg/L	0.0050	0.00039	1	09/21/22 13:49	09/24/22 16:01	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/21/22 13:49	09/24/22 16:01	7439-92-1	
Lithium	0.0023J	mg/L	0.030	0.00073	1	09/21/22 13:49	09/24/22 16:01	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	09/21/22 13:49	09/24/22 16:01	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/21/22 13:49	09/24/22 16:01	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/21/22 13:49	09/24/22 16:01	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/22/22 14:00	09/22/22 17:35	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	606	mg/L	50.0	20.0	1		09/14/22 11:32		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	31.5	mg/L	5.0	5.0	1		09/14/22 17:16		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/14/22 17:16		
Alkalinity, Total as CaCO3	31.5	mg/L	5.0	5.0	1		09/14/22 17:16		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	10.2	mg/L	1.0	0.60	1		09/13/22 19:12	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: McDonough AP-1 Assessment-Revised Report

Pace Project No.: 92624373

Sample: B-100 **Lab ID: 92624373003** Collected: 09/08/22 11:05 Received: 09/09/22 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.072J	mg/L	0.10	0.050	1		09/13/22 19:12	16984-48-8	
Sulfate	399	mg/L	8.0	4.0	8		09/14/22 21:32	14808-79-8	

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ANALYTICAL RESULTS

Project: McDonough AP-1 Assessment-Revised Report

Pace Project No.: 92624373

Sample: B-62 **Lab ID: 92624373004** Collected: 09/09/22 11:25 Received: 09/09/22 15:50 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/09/22 17:31		
pH	6.22	Std. Units			1		09/09/22 17:31		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Potassium	2.4	mg/L	0.20	0.15	1	09/21/22 12:19	09/22/22 21:05	7440-09-7	
Iron	6.5	mg/L	0.040	0.025	1	09/21/22 12:19	09/21/22 21:19	7439-89-6	
Sodium	10.2	mg/L	1.0	0.58	1	09/21/22 12:19	09/21/22 21:19	7440-23-5	
Calcium	31.4	mg/L	1.0	0.12	1	09/21/22 12:19	09/21/22 21:19	7440-70-2	
Magnesium	5.1	mg/L	0.050	0.012	1	09/21/22 12:19	09/21/22 21:19	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/21/22 13:49	09/24/22 16:07	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/21/22 13:49	09/24/22 16:07	7440-38-2	
Barium	0.018	mg/L	0.0050	0.00067	1	09/21/22 13:49	09/24/22 16:07	7440-39-3	
Beryllium	0.00013J	mg/L	0.00050	0.000054	1	09/21/22 13:49	09/24/22 16:07	7440-41-7	
Boron	0.064	mg/L	0.040	0.0086	1	09/21/22 13:49	09/26/22 14:19	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/21/22 13:49	09/24/22 16:07	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/21/22 13:49	09/24/22 16:07	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/21/22 13:49	09/24/22 16:07	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/21/22 13:49	09/24/22 16:07	7439-92-1	
Lithium	0.0085J	mg/L	0.030	0.00073	1	09/21/22 13:49	09/24/22 16:07	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	09/21/22 13:49	09/24/22 16:07	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/21/22 13:49	09/24/22 16:07	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/21/22 13:49	09/24/22 16:07	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/22/22 14:00	09/22/22 17:38	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	160	mg/L	25.0	10.0	1		09/14/22 11:33		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO ₃)	70.3	mg/L	5.0	5.0	1		09/14/22 17:23		
Alkalinity,Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/14/22 17:23		
Alkalinity, Total as CaCO ₃	70.3	mg/L	5.0	5.0	1		09/14/22 17:23		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	5.3	mg/L	1.0	0.60	1		09/13/22 19:27	16887-00-6	

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ANALYTICAL RESULTS

Project: McDonough AP-1 Assessment-Revised Report

Pace Project No.: 92624373

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: B-62									
Lab ID: 92624373004									
Collected: 09/09/22 11:25									
Received: 09/09/22 15:50									
Matrix: Water									
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.13	mg/L	0.10	0.050	1		09/13/22 19:27	16984-48-8	
Sulfate	45.8	mg/L	1.0	0.50	1		09/13/22 19:27	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: McDonough AP-1 Assessment-Revised Report

Pace Project No.: 92624373

QC Batch: 724698 Analysis Method: EPA 6010D
 QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
 Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92624373003, 92624373004

METHOD BLANK: 3775652 Matrix: Water

Associated Lab Samples: 92624373003, 92624373004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	09/21/22 19:48	
Iron	mg/L	ND	0.040	0.025	09/21/22 19:48	
Magnesium	mg/L	ND	0.050	0.012	09/21/22 19:48	
Potassium	mg/L	ND	0.20	0.15	09/21/22 19:48	
Sodium	mg/L	ND	1.0	0.58	09/21/22 19:48	

LABORATORY CONTROL SAMPLE: 3775653

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	
Iron	mg/L	1	1.0	101	80-120	
Magnesium	mg/L	1	1.0	104	80-120	
Potassium	mg/L	1	1.0	103	80-120	
Sodium	mg/L	1	1.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3775654 3775655

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		92624373001	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Calcium	mg/L	73.2	1	1	71.7	72.8	-152	-37	75-125	2	20	M1	
Iron	mg/L	1.9	1	1	2.9	2.9	101	100	75-125	0	20		
Magnesium	mg/L	25.2	1	1	25.7	25.7	49	52	75-125	0	20	M1	
Potassium	mg/L	8.2	1	1	9.0	9.1	75	90	75-125	2	20		
Sodium	mg/L	19.9	1	1	20.3	20.6	38	68	75-125	1	20	M1	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: McDonough AP-1 Assessment-Revised Report
Pace Project No.: 92624373

QC Batch: 724800 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92624373003, 92624373004

METHOD BLANK: 3776150 Matrix: Water
Associated Lab Samples: 92624373003, 92624373004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	09/24/22 14:20	
Arsenic	mg/L	ND	0.0050	0.0022	09/24/22 14:20	
Barium	mg/L	ND	0.0050	0.00067	09/24/22 14:20	
Beryllium	mg/L	ND	0.00050	0.000054	09/24/22 14:20	
Boron	mg/L	ND	0.040	0.0086	09/24/22 14:20	
Cadmium	mg/L	ND	0.00050	0.00011	09/24/22 14:20	
Chromium	mg/L	ND	0.0050	0.0011	09/24/22 14:20	
Cobalt	mg/L	ND	0.0050	0.00039	09/24/22 14:20	
Lead	mg/L	ND	0.0010	0.00089	09/24/22 14:20	
Lithium	mg/L	ND	0.030	0.00073	09/24/22 14:20	
Molybdenum	mg/L	ND	0.010	0.00074	09/24/22 14:20	
Selenium	mg/L	ND	0.0050	0.0014	09/24/22 14:20	
Thallium	mg/L	ND	0.0010	0.00018	09/24/22 14:20	

LABORATORY CONTROL SAMPLE: 3776151

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	105	80-120	
Arsenic	mg/L	0.1	0.10	102	80-120	
Barium	mg/L	0.1	0.099	99	80-120	
Beryllium	mg/L	0.1	0.10	102	80-120	
Boron	mg/L	1	1.1	107	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.10	104	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.10	100	80-120	
Lithium	mg/L	0.1	0.098	98	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	
Selenium	mg/L	0.1	0.10	101	80-120	
Thallium	mg/L	0.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3776152 3776153

Parameter	Units	92625866027 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.1	0.11	106	109	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.1	0.10	99	101	75-125	2	20	

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QUALITY CONTROL DATA

Project: McDonough AP-1 Assessment-Revised Report

Pace Project No.: 92624373

Parameter	Units	3776152		3776153		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92625866027 Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Barium	mg/L	14.6 ug/L	0.1	0.1	0.12	0.12	102	102	75-125	0	20		
Beryllium	mg/L	ND	0.1	0.1	0.10	0.10	104	102	75-125	1	20		
Boron	mg/L	393 ug/L	1	1	1.6	1.6	116	116	75-125	0	20		
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	101	102	75-125	1	20		
Chromium	mg/L	22.8 ug/L	0.1	0.1	0.13	0.14	112	118	75-125	4	20		
Cobalt	mg/L	0.44J ug/L	0.1	0.1	0.098	0.10	98	101	75-125	3	20		
Lead	mg/L	ND	0.1	0.1	0.095	0.098	94	98	75-125	4	20		
Lithium	mg/L	ND	0.1	0.1	0.10	0.10	103	102	75-125	1	20		
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.11	100	105	75-125	5	20		
Selenium	mg/L	ND	0.1	0.1	0.098	0.10	98	100	75-125	2	20		
Thallium	mg/L	ND	0.1	0.1	0.095	0.099	95	99	75-125	4	20		

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QUALITY CONTROL DATA

Project: McDonough AP-1 Assessment-Revised Report

Pace Project No.: 92624373

QC Batch: 724426

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92624373003, 92624373004

METHOD BLANK: 3774367

Matrix: Water

Associated Lab Samples: 92624373003, 92624373004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	09/22/22 17:16	

LABORATORY CONTROL SAMPLE: 3774368

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3774369 3774370

Parameter	Units	92624373001		3774370		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	0.00014J	0.0025	0.0025	0.0025	93	93	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: McDonough AP-1 Assessment-Revised Report
Pace Project No.: 92624373

QC Batch: 722886 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92624373003, 92624373004

METHOD BLANK: 3766455 Matrix: Water
Associated Lab Samples: 92624373003, 92624373004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10.0	09/14/22 11:30	

LABORATORY CONTROL SAMPLE: 3766456

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	384	96	80-120	

SAMPLE DUPLICATE: 3766458

Parameter	Units	92624840004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	620000 ug/L	680	9	10	

SAMPLE DUPLICATE: 3767354

Parameter	Units	92624372007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	252	297	16	10 R1	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: McDonough AP-1 Assessment-Revised Report
Pace Project No.: 92624373

QC Batch: 723206 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92624373003, 92624373004

METHOD BLANK: 3768028 Matrix: Water
Associated Lab Samples: 92624373003, 92624373004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	09/14/22 14:56	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	09/14/22 14:56	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	09/14/22 14:56	

LABORATORY CONTROL SAMPLE: 3768029

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.2	100	80-120	

LABORATORY CONTROL SAMPLE: 3768030

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.8	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3768031 3768032

Parameter	Units	92625359004		3768032		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Alkalinity, Total as CaCO3	mg/L	324	50	50	353	349	58	51	80-120	1	25 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3768033 3768034

Parameter	Units	92624372011		3768034		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Alkalinity, Total as CaCO3	mg/L	134	50	50	193	185	118	102	80-120	4	25

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: McDonough AP-1 Assessment-Revised Report
Pace Project No.: 92624373

QC Batch: 722843 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92624373003, 92624373004

METHOD BLANK: 3766296 Matrix: Water
Associated Lab Samples: 92624373003, 92624373004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/13/22 12:35	
Fluoride	mg/L	ND	0.10	0.050	09/13/22 12:35	
Sulfate	mg/L	ND	1.0	0.50	09/13/22 12:35	

LABORATORY CONTROL SAMPLE: 3766297

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.4	101	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	50.8	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3766298 3766299

Parameter	Units	92624945004		MS		MSD		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result						
Chloride	mg/L	938	50	50	975	975	73	74	90-110	0	10	M1	
Fluoride	mg/L	ND	2.5	2.5	3.3J	3.8J	132	151	90-110		10	M1	
Sulfate	mg/L	3180	50	50	3170	3160	-30	-43	90-110	0	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3766300 3766301

Parameter	Units	92624372011		MS		MSD		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result						
Chloride	mg/L	5.4	50	50	57.1	58.0	103	105	90-110	2	10		
Fluoride	mg/L	0.082J	2.5	2.5	2.4	2.4	92	92	90-110	0	10		
Sulfate	mg/L	96.6	50	50	150	153	106	113	90-110	2	10	M1	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: McDonough AP-1 Assessment-Revised Report

Pace Project No.: 92624373

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: McDonough AP-1 Assessment-Revised Report
Pace Project No.: 92624373

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92624373003	B-100				
92624373004	B-62				
92624373003	B-100	EPA 3010A	724698	EPA 6010D	724853
92624373004	B-62	EPA 3010A	724698	EPA 6010D	724853
92624373003	B-100	EPA 3005A	724800	EPA 6020B	724886
92624373004	B-62	EPA 3005A	724800	EPA 6020B	724886
92624373003	B-100	EPA 7470A	724426	EPA 7470A	725130
92624373004	B-62	EPA 7470A	724426	EPA 7470A	725130
92624373003	B-100	SM 2540C-2015	722886		
92624373004	B-62	SM 2540C-2015	722886		
92624373003	B-100	SM 2320B-2011	723206		
92624373004	B-62	SM 2320B-2011	723206		
92624373003	B-100	EPA 300.0 Rev 2.1 1993	722843		
92624373004	B-62	EPA 300.0 Rev 2.1 1993	722843		

REPORT OF LABORATORY ANALYSIS

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	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: November 15, 2021 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.08	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: Georgica Power

Project #:

WO#: 92624373



Courier: Commercial Fed Ex Pace UPS USPS Other: Client

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 9/9/22

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

JM

Thermometer: IR Gun ID: 230 Type of Ice: Wet Blue None

Cooler Temp: 2.4 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 2.4

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>WJ</u>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO# : 92624373

PM: NMG

Due Date: 11/12/22

CLIENT: GA-GA Power

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project :

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic 2N Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - ab)	SP2T-250 mL Sterile Plastic (N/A - ab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1		2	1																										
2		2	1																										
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

November 10, 2022

Andrea McClure
WSP/Golder
5170 Peachtree Road
Building 100, Suite 300
Atlanta, GA 30341

RE: Project: McDonough AP1,2,3/4 ASSESS RAD-Revised Report
Pace Project No.: 92624383

Dear Andrea McClure:

Enclosed are the analytical results for sample(s) received by the laboratory on September 09, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:


- Pace Analytical Services - Greensburg

Revision 2: Issued on 11/10/22 to update Project Name.

Revision 1: Issued on 11/4/22 to include Radium QC Sheets and to update the samples included in this report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Stephen Benda, Southern Company
Noelia Gangi, Georgia Power
Daniela Herrera, Golder
Ben Hodges, Georgia Power
Kristen Jurinko
Laura Midkiff, Georgia Power

Karim Minkara, Golder Associates - Atlanta
J. Shelby Mobley, Southern Company
Charles Norton, Southern Company
Ms. Lauren Petty, Southern Company
Dawn Prell, Golder Associates Inc.
Michael Smilley, Georgia Power
Yong Cheng Soo, WSP/Golder



REPORT OF LABORATORY ANALYSIS

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November 10, 2022
Page 2

cc: Tina Sullivan, ERM



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: McDonough AP1,2,3/4 ASSESS RAD-Revised Report
Pace Project No.: 92624383

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: McDonough AP1,2,3/4 ASSESS RAD-Revised Report

Pace Project No.: 92624383

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92624383003	B-100	Water	09/08/22 11:05	09/09/22 15:50
92624383004	B-62	Water	09/09/22 11:25	09/09/22 15:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: McDonough AP1,2,3/4 ASSESS RAD-Revised Report

Pace Project No.: 92624383

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92624383003	B-100	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92624383004	B-62	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP1,2,3/4 ASSESS RAD-Revised Report

Pace Project No.: 92624383

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: B-100 Lab ID: 92624383003 Collected: 09/08/22 11:05 Received: 09/09/22 15:50 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.114 ± 0.0896 (0.141) C:89% T:NA	pCi/L	10/02/22 10:26	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.529 ± 0.360 (0.681) C:70% T:87%	pCi/L	09/28/22 12:21	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.643 ± 0.450 (0.822)	pCi/L	10/03/22 12:21	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP1,2,3/4 ASSESS RAD-Revised Report

Pace Project No.: 92624383

Sample: B-62 **Lab ID: 92624383004** Collected: 09/09/22 11:25 Received: 09/09/22 15:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.627 ± 0.205 (0.135) C:86% T:NA	pCi/L	10/02/22 10:26	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	1.33 ± 0.510 (0.781) C:71% T:88%	pCi/L	09/28/22 12:21	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	1.96 ± 0.715 (0.916)	pCi/L	10/03/22 12:21	7440-14-4	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP1,2,3/4 ASSESS RAD-Revised Report

Pace Project No.: 92624383

QC Batch: 532087

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples:

METHOD BLANK: 2581306

Matrix: Water

Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.122 ± 0.122 (0.241) C:95% T:NA	pCi/L	09/27/22 08:34	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP1,2,3/4 ASSESS RAD-Revised Report

Pace Project No.: 92624383

QC Batch: 533110

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92624383003, 92624383004

METHOD BLANK: 2586601

Matrix: Water

Associated Lab Samples: 92624383003, 92624383004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.00759 ± 0.0468 (0.133) C:88% T:NA	pCi/L	10/02/22 10:24	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP1,2,3/4 ASSESS RAD-Revised Report

Pace Project No.: 92624383

QC Batch: 532089

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples:

METHOD BLANK: 2581322

Matrix: Water

Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.391 ± 0.413 (0.858) C:74% T:78%	pCi/L	09/23/22 16:00	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP1,2,3/4 ASSESS RAD-Revised Report

Pace Project No.: 92624383

QC Batch: 533111

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92624383003, 92624383004

METHOD BLANK: 2586603

Matrix: Water

Associated Lab Samples: 92624383003, 92624383004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.798 ± 0.368 (0.604) C:81% T:85%	pCi/L	09/28/22 11:36	

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

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QUALIFIERS

Project: McDonough AP1,2,3/4 ASSESS RAD-Revised Report

Pace Project No.: 92624383

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: McDonough AP1,2,3/4 ASSESS RAD-Revised Report

Pace Project No.: 92624383

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92624383003	B-100	EPA 9315	533110		
92624383004	B-62	EPA 9315	533110		
92624383003	B-100	EPA 9320	533111		
92624383004	B-62	EPA 9320	533111		
92624383003	B-100	Total Radium Calculation	536982		
92624383004	B-62	Total Radium Calculation	536982		

REPORT OF LABORATORY ANALYSIS

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Document Name:
Sample Condition Upon Receipt (SCUR)
 Document No.:
F-CAR-CS-033-Rev.08

Document Revised: November 15, 2021
 Page 1 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition
Upon Receipt

Client Name:
Georgia Power

Project #:

WO#: 92624383



Courier:
 Commercial Fed Ex Pace UPS USPS Other: Client

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: *9/9/22 JM*

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer:
 IR Gun ID: *230* Type of Ice: Wet Blue None

Biological Tissue Frozen? Yes No N/A

Cooler Temp: *2.4* Correction Factor: Add/Subtract (°C) *0.0*

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): *2.4*

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <i>WJ</i>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO# : 92624383

PM: NMG

Due Date: 09/29/22

CLIENT: GA-GA Power

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Project #

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9A-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG6U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)			
1		2	1																											
2		2	1																											
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: RMS
Date: 9/20/2022
Worklist: 68887
Matrix: DW

Method Blank Assessment		
MB Sample ID	2586601	
MB concentration:	0.008	
M/B Counting Uncertainty:	0.047	
MB MDC:	0.133	
MB Numerical Performance Indicator:	0.32	
MB Status vs Numerical Indicator:	N/A	
MB Status vs. MDC:	Pass	

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
	LCSD68887	LCSD68887
Count Date:	10/2/2022	
Spike I.D.:	19-033	
Decay Corrected Spike Concentration (pCi/mL):	24.023	
Volume Used (mL):	0.10	
Aliquot Volume (L, g, F):	0.505	
Target Conc. (pCi/L, g, F):	4.760	
Uncertainty (Calculated):	0.057	
Result (pCi/L, g, F):	3.993	
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.431	
Numerical Performance Indicator:	-3.46	
Percent Recovery:	83.89%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	125%	
Lower % Recovery Limits:	75%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.:		
Sample MS I.D.:		
Sample MSD I.D.:		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):		
MS Target Conc. (pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result:		
Sample Result Counting Uncertainty (pCi/L, g, F):		
Sample Matrix Spike Result:		
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		
MS Numerical Performance Indicator:		
MSD Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:		
MS/MSD Lower % Recovery Limits:		

Duplicate Sample Assessment		
Sample I.D.:	92624832001	92624832001
Duplicate Sample I.D.:	92624832001DUP	92624832002
Sample Result (pCi/L, g, F):	0.124	0.124
Sample Result Counting Uncertainty (pCi/L, g, F):	0.091	0.091
Sample Duplicate Result (pCi/L, g, F):	0.071	0.187
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.074	0.104
Are sample and/or duplicate results below RL?	See Below ##	See Below ##
Duplicate Numerical Performance Indicator:	0.874	-0.888
Duplicate RPD:	53.80%	40.52%
Duplicate Status vs Numerical Indicator:	N/A	N/A
Duplicate Status vs RPD:	Fail***	Fail***
% RPD Limit:	25%	25%

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.:		
Sample MS I.D.:		
Sample MSD I.D.:		
Sample Matrix Spike Result:		
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		
Duplicate Numerical Performance Indicator:		
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:		
MS/MSD Duplicate Status vs Numerical Indicator:		
MS/MSD Duplicate Status vs RPD:		
% RPD Limit:		

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

M. 10/3/22

***Batch must be re-prepped due to unacceptable precision. *N/A*

LAM 10/3/22

LAM 10/3/22



Quality Control Sample Performance Assessment

Test: Ra-228
Analyst: VAL
Date: 9/14/2022
Worklist: 68823
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment		
MB Sample ID	2581322	
MB concentration:	0.391	
M/B 2 Sigma CSU:	0.413	
MB MDC:	0.858	
MB Numerical Performance Indicator:	1.86	
MB Status vs Numerical Indicator:	Pass	
MB Status vs. MDC:	Pass	

Laboratory Control Sample Assessment	LCSD (Y or N)?	
	LCS68823	LCS68823
Count Date:	9/23/2022	9/23/2022
Spike I.D.:	20-030	20-030
Decay Corrected Spike Concentration (pCi/mL):	30.094	30.094
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.812	0.815
Target Conc. (pCi/L, g, F):	3.707	3.693
Uncertainty (Calculated):	0.182	0.181
Result (pCi/L, g, F):	3.342	3.360
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.875	0.865
Numerical Performance Indicator:	-0.80	-0.74
Percent Recovery:	90.14%	90.99%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.:		
Sample MS I.D.:		
Sample MSD I.D.:		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):		
MS Target Conc. (pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result:		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
MS Numerical Performance Indicator:		
MSD Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:		
MS/MSD Lower % Recovery Limits:		

Duplicate Sample Assessment		
Sample I.D.:	LCS68823	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	LCS68823	
Sample Result (pCi/L, g, F):	3.342	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.875	
Sample Duplicate Result (pCi/L, g, F):	3.360	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.865	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	-0.030	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	0.94%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment		
Sample I.D.:		
Sample MS I.D.:		
Sample MSD I.D.:		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
Duplicate Numerical Performance Indicator:		
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:		
MS/MSD Duplicate Status vs Numerical Indicator:		
MS/MSD Duplicate Status vs RPD:		
% RPD Limit:		

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Maipul

Quality Control Sample Performance Assessment



Test: Ra-228
Analyst: VAL
Date: 9/19/2022
Worklist: 68888
Matrix: WT

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Method Blank Assessment		
MB Sample ID	2586603	
MB concentration:	0.798	
M/B 2 Sigma CSU:	0.368	
MB MDC:	0.604	
MB Numerical Performance Indicator:	4.25	
MB Status vs Numerical Indicator:	Fail*	
MB Status vs. MDC:	See Comment*	

Laboratory Control Sample Assessment	LCSD (Y or N)?	
	LCS68888	LCSD68888
Count Date:	9/28/2022	9/28/2022
Spike I.D.:	22-029	22-029
Decay Corrected Spike Concentration (pCi/mL):	19.913	19.913
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.808	0.809
Target Conc. (pCi/L, g, F):	4.927	4.925
Uncertainty (Calculated):	0.355	0.355
Result (pCi/L, g, F):	5.626	5.197
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.255	1.158
Numerical Performance Indicator:	1.05	0.44
Percent Recovery:	114.19%	105.52%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.:		
Sample MS I.D.:		
Sample MSD I.D.:		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):		
MS Target Conc. (pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result:		
Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Result:		
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		
MS Numerical Performance Indicator:		
MSD Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:		
MS/MSD Lower % Recovery Limits:		

Duplicate Sample Assessment		
Sample I.D.:	LCS68888	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Duplicate Sample I.D.:	LCSD68888	
Sample Result (pCi/L, g, F):	5.626	
Sample Result 2 Sigma CSU (pCi/L, g, F):	1.255	
Sample Duplicate Result (pCi/L, g, F):	5.197	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.158	
Are sample and/or duplicate results below RL?	NO	
Duplicate Numerical Performance Indicator:	0.493	
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	7.89%	
Duplicate Status vs Numerical Indicator:	Pass	
Duplicate Status vs RPD:	Pass	
% RPD Limit:	36%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment
Sample I.D.:
Sample MS I.D.:
Sample MSD I.D.:
Sample Matrix Spike Result:
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):
Duplicate Numerical Performance Indicator:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPD:
% RPD Limit:

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

*The method blank result is below the reporting limit for this analysis and is acceptable.

Handwritten signature and date: 9/21/22

November 10, 2022

Andrea McClure
WSP/Golder
5170 Peachtree Road
Building 100, Suite 300
Atlanta, GA 30341

RE: Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report
Pace Project No.: 92625189

Dear Andrea McClure:

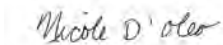
Enclosed are the analytical results for sample(s) received by the laboratory between September 13, 2022 and September 21, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Stephen Benda, Southern Company
Noelia Gangi, Georgia Power
Daniela Herrera, Golder
Ben Hodges, Georgia Power
Kristen Jurinko
Laura Midkiff, Georgia Power
Karim Minkara, Golder Associates - Atlanta

J. Shelby Mobley, Southern Company
Charles Norton, Southern Company
Ms. Lauren Petty, Southern Company
Dawn Prell, Golder Associates Inc.
Michael Smilley, Georgia Power
Yong Cheng Soo, WSP/Golder
Tina Sullivan, ERM



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001

South Carolina Drinking Water Cert. #: 99006003

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Louisiana DoH Drinking Water #: LA029

Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report
Pace Project No.: 92625189

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92625189001	B-90	Water	09/12/22 12:15	09/13/22 10:30
92625189002	B-91	Water	09/12/22 13:26	09/13/22 10:30
92625189003	B-95	Water	09/12/22 14:38	09/13/22 10:30
92625189004	B-99	Water	09/12/22 10:25	09/13/22 10:30
92625189005	B-119D	Water	09/12/22 10:37	09/13/22 10:30
92625189006	Dup-3	Water	09/12/22 00:00	09/13/22 10:30
92625189007	B-96	Water	09/13/22 11:33	09/14/22 09:53
92625189008	B-122D	Water	09/14/22 10:33	09/15/22 08:20
92625189009	EB-4	Water	09/14/22 11:23	09/15/22 08:20
92625189010	B-117D	Water	09/15/22 10:36	09/16/22 16:30
92625189011	B-123D	Water	09/20/22 15:25	09/21/22 15:05

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report
Pace Project No.: 92625189

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92625189001	B-90	EPA 6020B	CW1	1
92625189002	B-91	EPA 6020B	CW1	1
92625189003	B-95	EPA 6020B	CW1	1
92625189004	B-99	EPA 6020B	CW1	1
92625189005	B-119D	EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	CDC	3
92625189006	Dup-3	EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	CDC	3
92625189007	B-96	EPA 6020B	CW1	1
92625189008	B-122D	EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	CDC	3
92625189009	EB-4	EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	CDC	3
92625189010	B-117D	EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	CDC	3
92625189011	B-123D	EPA 6010D	DRB	5
		EPA 6020B	CW1	13

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 7470A	VB	1
		SM 2320B-2011	SMS	3
		SM 2540C-2011	MAB2	1
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: B-90									
Lab ID: 92625189001									
Collected: 09/12/22 12:15 Received: 09/13/22 10:30 Matrix: Water									
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/13/22 13:55		
pH	5.35	Std. Units			1		09/13/22 13:55		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Boron	2.6	mg/L	0.040	0.0086	1	09/27/22 18:00	09/28/22 23:37	7440-42-8	

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ANALYTICAL RESULTS

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

Sample: B-91		Lab ID: 92625189002		Collected: 09/12/22 13:26		Received: 09/13/22 10:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/13/22 13:55		
pH	5.28	Std. Units			1		09/13/22 13:55		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Boron	2.9	mg/L	0.040	0.0086	1	09/27/22 18:00	09/29/22 00:01	7440-42-8	

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ANALYTICAL RESULTS

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

Sample: B-95		Lab ID: 92625189003		Collected: 09/12/22 14:38		Received: 09/13/22 10:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/13/22 13:55		
pH	5.33	Std. Units			1		09/13/22 13:55		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Boron	1.5	mg/L	0.040	0.0086	1	09/27/22 18:00	09/29/22 00:07	7440-42-8	

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ANALYTICAL RESULTS

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

Sample: B-99		Lab ID: 92625189004		Collected: 09/12/22 10:25		Received: 09/13/22 10:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/13/22 13:56		
pH	5.71	Std. Units			1		09/13/22 13:56		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Boron	2.2	mg/L	0.040	0.0086	1	09/27/22 18:00	09/29/22 00:13	7440-42-8	

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ANALYTICAL RESULTS

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report
Pace Project No.: 92625189

Sample: B-119D		Lab ID: 92625189005		Collected: 09/12/22 10:37		Received: 09/13/22 10:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/13/22 13:56		
pH	6.57	Std. Units			1		09/13/22 13:56		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	1.5	mg/L	0.040	0.025	1	09/28/22 12:36	09/28/22 16:10	7439-89-6	
Potassium	2.0	mg/L	0.20	0.15	1	09/28/22 12:36	09/28/22 16:10	7440-09-7	
Sodium	10.2	mg/L	1.0	0.58	1	09/28/22 12:36	09/28/22 16:10	7440-23-5	M1
Calcium	10.4	mg/L	1.0	0.12	1	09/28/22 12:36	09/28/22 16:10	7440-70-2	M1
Magnesium	3.2	mg/L	0.050	0.012	1	09/28/22 12:36	09/28/22 16:10	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0015J	mg/L	0.0030	0.00078	1	09/27/22 18:00	09/29/22 00:19	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/27/22 18:00	09/29/22 00:19	7440-38-2	
Barium	0.0029J	mg/L	0.0050	0.00067	1	09/27/22 18:00	09/29/22 00:19	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/27/22 18:00	09/29/22 00:19	7440-41-7	
Boron	0.048	mg/L	0.040	0.0086	1	09/27/22 18:00	09/29/22 00:19	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/27/22 18:00	09/29/22 00:19	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/27/22 18:00	09/29/22 00:19	7440-47-3	
Cobalt	0.0031J	mg/L	0.0050	0.00039	1	09/27/22 18:00	09/29/22 00:19	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/27/22 18:00	09/29/22 00:19	7439-92-1	
Lithium	0.0045J	mg/L	0.030	0.00073	1	09/27/22 18:00	09/29/22 00:19	7439-93-2	
Molybdenum	0.015	mg/L	0.010	0.00074	1	09/27/22 18:00	09/29/22 00:19	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/27/22 18:00	09/29/22 00:19	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/27/22 18:00	09/29/22 00:19	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	10/03/22 11:30	10/03/22 13:22	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	87.0	mg/L	25.0	10.0	1		09/15/22 11:46		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	60.6	mg/L	5.0	5.0	1		09/16/22 17:12		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/16/22 17:12		
Alkalinity, Total as CaCO3	60.6	mg/L	5.0	5.0	1		09/16/22 17:12		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.8	mg/L	1.0	0.60	1		09/15/22 21:46	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

Sample: B-119D **Lab ID: 92625189005** Collected: 09/12/22 10:37 Received: 09/13/22 10:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.084J	mg/L	0.10	0.050	1		09/15/22 21:46	16984-48-8	
Sulfate	2.8	mg/L	1.0	0.50	1		09/15/22 21:46	14808-79-8	

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ANALYTICAL RESULTS

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report
Pace Project No.: 92625189

Sample: Dup-3		Lab ID: 92625189006		Collected: 09/12/22 00:00		Received: 09/13/22 10:30		Matrix: Water	
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	1.6	mg/L	0.040	0.025	1	09/28/22 12:36	09/28/22 16:41	7439-89-6	
Potassium	2.1	mg/L	0.20	0.15	1	09/28/22 12:36	09/28/22 16:41	7440-09-7	
Sodium	10.9	mg/L	1.0	0.58	1	09/28/22 12:36	09/28/22 16:41	7440-23-5	
Calcium	11.2	mg/L	1.0	0.12	1	09/28/22 12:36	09/28/22 16:41	7440-70-2	
Magnesium	3.5	mg/L	0.050	0.012	1	09/28/22 12:36	09/28/22 16:41	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0014J	mg/L	0.0030	0.00078	1	09/27/22 18:00	09/29/22 00:37	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/27/22 18:00	09/29/22 00:37	7440-38-2	
Barium	0.0028J	mg/L	0.0050	0.00067	1	09/27/22 18:00	09/29/22 00:37	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/27/22 18:00	09/29/22 00:37	7440-41-7	
Boron	0.023J	mg/L	0.040	0.0086	1	09/27/22 18:00	09/29/22 00:37	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/27/22 18:00	09/29/22 00:37	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/27/22 18:00	09/29/22 00:37	7440-47-3	
Cobalt	0.0030J	mg/L	0.0050	0.00039	1	09/27/22 18:00	09/29/22 00:37	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/27/22 18:00	09/29/22 00:37	7439-92-1	
Lithium	0.0045J	mg/L	0.030	0.00073	1	09/27/22 18:00	09/29/22 00:37	7439-93-2	
Molybdenum	0.015	mg/L	0.010	0.00074	1	09/27/22 18:00	09/29/22 00:37	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/27/22 18:00	09/29/22 00:37	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/27/22 18:00	09/29/22 00:37	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	10/03/22 11:30	10/03/22 13:25	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	94.0	mg/L	25.0	10.0	1		09/15/22 11:46		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity,Bicarbonate (CaCO3)	61.4	mg/L	5.0	5.0	1		09/16/22 17:19		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/16/22 17:19		
Alkalinity, Total as CaCO3	61.4	mg/L	5.0	5.0	1		09/16/22 17:19		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.9	mg/L	1.0	0.60	1		09/15/22 22:01	16887-00-6	
Fluoride	0.085J	mg/L	0.10	0.050	1		09/15/22 22:01	16984-48-8	
Sulfate	2.9	mg/L	1.0	0.50	1		09/15/22 22:01	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

Sample: B-96 **Lab ID: 92625189007** Collected: 09/13/22 11:33 Received: 09/14/22 09:53 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer				1		09/14/22 14:44		
pH	5.03	Std. Units			1		09/14/22 14:44		

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Boron	3.4	mg/L	0.040	0.0086	1	09/27/22 18:00	09/29/22 00:43	7440-42-8	
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

Sample: B-122D **Lab ID: 92625189008** Collected: 09/14/22 10:33 Received: 09/15/22 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer						09/15/22 17:33		
pH	6.07	Std. Units					09/15/22 17:33		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Iron	13.8	mg/L	0.040	0.025	1	09/28/22 12:36	09/28/22 16:46	7439-89-6	
Potassium	4.0	mg/L	0.20	0.15	1	09/28/22 12:36	09/28/22 16:46	7440-09-7	
Sodium	31.3	mg/L	1.0	0.58	1	09/28/22 12:36	09/28/22 16:46	7440-23-5	
Calcium	51.0	mg/L	1.0	0.12	1	09/28/22 12:36	09/28/22 16:46	7440-70-2	
Magnesium	9.9	mg/L	0.050	0.012	1	09/28/22 12:36	09/28/22 16:46	7439-95-4	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	09/27/22 18:00	09/29/22 01:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/27/22 18:00	09/29/22 01:01	7440-38-2	
Barium	0.046	mg/L	0.0050	0.00067	1	09/27/22 18:00	09/29/22 01:01	7440-39-3	
Beryllium	0.00028J	mg/L	0.00050	0.000054	1	09/27/22 18:00	09/29/22 01:01	7440-41-7	
Boron	0.25	mg/L	0.040	0.0086	1	09/27/22 18:00	09/29/22 01:01	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/27/22 18:00	09/29/22 01:01	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/27/22 18:00	09/29/22 01:01	7440-47-3	
Cobalt	0.0033J	mg/L	0.0050	0.00039	1	09/27/22 18:00	09/29/22 01:01	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/27/22 18:00	09/29/22 01:01	7439-92-1	
Lithium	0.013J	mg/L	0.030	0.00073	1	09/27/22 18:00	09/29/22 01:01	7439-93-2	
Molybdenum	0.0011J	mg/L	0.010	0.00074	1	09/27/22 18:00	09/29/22 01:01	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/27/22 18:00	09/29/22 01:01	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/27/22 18:00	09/29/22 01:01	7440-28-0	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	10/03/22 11:30	10/03/22 13:27	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	315	mg/L	25.0	10.0	1		09/19/22 09:22		
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2320B Alkalinity

Analytical Method: SM 2320B-2011
Pace Analytical Services - Asheville

Alkalinity,Bicarbonate (CaCO3)	123	mg/L	5.0	5.0	1		09/20/22 16:56		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/20/22 16:56		
Alkalinity, Total as CaCO3	123	mg/L	5.0	5.0	1		09/20/22 16:56		

300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	15.5	mg/L	1.0	0.60	1		09/19/22 18:14	16887-00-6	
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

Sample: B-122D		Lab ID: 92625189008		Collected: 09/14/22 10:33	Received: 09/15/22 08:20	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Fluoride	0.17	mg/L	0.10	0.050	1		09/19/22 18:14	16984-48-8	
Sulfate	121	mg/L	2.0	1.0	2		09/20/22 00:34	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report
Pace Project No.: 92625189

Sample: EB-4		Lab ID: 92625189009		Collected: 09/14/22 11:23		Received: 09/15/22 08:20		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	ND	mg/L	0.040	0.025	1	09/28/22 12:36	09/28/22 16:50	7439-89-6		
Potassium	ND	mg/L	0.20	0.15	1	09/28/22 12:36	09/28/22 16:50	7440-09-7		
Sodium	ND	mg/L	1.0	0.58	1	09/28/22 12:36	09/28/22 16:50	7440-23-5		
Calcium	ND	mg/L	1.0	0.12	1	09/28/22 12:36	09/28/22 16:50	7440-70-2		
Magnesium	ND	mg/L	0.050	0.012	1	09/28/22 12:36	09/28/22 16:50	7439-95-4		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	09/27/22 18:00	09/29/22 01:07	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0022	1	09/27/22 18:00	09/29/22 01:07	7440-38-2		
Barium	0.0024J	mg/L	0.0050	0.00067	1	09/27/22 18:00	09/29/22 01:07	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	09/27/22 18:00	09/29/22 01:07	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	09/27/22 18:00	09/29/22 01:07	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	09/27/22 18:00	09/29/22 01:07	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	09/27/22 18:00	09/29/22 01:07	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	09/27/22 18:00	09/29/22 01:07	7440-48-4		
Lead	ND	mg/L	0.0010	0.00089	1	09/27/22 18:00	09/29/22 01:07	7439-92-1		
Lithium	ND	mg/L	0.030	0.00073	1	09/27/22 18:00	09/29/22 01:07	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00074	1	09/27/22 18:00	09/29/22 01:07	7439-98-7		
Selenium	ND	mg/L	0.0050	0.0014	1	09/27/22 18:00	09/29/22 01:07	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00018	1	09/27/22 18:00	09/29/22 01:07	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	10/03/22 11:30	10/03/22 13:30	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		09/19/22 09:22			
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/20/22 17:07			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/20/22 17:07			
Alkalinity, Total as CaCO3	ND	mg/L	5.0	5.0	1		09/20/22 17:07			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		09/19/22 18:29	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		09/19/22 18:29	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		09/19/22 18:29	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report
Pace Project No.: 92625189

Sample: B-117D		Lab ID: 92625189010		Collected: 09/15/22 10:36		Received: 09/16/22 16:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/19/22 10:29		
pH	5.86	Std. Units			1		09/19/22 10:29		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	ND	mg/L	0.040	0.025	1	09/28/22 12:36	09/28/22 16:55	7439-89-6	
Potassium	2.6	mg/L	0.20	0.15	1	09/28/22 12:36	09/28/22 16:55	7440-09-7	
Sodium	16.6	mg/L	1.0	0.58	1	09/28/22 12:36	09/28/22 16:55	7440-23-5	
Calcium	9.5	mg/L	1.0	0.12	1	09/28/22 12:36	09/28/22 16:55	7440-70-2	
Magnesium	1.5	mg/L	0.050	0.012	1	09/28/22 12:36	09/28/22 16:55	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/27/22 18:00	09/29/22 15:21	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/27/22 18:00	09/29/22 15:21	7440-38-2	
Barium	0.043	mg/L	0.0050	0.00067	1	09/27/22 18:00	09/29/22 15:21	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/27/22 18:00	09/29/22 15:21	7440-41-7	
Boron	0.011J	mg/L	0.040	0.0086	1	09/27/22 18:00	09/29/22 15:21	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/27/22 18:00	09/29/22 15:21	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/27/22 18:00	09/29/22 15:21	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/27/22 18:00	09/29/22 15:21	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/27/22 18:00	09/29/22 15:21	7439-92-1	
Lithium	0.0094J	mg/L	0.030	0.00073	1	09/27/22 18:00	09/29/22 15:21	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	09/27/22 18:00	09/29/22 15:21	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/27/22 18:00	09/29/22 15:21	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/27/22 18:00	09/29/22 15:21	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	10/03/22 11:30	10/03/22 13:33	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	106	mg/L	25.0	10.0	1		09/20/22 13:21		
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	42.0	mg/L	5.0	5.0	1		09/20/22 17:38		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/20/22 17:38		
Alkalinity, Total as CaCO ₃	42.0	mg/L	5.0	5.0	1		09/20/22 17:38		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.6	mg/L	1.0	0.60	1		09/20/22 20:22	16887-00-6	

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ANALYTICAL RESULTS

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

Sample: B-117D **Lab ID: 92625189010** Collected: 09/15/22 10:36 Received: 09/16/22 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.090J	mg/L	0.10	0.050	1		09/20/22 20:22	16984-48-8	
Sulfate	14.4	mg/L	1.0	0.50	1		09/20/22 20:22	14808-79-8	

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ANALYTICAL RESULTS

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report
Pace Project No.: 92625189

Sample: B-123D		Lab ID: 92625189011		Collected: 09/20/22 15:25		Received: 09/21/22 15:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/21/22 16:51		
pH	7.13	Std. Units			1		09/21/22 16:51		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Iron	5.4	mg/L	0.040	0.025	1	09/28/22 12:36	09/28/22 18:37	7439-89-6	
Potassium	7.6	mg/L	0.20	0.15	1	09/28/22 12:36	09/28/22 18:37	7440-09-7	
Sodium	29.0	mg/L	1.0	0.58	1	09/28/22 12:36	09/28/22 18:37	7440-23-5	
Calcium	90.8	mg/L	1.0	0.12	1	09/28/22 12:36	09/28/22 18:37	7440-70-2	
Magnesium	13.0	mg/L	0.050	0.012	1	09/28/22 12:36	09/28/22 18:37	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/27/22 18:00	09/29/22 16:41	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/27/22 18:00	09/29/22 16:41	7440-38-2	
Barium	0.023	mg/L	0.0050	0.00067	1	09/27/22 18:00	09/29/22 16:41	7440-39-3	
Beryllium	0.00022J	mg/L	0.00050	0.000054	1	09/27/22 18:00	09/29/22 16:41	7440-41-7	
Boron	0.49	mg/L	0.040	0.0086	1	09/27/22 18:00	09/29/22 16:41	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/27/22 18:00	09/29/22 16:41	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/27/22 18:00	09/29/22 16:41	7440-47-3	
Cobalt	0.056	mg/L	0.0050	0.00039	1	09/27/22 18:00	09/29/22 16:41	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/27/22 18:00	09/29/22 16:41	7439-92-1	
Lithium	0.034	mg/L	0.030	0.00073	1	09/27/22 18:00	09/29/22 16:41	7439-93-2	
Molybdenum	0.0015J	mg/L	0.010	0.00074	1	09/27/22 18:00	09/29/22 16:41	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/27/22 18:00	09/29/22 16:41	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/27/22 18:00	09/29/22 16:41	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	10/03/22 11:30	10/03/22 13:35	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B-2011									
Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO3)	38.5	mg/L	5.0	5.0	1		09/22/22 23:09		
Alkalinity, Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/22/22 23:09		
Alkalinity, Total as CaCO3	38.5	mg/L	5.0	5.0	1		09/22/22 23:09		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011									
Pace Analytical Services - Asheville									
Total Dissolved Solids	533	mg/L	25.0	25.0	1		09/23/22 10:03		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	8.6	mg/L	1.0	0.60	1		09/23/22 03:42	16887-00-6	

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ANALYTICAL RESULTS

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

Sample: B-123D **Lab ID: 92625189011** Collected: 09/20/22 15:25 Received: 09/21/22 15:05 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.57	mg/L	0.10	0.050	1		09/23/22 03:42	16984-48-8	
Sulfate	292	mg/L	5.0	2.5	5		09/23/22 05:28	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

QC Batch:	726415	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92625189005, 92625189006, 92625189008, 92625189009, 92625189010, 92625189011

METHOD BLANK: 3783437 Matrix: Water

Associated Lab Samples: 92625189005, 92625189006, 92625189008, 92625189009, 92625189010, 92625189011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	09/28/22 16:00	
Iron	mg/L	ND	0.040	0.025	09/28/22 16:00	
Magnesium	mg/L	ND	0.050	0.012	09/28/22 16:00	
Potassium	mg/L	ND	0.20	0.15	09/28/22 16:00	
Sodium	mg/L	ND	1.0	0.58	09/28/22 16:00	

LABORATORY CONTROL SAMPLE: 3783438

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	
Iron	mg/L	1	1.0	104	80-120	
Magnesium	mg/L	1	1.1	108	80-120	
Potassium	mg/L	1	1.0	100	80-120	
Sodium	mg/L	1	1.0	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3783439 3783440

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92625189005 Result	Spike Conc.	Spike Conc.	Result						
Calcium	mg/L	10.4	1	1	11.7	11.7	130	136	75-125	1	20 M1
Iron	mg/L	1.5	1	1	2.6	2.6	106	107	75-125	0	20
Magnesium	mg/L	3.2	1	1	4.3	4.4	113	123	75-125	2	20
Potassium	mg/L	2.0	1	1	3.0	3.1	103	108	75-125	2	20
Sodium	mg/L	10.2	1	1	11.5	11.5	129	135	75-125	0	20 M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

QC Batch: 726202 Analysis Method: EPA 6020B
 QC Batch Method: EPA 3005A Analysis Description: 6020 MET
 Laboratory: Pace Analytical Services - Peachtree Corners, GA
 Associated Lab Samples: 92625189001, 92625189002, 92625189003, 92625189004, 92625189005, 92625189006, 92625189007, 92625189008, 92625189009

METHOD BLANK: 3782708 Matrix: Water
 Associated Lab Samples: 92625189001, 92625189002, 92625189003, 92625189004, 92625189005, 92625189006, 92625189007, 92625189008, 92625189009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	09/28/22 23:25	
Arsenic	mg/L	ND	0.0050	0.0022	09/28/22 23:25	
Barium	mg/L	ND	0.0050	0.00067	09/28/22 23:25	
Beryllium	mg/L	ND	0.00050	0.000054	09/28/22 23:25	
Boron	mg/L	ND	0.040	0.0086	09/28/22 23:25	
Cadmium	mg/L	ND	0.00050	0.00011	09/28/22 23:25	
Chromium	mg/L	ND	0.0050	0.0011	09/28/22 23:25	
Cobalt	mg/L	ND	0.0050	0.00039	09/28/22 23:25	
Lead	mg/L	ND	0.0010	0.00089	09/28/22 23:25	
Lithium	mg/L	ND	0.030	0.00073	09/28/22 23:25	
Molybdenum	mg/L	ND	0.010	0.00074	09/28/22 23:25	
Selenium	mg/L	ND	0.0050	0.0014	09/28/22 23:25	
Thallium	mg/L	ND	0.0010	0.00018	09/28/22 23:25	

LABORATORY CONTROL SAMPLE: 3782709

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	106	80-120	
Arsenic	mg/L	0.1	0.097	97	80-120	
Barium	mg/L	0.1	0.098	98	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	0.99	99	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.096	96	80-120	
Cobalt	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.098	98	80-120	
Lithium	mg/L	0.1	0.10	100	80-120	
Molybdenum	mg/L	0.1	0.10	102	80-120	
Selenium	mg/L	0.1	0.098	98	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3782710 3782711

Parameter	Units	92625189001 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.10	0.10	100	103	75-125	3	20	

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QUALITY CONTROL DATA

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3782710												3782711	
Parameter	Units	92625189001		MS	MSD	MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Arsenic	mg/L	ND	0.1	0.1	0.095	0.097	95	97	75-125	1	20		
Barium	mg/L	0.014	0.1	0.1	0.11	0.11	93	96	75-125	3	20		
Beryllium	mg/L	0.0018	0.1	0.1	0.093	0.092	91	91	75-125	0	20		
Boron	mg/L	2.6	1	1	3.7	3.7	107	107	75-125	0	20		
Cadmium	mg/L	0.00092	0.1	0.1	0.098	0.10	97	100	75-125	2	20		
Chromium	mg/L	ND	0.1	0.1	0.090	0.089	90	89	75-125	1	20		
Cobalt	mg/L	0.0032J	0.1	0.1	0.094	0.094	90	91	75-125	1	20		
Lead	mg/L	ND	0.1	0.1	0.090	0.091	90	90	75-125	0	20		
Lithium	mg/L	0.0052J	0.1	0.1	0.10	0.10	97	96	75-125	1	20		
Molybdenum	mg/L	ND	0.1	0.1	0.094	0.095	93	95	75-125	1	20		
Selenium	mg/L	0.0020J	0.1	0.1	0.099	0.098	97	96	75-125	1	20		
Thallium	mg/L	0.00020J	0.1	0.1	0.091	0.090	91	90	75-125	1	20		

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QUALITY CONTROL DATA

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report
Pace Project No.: 92625189

QC Batch: 726205 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92625189010, 92625189011

METHOD BLANK: 3782736 Matrix: Water
Associated Lab Samples: 92625189010, 92625189011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	09/29/22 14:50	
Arsenic	mg/L	ND	0.0050	0.0022	09/29/22 14:50	
Barium	mg/L	ND	0.0050	0.00067	09/29/22 14:50	
Beryllium	mg/L	ND	0.00050	0.000054	09/29/22 14:50	
Boron	mg/L	ND	0.040	0.0086	09/29/22 14:50	
Cadmium	mg/L	ND	0.00050	0.00011	09/29/22 14:50	
Chromium	mg/L	ND	0.0050	0.0011	09/29/22 14:50	
Cobalt	mg/L	ND	0.0050	0.00039	09/29/22 14:50	
Lead	mg/L	ND	0.0010	0.00089	09/29/22 14:50	
Lithium	mg/L	ND	0.030	0.00073	09/29/22 14:50	
Molybdenum	mg/L	ND	0.010	0.00074	09/29/22 14:50	
Selenium	mg/L	ND	0.0050	0.0014	09/29/22 14:50	
Thallium	mg/L	ND	0.0010	0.00018	09/29/22 14:50	

LABORATORY CONTROL SAMPLE: 3782737

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.099	99	80-120	
Arsenic	mg/L	0.1	0.095	95	80-120	
Barium	mg/L	0.1	0.094	94	80-120	
Beryllium	mg/L	0.1	0.096	96	80-120	
Boron	mg/L	1	1.0	102	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.10	102	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Lithium	mg/L	0.1	0.098	98	80-120	
Molybdenum	mg/L	0.1	0.095	95	80-120	
Selenium	mg/L	0.1	0.097	97	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3782738 3782739

Parameter	Units	92625189010 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Antimony	mg/L	ND	0.1	0.1	0.098	0.10	97	101	75-125	3	20	
Arsenic	mg/L	ND	0.1	0.1	0.094	0.097	93	96	75-125	3	20	

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QUALITY CONTROL DATA

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3782738												3782739	
Parameter	Units	92625189010		MS	MSD	MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec				
Barium	mg/L	0.043	0.1	0.1	0.13	0.14	90	93	75-125	2	20		
Beryllium	mg/L	ND	0.1	0.1	0.089	0.092	89	92	75-125	4	20		
Boron	mg/L	0.011J	1	1	0.92	0.98	91	97	75-125	6	20		
Cadmium	mg/L	ND	0.1	0.1	0.096	0.099	96	99	75-125	3	20		
Chromium	mg/L	ND	0.1	0.1	0.097	0.10	96	100	75-125	4	20		
Cobalt	mg/L	ND	0.1	0.1	0.098	0.10	98	103	75-125	4	20		
Lead	mg/L	ND	0.1	0.1	0.093	0.098	93	98	75-125	5	20		
Lithium	mg/L	0.0094J	0.1	0.1	0.099	0.10	90	94	75-125	4	20		
Molybdenum	mg/L	ND	0.1	0.1	0.095	0.10	95	100	75-125	6	20		
Selenium	mg/L	ND	0.1	0.1	0.094	0.095	94	95	75-125	1	20		
Thallium	mg/L	ND	0.1	0.1	0.094	0.098	94	98	75-125	4	20		

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QUALITY CONTROL DATA

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report
Pace Project No.: 92625189

QC Batch: 727398 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92625189005, 92625189006, 92625189008, 92625189009, 92625189010, 92625189011

METHOD BLANK: 3787972 Matrix: Water
Associated Lab Samples: 92625189005, 92625189006, 92625189008, 92625189009, 92625189010, 92625189011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	10/03/22 13:17	

LABORATORY CONTROL SAMPLE: 3787973

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0023	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3787974 3787975

Parameter	Units	3787974		3787975		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	0.00016J	0.0025	0.0022	0.0022	82	81	75-125	1	20	

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QUALITY CONTROL DATA

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

QC Batch: 723325	Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92625189005, 92625189006

METHOD BLANK: 3768875 Matrix: Water

Associated Lab Samples: 92625189005, 92625189006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10.0	09/15/22 11:44	

LABORATORY CONTROL SAMPLE: 3768876

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	374	94	80-120	

SAMPLE DUPLICATE: 3768878

Parameter	Units	92625189005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	87.0	83.0	5	10	

SAMPLE DUPLICATE: 3768892

Parameter	Units	92625181001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	197	193	2	10	

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QUALITY CONTROL DATA

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report
Pace Project No.: 92625189

QC Batch: 724043 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92625189008, 92625189009

METHOD BLANK: 3772705 Matrix: Water
Associated Lab Samples: 92625189008, 92625189009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10.0	09/19/22 09:17	

LABORATORY CONTROL SAMPLE: 3772706

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	386	96	80-120	

SAMPLE DUPLICATE: 3772708

Parameter	Units	92625623010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	572	582	2	10	

SAMPLE DUPLICATE: 3772903

Parameter	Units	92625178010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	582	578	1	10	

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QUALITY CONTROL DATA

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

QC Batch: 724233	Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92625189010

METHOD BLANK: 3773743 Matrix: Water

Associated Lab Samples: 92625189010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10.0	09/20/22 13:21	

LABORATORY CONTROL SAMPLE: 3773744

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	346	86	80-120	

SAMPLE DUPLICATE: 3773745

Parameter	Units	92625623012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	437	420	4	10	

SAMPLE DUPLICATE: 3773746

Parameter	Units	92625623021 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	440	405	8	10	

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QUALITY CONTROL DATA

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report
Pace Project No.: 92625189

QC Batch: 723613 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92625189005, 92625189006

METHOD BLANK: 3770309 Matrix: Water
Associated Lab Samples: 92625189005, 92625189006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	09/16/22 13:22	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	09/16/22 13:22	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	09/16/22 13:22	

LABORATORY CONTROL SAMPLE: 3770310

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	52.1	104	80-120	

LABORATORY CONTROL SAMPLE: 3770311

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	51.6	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3770314 3770315

Parameter	Units	92625683004		3770314		3770315		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					MS % Rec
Alkalinity, Total as CaCO3	mg/L	190	190	50	50	247	262	114	144	80-120	6	25 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3771994 3771995

Parameter	Units	92625683003		3771994		3771995		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result					MS % Rec
Alkalinity, Total as CaCO3	mg/L	ND	ND	50	50	54.9	54.9	104	103	80-120	0	25

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QUALITY CONTROL DATA

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report
Pace Project No.: 92625189

QC Batch: 724379 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92625189008, 92625189009, 92625189010

METHOD BLANK: 3774170 Matrix: Water
Associated Lab Samples: 92625189008, 92625189009, 92625189010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	09/20/22 15:05	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	09/20/22 15:05	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	09/20/22 15:05	

LABORATORY CONTROL SAMPLE: 3774171

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	51.8	104	80-120	

LABORATORY CONTROL SAMPLE: 3774172

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	51.4	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3774173 3774174

Parameter	Units	92625623006		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	Spike Conc.	Result	MS Result	% Rec	% Rec					
Alkalinity, Total as CaCO3	mg/L	ND	50	50	50.8	51.4	102	103	80-120	1	25		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3774175 3774176

Parameter	Units	92625623011		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	Spike Conc.	Result	MS Result	% Rec	% Rec					
Alkalinity, Total as CaCO3	mg/L	ND	50	50	56.4	56.1	104	104	80-120	1	25		

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QUALITY CONTROL DATA

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

QC Batch: 725081

Analysis Method: SM 2320B-2011

QC Batch Method: SM 2320B-2011

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92625189011

METHOD BLANK: 3777562

Matrix: Water

Associated Lab Samples: 92625189011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	09/23/22 14:29	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	09/23/22 14:29	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	09/23/22 14:29	

LABORATORY CONTROL SAMPLE: 3777563

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.5	101	80-120	

LABORATORY CONTROL SAMPLE: 3777564

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.4	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3777565 3777566

Parameter	Units	92626727004		3777565		3777566		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.					
Alkalinity, Total as CaCO3	mg/L	449	50	50	50	471	468	43	37	80-120	1	25 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3777567 3777568

Parameter	Units	92626727005		3777567		3777568		% Rec Limits	RPD	Max RPD	Qual	
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.					
Alkalinity, Total as CaCO3	mg/L	149	50	50	50	207	200	116	103	80-120	3	25

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

QC Batch: 725355	Analysis Method: SM 2540C-2011
QC Batch Method: SM 2540C-2011	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92625189011

METHOD BLANK: 3778984 Matrix: Water

Associated Lab Samples: 92625189011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	09/23/22 10:01	

LABORATORY CONTROL SAMPLE: 3778985

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	242	97	90-110	

SAMPLE DUPLICATE: 3778986

Parameter	Units	92626923001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	29.0	33.0	13	25	

SAMPLE DUPLICATE: 3778987

Parameter	Units	92626865001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2430	2480	2	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

QC Batch: 723467 Analysis Method: EPA 300.0 Rev 2.1 1993
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
 Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92625189005, 92625189006

METHOD BLANK: 3769521 Matrix: Water

Associated Lab Samples: 92625189005, 92625189006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/15/22 15:11	
Fluoride	mg/L	ND	0.10	0.050	09/15/22 15:11	
Sulfate	mg/L	ND	1.0	0.50	09/15/22 15:11	

LABORATORY CONTROL SAMPLE: 3769522

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.0	98	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	49.3	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3769523 3769524

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92625147002 Result	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	94.2	50	50	133	134	77	79	90-110	1	10	M1	
Fluoride	mg/L	0.49	2.5	2.5	3.0	3.0	101	102	90-110	1	10		
Sulfate	mg/L	53.6	50	50	99.3	100	91	93	90-110	1	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3769525 3769526

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92625178002 Result	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	15.0	50	50	66.7	67.1	103	104	90-110	1	10		
Fluoride	mg/L	0.40	2.5	2.5	3.6	3.6	127	128	90-110	1	10	M1	
Sulfate	mg/L	508	50	50	552	552	88	89	90-110	0	10	M1	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report
Pace Project No.: 92625189

QC Batch: 724055 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92625189008, 92625189009

METHOD BLANK: 3772745 Matrix: Water
Associated Lab Samples: 92625189008, 92625189009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/19/22 00:00	
Fluoride	mg/L	ND	0.10	0.050	09/19/22 00:00	
Sulfate	mg/L	ND	1.0	0.50	09/19/22 00:00	

LABORATORY CONTROL SAMPLE: 3772746

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.9	100	90-110	
Fluoride	mg/L	2.5	2.6	104	90-110	
Sulfate	mg/L	50	50.9	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3772749 3772750

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92625178011 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	10.3	50	50	61.5	61.6	102	103	90-110	0	10		
Fluoride	mg/L	0.38	2.5	2.5	3.0	3.0	106	107	90-110	1	10		
Sulfate	mg/L	228	50	50	276	279	97	102	90-110	1	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3772755 3772756

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92625980001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	2.6	50	50	53.2	53.2	101	101	90-110	0	10		
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	101	102	90-110	0	10		
Sulfate	mg/L	5.5	50	50	56.9	56.6	103	102	90-110	0	10		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

QC Batch: 724437	Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993	Analysis Description: 300.0 IC Anions
	Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92625189010

METHOD BLANK: 3774398 Matrix: Water

Associated Lab Samples: 92625189010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/20/22 18:23	
Fluoride	mg/L	ND	0.10	0.050	09/20/22 18:23	
Sulfate	mg/L	ND	1.0	0.50	09/20/22 18:23	

LABORATORY CONTROL SAMPLE: 3774399

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.4	99	90-110	
Fluoride	mg/L	2.5	2.5	101	90-110	
Sulfate	mg/L	50	50.2	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3774400 3774401

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92626469002	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	105	50	50	50	159	159	108	107	90-110	0	10	
Fluoride	mg/L	0.49	2.5	2.5	2.5	3.1	3.2	106	107	90-110	1	10	
Sulfate	mg/L	31.2	50	50	50	82.4	82.6	102	103	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3774402 3774403

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92625623020	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	26.2	50	50	50	77.4	77.1	102	102	90-110	0	10	
Fluoride	mg/L	0.69	2.5	2.5	2.5	3.2	3.3	102	104	90-110	1	10	
Sulfate	mg/L	462	50	50	50	509	510	92	95	90-110	0	10	

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QUALITY CONTROL DATA

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report
Pace Project No.: 92625189

QC Batch: 725140 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92625189011

METHOD BLANK: 3777923 Matrix: Water
Associated Lab Samples: 92625189011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/22/22 20:18	
Fluoride	mg/L	ND	0.10	0.050	09/22/22 20:18	
Sulfate	mg/L	ND	1.0	0.50	09/22/22 20:18	

LABORATORY CONTROL SAMPLE: 3777924

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	47.3	95	90-110	
Fluoride	mg/L	2.5	2.4	97	90-110	
Sulfate	mg/L	50	47.6	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3777925 3777926

Parameter	Units	92626959007		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	MSD Result	% Rec	% Rec					
Chloride	mg/L	12.9	50	50	61.1	61.1	96	96	90-110	0	10		
Fluoride	mg/L	0.23	2.5	2.5	2.7	2.7	98	97	90-110	1	10		
Sulfate	mg/L	31.0	50	50	79.4	79.5	97	97	90-110	0	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3777927 3777928

Parameter	Units	92626959011		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	Result	MSD Result	% Rec	% Rec					
Chloride	mg/L	15.2	50	50	63.1	63.7	96	97	90-110	1	10		
Fluoride	mg/L	0.38	2.5	2.5	2.9	2.9	101	102	90-110	1	10		
Sulfate	mg/L	ND	50	50	47.9	48.6	95	96	90-110	1	10		

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report
Pace Project No.: 92625189

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92625189001	B-90				
92625189002	B-91				
92625189003	B-95				
92625189004	B-99				
92625189005	B-119D				
92625189007	B-96				
92625189008	B-122D				
92625189010	B-117D				
92625189011	B-123D				
92625189005	B-119D	EPA 3010A	726415	EPA 6010D	726515
92625189006	Dup-3	EPA 3010A	726415	EPA 6010D	726515
92625189008	B-122D	EPA 3010A	726415	EPA 6010D	726515
92625189009	EB-4	EPA 3010A	726415	EPA 6010D	726515
92625189010	B-117D	EPA 3010A	726415	EPA 6010D	726515
92625189011	B-123D	EPA 3010A	726415	EPA 6010D	726515
92625189001	B-90	EPA 3005A	726202	EPA 6020B	726322
92625189002	B-91	EPA 3005A	726202	EPA 6020B	726322
92625189003	B-95	EPA 3005A	726202	EPA 6020B	726322
92625189004	B-99	EPA 3005A	726202	EPA 6020B	726322
92625189005	B-119D	EPA 3005A	726202	EPA 6020B	726322
92625189006	Dup-3	EPA 3005A	726202	EPA 6020B	726322
92625189007	B-96	EPA 3005A	726202	EPA 6020B	726322
92625189008	B-122D	EPA 3005A	726202	EPA 6020B	726322
92625189009	EB-4	EPA 3005A	726202	EPA 6020B	726322
92625189010	B-117D	EPA 3005A	726205	EPA 6020B	726325
92625189011	B-123D	EPA 3005A	726205	EPA 6020B	726325
92625189005	B-119D	EPA 7470A	727398	EPA 7470A	727474
92625189006	Dup-3	EPA 7470A	727398	EPA 7470A	727474
92625189008	B-122D	EPA 7470A	727398	EPA 7470A	727474
92625189009	EB-4	EPA 7470A	727398	EPA 7470A	727474
92625189010	B-117D	EPA 7470A	727398	EPA 7470A	727474
92625189011	B-123D	EPA 7470A	727398	EPA 7470A	727474
92625189005	B-119D	SM 2540C-2015	723325		
92625189006	Dup-3	SM 2540C-2015	723325		
92625189008	B-122D	SM 2540C-2015	724043		
92625189009	EB-4	SM 2540C-2015	724043		
92625189010	B-117D	SM 2540C-2015	724233		
92625189005	B-119D	SM 2320B-2011	723613		
92625189006	Dup-3	SM 2320B-2011	723613		
92625189008	B-122D	SM 2320B-2011	724379		
92625189009	EB-4	SM 2320B-2011	724379		
92625189010	B-117D	SM 2320B-2011	724379		
92625189011	B-123D	SM 2320B-2011	725081		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: McDonough AP-1, 2, 3/4 Supplem-Revised Report

Pace Project No.: 92625189

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92625189011	B-123D	SM 2540C-2011	725355		
92625189005	B-119D	EPA 300.0 Rev 2.1 1993	723467		
92625189006	Dup-3	EPA 300.0 Rev 2.1 1993	723467		
92625189008	B-122D	EPA 300.0 Rev 2.1 1993	724055		
92625189009	EB-4	EPA 300.0 Rev 2.1 1993	724055		
92625189010	B-117D	EPA 300.0 Rev 2.1 1993	724437		
92625189011	B-123D	EPA 300.0 Rev 2.1 1993	725140		

REPORT OF LABORATORY ANALYSIS

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Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

WO# : 92625189



92625189

Sample Condition Upon Receipt

Client Name: GA Power

Project #:

Courier: Commercial Fed Ex UPS USPS Client Pace Other: _____

Date/Initials Person Examining Contents: 9/15/22
COJ

Custody Seal Present? Yes No Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer: IR Gun ID: 230 Type of Ice: Wet Blue None

Biological Tissue Frozen? Yes No N/A

Cooler Temp: 3.8 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 3.8

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>W</u>	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



Document Name:
Bottle Identification Form (BIF)
Document No.:
F-CAR-CS-043-Rev.01

Document Issued: November 15, 2021
Page 1 of 1
Issuing Authority:
Pace Carolinas Quality Office

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

WO# : 92625189

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

PM: NMG

Due Date: 09/27/22

**Bottom half of box is to list number of bottles

CLIENT: GA-GA Power

Matrix	Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFLU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (3 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)			
1		2	1																												
2		2	1																												
3																															
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers).



DC#_ Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mecklenburg

Sample Condition Upon Receipt

Client Name:

GA Power

Project #:

WO#: 92625189

PM: NMG

Due Date: 09/27/22

CLIENT: GA-GA Power

Courier:

Commercial

Fed Ex

UPS

USPS

Other:

Client

Custody Seal Present? Yes No

Seals Intact? Yes No

Date/Initials Person Examining Contents: 9/14/22

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer:

IR Gun ID:

230

Type of Ice:

Wet

Blue

None

Biological Tissue Frozen?

Yes

No

N/A

Cooler Temp:

3.2

Correction Factor:

Add/Subtract (°C)

0.0

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C):

3.2

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

	Yes	No	N/A	Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3.
Rush Turn Around Time Requested?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.
Sufficient Volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.
Correct Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
-Pace Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.
Containers Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.
-Includes Date/Time/ID/Analysis Matrix: <u>uvv</u>				
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10.
Trip Blank Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

CLIENT NOTIFICATION/RESOLUTION

Lot ID of split containers:

Person contacted:

Date/Time:

Project Manager SCURF Review:

Date:

Project Manager SRF Review:

Date:



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Project # **WO# : 92625189**
 PM: NMG Due Date: 09/27/22
 CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
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pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: Georgia Power - Coal Combustion Residuals Address: 2480 Meier Road Atlanta, GA 30339 Email: lucocker@southrimco.com Phone: (470) 920-4170 Requested Due Date: 10 Day TAT

Section B Required Project Information: Report To: Lauren Collier Copy To: Golder Purchase Order #: Plant MOD AP-1, AP-2 and 3/4 Project Name: Supplemental Sampling Project #: Q116804022

Section C Invoice Information: Attention: aculmichals@southrimco.com Address: P.O. Box 1000000, Atlanta, GA 30368 Company Name: Pacesetter Project Manager: Nicole D'Olivo Price Profile #: Requested Analysis Method (Y/N):

Page: 1 of 1

ITEM #	B-98	WG	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Residual Chlorine (Y/N)	pH = 5.03					
							Unpreserved - Ice	H2SO4	HNO3 + Ice	HCl	NaOH + Zn Acetate	Na2S2O3	Methanol			Other				
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ADDITIONAL COMMENTS

RELINQUISHED BY: *M. P. Smith* DATE: 9-14-22 TIME: 8:53

ACCEPTED BY / AFFILIATION: *James Apple* DATE: 9/14/22 TIME: 8:53

DATE SIGNED: 9-14-22

TEMP in C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

Project

WO#: 92625189

PM: NMG

Due Date: 09/27/22

CLIENT: GA-GA Power

Courier:

Commercial

Fed-Ex

UPS

USPS

Client

Pace

Other: _____

Custody Seal Present?

Yes

No

Seals Intact?

Yes

No

Date/Initials Person Examining Contents: 09/13/22 JM

Packing Material:

Bubble Wrap

Bubble Bags

None

Other

Biological Tissue Frozen?

Yes

No

N/A

Thermometer:

IR Gun ID:

083

Type of Ice:

Wet

Blue

None

Cooler Temp:

1.9

Correction Factor:

Add/Subtract (°C)

0.0

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C):

1.9

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4. 10 DAY TAT
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: WLG		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____

Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO# : 92625189

Project #

PM: NMG

Due Date: 09/27/22

CLIENT: GA-GA Power

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TQC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2SO3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 [9.3-9.7]	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
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pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh M... Atlanta Knoxville

Sample Condition Upon Receipt

Client Name: Georgia Power

Project

WO#: 92625189

PM: NMG Due Date: 09/27/22
CLIENT: GA-GA Power

Courier: Commercial Fed Ex Pace UPS USPS Other: Client

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 9/17/22 JM

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer: IR Gun ID: 230 Type of Ice: Wet Blue None

Biological Tissue Frozen? Yes No N/A

Cooler Temp: 3.3 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 3.3

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

Chain of Custody Present?	Yes	No	N/A	1.	Comments/Discrepancy:
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.	
Sufficient Volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.	
Correct Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Containers Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.	
-Includes Date/Time/ID/Analysis Matrix: W9					
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10.	
Trip Blank Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

CLIENT NOTIFICATION/RESOLUTION

Lot ID of split containers:

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



DC#_ Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Project

WO# : 92625189

PM: NMG

Due Date: 09/27/22

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA NazSO3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
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pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: Georgia Power - Coal Combustion Residuals	Address: 2480 Maner Road Atlanta, GA 30339	Report To: Lauren Coker	Copy To: Golder	Attention: scanouca@southernco.com	Company Name: scanouca@southernco.com
Email: launcoker@southernco.com	Phone: (478) 620-6178	Purchase Order #: Plant MCD AP-1-2-3A	Project Name: Supplemental Well Network	Address: Pace Profile Manager	Nicole D'Ono
Requested Due Date: 10 Day FAT		Project #: QL156849522		Pace Profile #	
		Regulatory Agency: GA		State/Location: GA	

ITEM #	MATRIX	CODE	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH = 5.66, Fa2 = 0.0 mg/L
							Unpreserved - Ice	H2SO4	HNO3 + Ice	HCl	NaOH + Zn Acetate	Na2S2O3	Methanol			
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ADDITIONAL COMMENTS:		RELINQUISHED BY / AFFILIATION:	DATE:	TIME:	ACCEPTED BY / AFFILIATION:	DATE:	TIME:	SAMPLE CONDITIONS:
		Galbraith	16-25			9/16	16:30	Received on ce (Y/N) Custody Sealed Cooler (Y/N) Samples intact (Y/N)
								TEMP in C
								DATE Signed:

10



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Meridianville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

Georgia Power Project #:

WO#: 92625189

PM: NMG

Due Date: 09/27/22

CLIENT: GA-GA Power

Courier: Fed Ex UPS USPS Client Commercial Pace Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 4/21/22 AF

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Yes No N/A

Thermometer:

IR Gun ID: 230

Type of Ice: Wet Blue None

Cooler Temp: 3.6 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 3.6

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: W G	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



DC#_ Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO# : 92625189

PM: NMG

Due Date: 09/27/22

CLIENT: GA-GA Power

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Proje

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9A-250 mL Amber NH4Cl (N/A)(Cl-)	DG8H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
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pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

November 04, 2022

Andrea McClure
WSP/Golder
5170 Peachtree Road
Building 100, Suite 300
Atlanta, GA 30341

RE: Project: McDonough AP-1, 2, 3/4 Sup Rad-Revised Report
Pace Project No.: 92625212

Dear Andrea McClure:

Enclosed are the analytical results for sample(s) received by the laboratory between September 13, 2022 and September 21, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

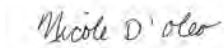
The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

Revision 1: Issued on 11/4/22 to include Radium QC Sheets.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Stephen Benda, Southern Company
Noelia Gangi, Georgia Power
Daniela Herrera, Golder
Ben Hodges, Georgia Power
Kristen Jurinko
Laura Midkiff, Georgia Power
Karim Minkara, Golder Associates - Atlanta

J. Shelby Mobley, Southern Company
Charles Norton, Southern Company
Ms. Lauren Petty, Southern Company
Dawn Prell, Golder Associates Inc.
Michael Smilley, Georgia Power
Yong Cheng Soo, WSP/Golder
Tina Sullivan, ERM



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: McDonough AP-1, 2, 3/4 Sup Rad-Revised Report
Pace Project No.: 92625212

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: McDonough AP-1, 2, 3/4 Sup Rad-Revised Report

Pace Project No.: 92625212

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92625212001	B-119D	Water	09/12/22 10:37	09/13/22 10:30
92625212002	Dup-3	Water	09/12/22 00:00	09/13/22 10:30
92625212003	B-122D	Water	09/14/22 10:33	09/15/22 08:20
92625212004	EB-4	Water	09/14/22 11:23	09/15/22 08:20
92625212005	B-117D	Water	09/15/22 10:36	09/16/22 16:30
92625212006	B-123D	Water	09/20/22 15:25	09/21/22 15:05

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: McDonough AP-1, 2, 3/4 Sup Rad-Revised Report

Pace Project No.: 92625212

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92625212001	B-119D	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92625212002	Dup-3	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92625212003	B-122D	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92625212004	EB-4	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92625212005	B-117D	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92625212006	B-123D	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1, 2, 3/4 Sup Rad-Revised Report

Pace Project No.: 92625212

Sample: B-119D **Lab ID: 92625212001** Collected: 09/12/22 10:37 Received: 09/13/22 10:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.145 ± 0.105 (0.174) C:97% T:NA	pCi/L	10/12/22 20:23	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.183 ± 0.492 (1.10) C:57% T:87%	pCi/L	10/10/22 13:31	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.328 ± 0.597 (1.27)	pCi/L	10/14/22 17:44	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1, 2, 3/4 Sup Rad-Revised Report

Pace Project No.: 92625212

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Sample: Dup-3 Lab ID: 92625212002 Collected: 09/12/22 00:00 Received: 09/13/22 10:30 Matrix: Water PWS: Site ID: Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.181 ± 0.112 (0.162) C:89% T:NA	pCi/L	10/12/22 20:23	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.486 ± 0.414 (0.828) C:80% T:84%	pCi/L	10/10/22 13:31	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.667 ± 0.526 (0.990)	pCi/L	10/14/22 17:44	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1, 2, 3/4 Sup Rad-Revised Report

Pace Project No.: 92625212

Sample: B-122D **Lab ID: 92625212003** Collected: 09/14/22 10:33 Received: 09/15/22 08:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	3.11 ± 0.608 (0.173) C:94% T:NA	pCi/L	10/13/22 08:44	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	4.83 ± 1.10 (0.803) C:73% T:86%	pCi/L	10/11/22 14:44	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	7.94 ± 1.71 (0.976)	pCi/L	10/14/22 17:45	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1, 2, 3/4 Sup Rad-Revised Report

Pace Project No.: 92625212

Sample: EB-4 **Lab ID: 92625212004** Collected: 09/14/22 11:23 Received: 09/15/22 08:20 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.00481 ± 0.0724 (0.197) C:94% T:NA	pCi/L	10/13/22 08:44	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.590 ± 0.416 (0.802) C:73% T:88%	pCi/L	10/11/22 14:45	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.595 ± 0.488 (0.999)	pCi/L	10/14/22 17:45	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1, 2, 3/4 Sup Rad-Revised Report

Pace Project No.: 92625212

Sample: B-117D **Lab ID: 92625212005** Collected: 09/15/22 10:36 Received: 09/16/22 16:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.241 ± 0.142 (0.224) C:96% T:NA	pCi/L	10/07/22 08:30	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.634 ± 0.403 (0.757) C:76% T:84%	pCi/L	10/04/22 15:43	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.875 ± 0.545 (0.981)	pCi/L	10/07/22 15:37	7440-14-4	

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough AP-1, 2, 3/4 Sup Rad-Revised Report

Pace Project No.: 92625212

Sample: B-123D **Lab ID: 92625212006** Collected: 09/20/22 15:25 Received: 09/21/22 15:05 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.792 ± 0.230 (0.152) C:94% T:NA	pCi/L	10/11/22 09:25	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	2.16 ± 0.657 (0.891) C:79% T:90%	pCi/L	10/04/22 12:33	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	2.95 ± 0.887 (1.04)	pCi/L	10/11/22 14:52	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP-1, 2, 3/4 Sup Rad-Revised Report

Pace Project No.: 92625212

QC Batch:	535740	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92625212006

METHOD BLANK:	2599417	Matrix:	Water
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Associated Lab Samples: 92625212006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0657 ± 0.105 (0.234) C:98% T:NA	pCi/L	10/11/22 09:17	

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

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP-1, 2, 3/4 Sup Rad-Revised Report

Pace Project No.: 92625212

QC Batch: 536956

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92625212003, 92625212004

METHOD BLANK: 2605313

Matrix: Water

Associated Lab Samples: 92625212003, 92625212004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.000824 ± 0.0487 (0.149) C:97% T:NA	pCi/L	10/12/22 20:07	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP-1, 2, 3/4 Sup Rad-Revised Report

Pace Project No.: 92625212

QC Batch: 535922

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92625212001, 92625212002

METHOD BLANK: 2600355

Matrix: Water

Associated Lab Samples: 92625212001, 92625212002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0438 ± 0.0695 (0.152) C:94% T:NA	pCi/L	10/12/22 20:23	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP-1, 2, 3/4 Sup Rad-Revised Report

Pace Project No.: 92625212

QC Batch:	534681	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92625212005

METHOD BLANK:	2594503	Matrix:	Water
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Associated Lab Samples: 92625212005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0423 ± 0.0706 (0.157) C:95% T:NA	pCi/L	10/07/22 09:37	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP-1, 2, 3/4 Sup Rad-Revised Report

Pace Project No.: 92625212

QC Batch:	536957	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92625212003, 92625212004

METHOD BLANK: 2605315 Matrix: Water

Associated Lab Samples: 92625212003, 92625212004

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.660 ± 0.393 (0.716) C:65% T:87%	pCi/L	10/11/22 11:38	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP-1, 2, 3/4 Sup Rad-Revised Report

Pace Project No.: 92625212

QC Batch: 534679

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92625212005

METHOD BLANK: 2594500

Matrix: Water

Associated Lab Samples: 92625212005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.343 ± 0.266 (0.703) C:75% T:90%	pCi/L	10/04/22 15:45	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP-1, 2, 3/4 Sup Rad-Revised Report

Pace Project No.: 92625212

QC Batch: 535924

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92625212001, 92625212002

METHOD BLANK: 2600360

Matrix: Water

Associated Lab Samples: 92625212001, 92625212002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.590 ± 0.382 (0.710) C:71% T:92%	pCi/L	10/10/22 13:30	

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough AP-1, 2, 3/4 Sup Rad-Revised Report

Pace Project No.: 92625212

QC Batch: 535739

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 92625212006

METHOD BLANK: 2599416

Matrix: Water

Associated Lab Samples: 92625212006

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0371 ± 0.270 (0.626) C:74% T:89%	pCi/L	10/04/22 12:22	

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QUALIFIERS

Project: McDonough AP-1, 2, 3/4 Sup Rad-Revised Report

Pace Project No.: 92625212

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: McDonough AP-1, 2, 3/4 Sup Rad-Revised Report
Pace Project No.: 92625212

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92625212001	B-119D	EPA 9315	535922		
92625212002	Dup-3	EPA 9315	535922		
92625212003	B-122D	EPA 9315	536956		
92625212004	EB-4	EPA 9315	536956		
92625212005	B-117D	EPA 9315	534681		
92625212006	B-123D	EPA 9315	535740		
92625212001	B-119D	EPA 9320	535924		
92625212002	Dup-3	EPA 9320	535924		
92625212003	B-122D	EPA 9320	536957		
92625212004	EB-4	EPA 9320	536957		
92625212005	B-117D	EPA 9320	534679		
92625212006	B-123D	EPA 9320	535739		
92625212001	B-119D	Total Radium Calculation	540022		
92625212002	Dup-3	Total Radium Calculation	540022		
92625212003	B-122D	Total Radium Calculation	540023		
92625212004	EB-4	Total Radium Calculation	540023		
92625212005	B-117D	Total Radium Calculation	538367		
92625212006	B-123D	Total Radium Calculation	538980		

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DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta

Sample Condition Upon Receipt

Client Name: Georgia Power

Project

WO#: 92625212



Courier: Commercial Fed Ex UPS USPS Client Pace Other:

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 09/13/22 JM

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 083 Type of Ice: Wet Blue None

Cooler Temp: 1.9 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 1.9

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4. 10 DAY TAT
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: W6		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

Field Data Required? Yes No

COMMENTS/SAMPLE DISCREPANCY

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO#: 92625212

Project #

PM: NMG

Due Date: 10/04/22

CLIENT: GA-GA Power

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TQC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3W-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WG7U-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9A-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	SP1N	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1																													
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4																													
5		2	1																										
6		2	1																					2					
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company: Georgia Power - Coal Combustion Residuals Address: 2480 Manor Road Atlanta, GA 30339 Email: hauckler@southermo.com Phone: (470) 800-6178 Requested Due Date: 10 Day TAT	Section B Required Project Information: Report To: Laura Coler Copy To: Godek Purchase Order #: Project Name: Plant Unit AP-1, AP-2, AP-34 Supplemental Sampling Project #: Q119849822 Requested Analytical Parameters (Y/N): Regulatory Agency: State / Location: GA
Section C Invoice Information: Address: acalmonroe@southermo.com Company Name: Fax Quote: Fax Project Manager: Nicole D'Onofrio Fax Project #: Page Profile #:	Page : 1 Of 1

ITEM #	SAMPLE ID <small>One Character per box. (A-Z, 0-9, '-', ' ') Sample IDs must be unique</small>	MATRIX <small>Water Waste Sludge Soil Air Other</small>	CODE <small>WT WW P SL OK NA AT OT TS</small>	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test							Residual Chlorine (Y/N)	PH
										Unpreserved - Ice	H2SO4	HNO3 + Ice	HCl	NaOH + Zn Acetate	Na2S2O3	Methanol	Other	Y/N	App IUV Total Metals	Cl, F, SO4, TDS	Radium 226/228	Mg, Na, K	CO3+HCO2		
1	B-90		WG	WG	G	9/12/2022	12:15		1																
2	B-91		WG	WG	G	9/12/2022	13:26		1																
3	B-95		WG	WG	G	9/12/2022	14:36		1																
4	B-98		WG	WG	G	9/12/2022	10:25		1																
6	B-119D		WG	WG	G	9/12/2022	10:37		6	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
7	Dup-3		WG	WG	G	9/12/2022	-		6	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	
8																									
9																									
10																									
11																									
12																									
13																									
14																									

RELIEVED BY / APPLICATION Date: 9/13/22 Time: 8:05 Signature: <i>[Signature]</i>	ACQUIRED BY / APPLICATION Date: 9/13/22 Time: 8:10 Signature: <i>[Signature]</i>
--	--

DATE Signed: 9/13/22


TEMP in C

Received on Ice (Y/N)

Cooler Sealed (Y/N)

Cooler (Y/N)

Samples Intact (Y/N)

	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: November 15, 2021 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.08	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: GA Power

Project

WO# : 92625212
 PM: NMG Due Date: 10/04/22
 CLIENT: GA-GA Power

Courier: Commercial Fed Ex UPS USPS Client Pace Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 9/15/22
COA

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 230 Type of Ice: Wet Blue None

Cooler Temp: 3.8 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 3.8

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A -Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>W</u>	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

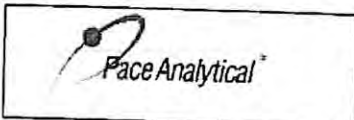
Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



Document Name:
Bottle Identification Form (BIF)
Document No.:
F-CAR-CS-043-Rev.01

Document Issued: November 15, 2021
Page 1 of 1
Issuing Authority:
Pace Carolinas Quality Office

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

Project **WO# : 92625212**

PM: NMG

Due Date: 10/04/22

CLIENT: GA-GA Power

Matrix	Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2SO3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (3 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9, 3-9, 7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)			
	1		2	1			1																								
	2		2	1			1																								
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pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



CHAIN-OF-CUSTODY / Analytical Request Document
 The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
 Required Client Information:
 Company: Georgia Power - Coal Contribution Residuals
 Address: 2480 Warner Road
 Atlanta, GA 30339
 Email: laurenc@epa.gov
 Phone: (478) 650-6178
 Requested Date: 10 Day TAT

Section B
 Required Project Information:
 Report To: Lauren Carter
 Copy To: Golder
 Purchase Order #: Plant MGD A-9-1, 2, 3/4
 Project Name: Supplemental Sampling
 Requested Date: 10 Day TAT

Section C
 Invoice Information:
 Attention: acshivoles@governors.com
 Company Name:
 Address:
 State:
 City:
 Regulatory Agency
 State / Location: GA

ITEM #	MATRIX Ours Character per box. (A-Z, 0-9 /) Sample ids must be unique	MATRIX CODE (see valid codes to left)		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analyse Test						Residual Chlorine (Y/N)	pH = 8.07, FCZ = 4.0 mg/L									
		DW	WG					Unpreserved - Ice	H2SO4	HNO3 + Ice	HCl	NaOH + Zn Acetate	Na2S2O3	Methanol	Other	App III/IV Total Metals	Cl, F, SO4, TDS	Radium 226/228	Mg, Na, K	CO3+HCO2			Fe Total, Fe 3+								
1	B-122D	D	Q	9/14/2022	10:23		6	3	3																						
2	EG-4	Q	Q	9/14/2022	11:23		6	3	3																						
3																															
4																															
5																															
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13																															
14																															

REQUISITIONED BY: LA DATE: 09/15/22 TIME: 05:10
 ACCEPTED BY / REFULATION: LAUREN CARTER DATE: 09/15/22 TIME: 05:20
LAUREN CARTER DATE: 09/15/22 TIME: 09:15
 DUANE FURSON / LA
 WOSP-GOLA51K
 DATE signed: 09/15/22



DC#_ Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: Georgia Power

Project:

WO#: 92625212

Courier: Commercial Fed Ex Pace UPS USPS Other: Client

PM: NMG Due Date: 10/04/22

CLIENT: GA-GA Power

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 9/17/22 JM

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer: IR Gun ID: 230 Correction Factor: 3.3 Add/Subtract (°C) 0.0 Type of Ice: Wet Blue None

Biological Tissue Frozen? Yes No N/A

Cooler Temp: 3.3

Temp should be above freezing to 6°C Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 3.3

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

Chain of Custody Present?	Yes	No	N/A	1.	Comments/Discrepancy:
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.	
Sufficient Volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.	
Correct Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.	
Containers Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	9.	
Sample Labels Match COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
-Includes Date/Time/ID/Analysis Matrix: WG					
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10.	
Trip Blank Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

CLIENT NOTIFICATION/RESOLUTION

Lot ID of split containers:

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



DC#_ Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Pro.

WO# : 92625212

PM: NMG

Due Date: 10/04/22

CLIENT: GA-GA Power

Item#	Item Description	1	2	3	4	5	6	7	8	9	10	11	12
BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)													
BP3U-250 mL Plastic Unpreserved (N/A)		2	1										
BP2U-500 mL Plastic Unpreserved (N/A)													
BP1U-1 liter Plastic Unpreserved (N/A)													
BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)													
BP3N-250 mL plastic HNO3 (pH < 2)													
BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)													
BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)													
WGFW-Wide-mouthed Glass jar Unpreserved													
AG1U-1 liter Amber Unpreserved (N/A) (Cl-)													
AG1H-1 liter Amber HCl (pH < 2)													
AG3U-250 mL Amber Unpreserved (N/A) (Cl-)													
AG1S-1 liter Amber H2SO4 (pH < 2)													
AG3S-250 mL Amber H2SO4 (pH < 2)													
DG94-250 mL Amber NH4Cl (N/A)(Cl-)													
DG9H-40 mL VOA HCl (N/A)													
VG9T-40 mL VOA Na2S2O3 (N/A)													
VG9U-40 mL VOA Unpreserved (N/A)													
DG9V-40 mL VOA H3PO4 (N/A)													
DG9S-40 mL VOA H2SO4 (N/A)													
V/GK (3 vials per kit)-VPH/Gas kit (N/A)													
SP5T-125 mL Sterile Plastic (N/A - lab)													
SP2T-250 mL Sterile Plastic (N/A - lab)													
BPIN													
BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)													
AG0U-100 mL Amber Unpreserved (N/A) (Cl-)													
VSGU-20 mL Scintillation vials (N/A)													
DG9U-40 mL Amber Unpreserved vials (N/A)													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers).



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
Required Client Information:
Company: Georgia Power - Coal Combustion Residuals
Address: 2400 Stuart Road
Atlanta, GA 30339

Section B
Required Project Information:
Request To: Lauren Collier
Copy To: Collier
Purchase Order #: Plant MCD AP 1 2 3/4
Project Name: Supplemental Water Network
Project #: GL105849322

Section C
Invoice Information:
Attention: scannices@gepower.com
Company Name: Pace Analytical
Address: Pace Analytical
Pace Project Manager: Nicole D'Ono

Regulatory Agency:
State / Location: GA

Page: 1 of 1

Email: jhucob@gepower.com
Phone: (478) 620-6176
Requested Due Date: 10 Day TAT

Requested Analysis Filtered (Y/N)

Requested Analysis Filtered (Y/N)

Requested Analysis Filtered (Y/N)

Requested Analysis Filtered (Y/N)

ITEM #	MATRIX One Character per box. (A-Z, 0-9 / -) Sample IDs must be unique	CODE DW WV SL UL WF DT TS	DATE TIME	SAMPLE TEMP AT COLLECTION						Preservatives						Analyses Test						Residual Chlorine (Y/N)	PH = 5.86 Fw2 = 0.0 mg/L
				MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-GRAB C-COMP)	# OF CONTAINERS	Unpreserved - Ice	H2SO4	HNO3 + Ice	HCl	NaOH + Zn Acetate	Na2SO3	Methanol	Other	Y/N	Y/N	Y/N	Y/N	Y/N	Y/N			
1	B-117D		07/15/2022	10:36	6	3	3								X	X	X	X	X	X			
2																							
3																							
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13																							
14																							

ADDITIONAL COMMENTS: *Revised*

RELINQUISHED BY / AFFILIATION: *John* *Go*

DATE: *07/16/22* TIME: *16:25*

ACCEPTED BY / AFFILIATION: *[Signature]*

DATE: *07/16* TIME: *16:30*

TEMP in C: _____

Received on ice (Y/N): _____

Custody Sealed Cooler (Y/N): _____

Samples Intact (Y/N): _____

DATE Signed: _____



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

Georgia Power Project #:

WO#: 92625212

PM: NMG

Due Date: 10/04/22

CLIENT: GA-GA Power

Courier: Commercial Fed Ex Pace UPS USPS Other: Client

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 4/21/22 A

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Yes No N/A

Thermometer:

IR Gun ID: 230

Type of Ice: Wet Blue None

Cooler Temp: 3.6 Correction Factor: Add/Subtract (°C) 0 - 0

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 3.6

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: W G		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



DC#_ Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Project #

WO# : 92625212

PM: NMG

Due Date: 10/04/22

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)		BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1		2	1		1																									
2																														
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A Required Client Information: Company Georgia Power - Coal Combustion Residuals Address 2480 Manor Road Atlanta, GA 30339 Email laudcker@southern.com Phone (470) 620-6176 Requested Due Date 10 Dec 1A1

Section B Required Project Information: Report To Lauren Collier Copy To Golder Project Name Plant 140 AP 1 2 34 Supplemental Water Network Project # CL16849822

Section C Invoice Information: Attention acunovce@southern.com Address Pace Project Manager Nicole D'Olivo Pace Profile #

Page: 1 of 1

ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	SAMPLE TEMP AT COLLECTION							# OF CONTAINERS	Preservatives	Analysis Test	Y/N	Requested Analytic Filtered (Y/N)	Residual Chlorine (Y/N)	pH = 7.13 Fe2 = 4.5 mg/L 5212 5189
					Unpreserved	Ice	H2SO4	HNO3 + Ice	HCl	NaOH + Zn Acetate	Na2S2O3							
1	B 123C	WG	9/20/2022	15:25	6	3												
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
13																		
14																		

ADDITIONAL COMMENTS: *Master copy on file*

RELINQUISHED BY / AFFILIATION: *[Signature]*

DATE: *09/20/22* TIME: *15:05*

ACCEPTED BY / AFFILIATION: *[Signature]*

DATE: *9/21/22* TIME: *15:05*

TEMP in C: _____

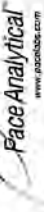
Received on ice (Y/N): _____

Custody Sealed Cooler (Y/N): _____

Samples Intact (Y/N): _____

DATE Signed: _____

Quality Control Sample Performance Assessment



Analyst **Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226
Analyst: RMS
Date: 10/5/2022
Worklist: 69144
Matrix: DW

Method Blank Assessment

MB Sample ID	2605313
MB concentration:	-0.001
MIB Counting Uncertainty:	0.049
MB MDC:	0.149
MB Numerical Performance Indicator:	-0.03
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

LCSD (Y or N)?	Y
Count Date:	10/13/2022
Spike I.D.:	LCS69144
Decay Corrected Spike Concentration (pCi/mL):	19.033
Volume Used (mL):	24.023
Aliquot Volume (L, g, F):	0.10
Target Conc. (pCi/L, g, F):	0.506
Uncertainty (Calculated):	4.746
Result (pCi/L, g, F):	0.057
LCSD Counting Uncertainty (pCi/L, g, F):	5.296
Numerical Performance Indicator:	0.512
Percent Recovery:	0.82
Status vs Numerical Indicator:	104.55%
Status vs Recovery:	N/A
Upper % Recovery Limits:	Pass
Lower % Recovery Limits:	125%
	75%

Sample Matrix Spike Control Assessment

MS/MSD 1	MS/MSD 2
<p>Sample Collection Date:</p> <p>Sample I.D.:</p> <p>Sample MS I.D.:</p> <p>Sample MSD I.D.:</p> <p>Spike I.D.:</p> <p>MS/MSD Decay Corrected Spike Concentration (pCi/mL):</p> <p>Spike Volume Used in MS (mL):</p> <p>Spike Volume Used in MSD (mL):</p> <p>MS Aliquot (L, g, F):</p> <p>MS Target Conc. (pCi/L, g, F):</p> <p>MSD Aliquot (L, g, F):</p> <p>MSD Target Conc. (pCi/L, g, F):</p> <p>MS Spike Uncertainty (calculated):</p> <p>MSD Spike Uncertainty (calculated):</p> <p>Sample Result:</p> <p>Sample Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Result:</p> <p>Matrix Spike Result Counting Uncertainty (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):</p> <p>MS Numerical Performance Indicator:</p> <p>MSD Numerical Performance Indicator:</p> <p>MS Percent Recovery:</p> <p>MSD Percent Recovery:</p> <p>MS Status vs Numerical Indicator:</p> <p>MSD Status vs Numerical Indicator:</p> <p>MS Status vs Recovery:</p> <p>MSD Status vs Recovery:</p> <p>MS/MSD Upper % Recovery Limits:</p> <p>MS/MSD Lower % Recovery Limits:</p>	

Duplicate Sample Assessment

Sample I.D.:	2605313
Duplicate Sample I.D.:	92625212004
Sample Result (pCi/L, g, F):	-0.001
Sample Duplicate Result (pCi/L, g, F):	0.049
Sample Result Counting Uncertainty (pCi/L, g, F):	0.005
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.072
Are sample and/or duplicate results below RL?	See Below #
Duplicate Numerical Performance Indicator:	-0.127
Duplicate (Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	282.60%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail**
% RPD Limit:	25%

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.:	Sample I.D.:
Sample MS I.D.:	Sample MS I.D.:
Sample MSD I.D.:	Sample MSD I.D.:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Matrix Spike Result Counting Uncertainty (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):
Duplicate Numerical Performance Indicator:	Duplicate Numerical Performance Indicator:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs RPD:	MS/MSD Duplicate Status vs RPD:
% RPD Limit:	% RPD Limit:

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

Batch must not be prepared close to using acceptance precision. N/A
VAM 10/13/22
VAM 10/13/22

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VAM 10/13/22

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: RMS
Date: 9/26/2022
Worklist: 68985
Matrix: DW

Method Blank Assessment	
MB Sample ID	2594503
MB concentration:	0.042
M/B Counting Uncertainty:	0.070
MB MDC:	0.157
MB Numerical Performance Indicator:	1.18
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
Count Date:	LCS (Y or N)?
Spike I.D.:	LCS D68985
Decay Corrected Spike Concentration (pCi/mL):	10/7/2022
Volume Used (mL):	19.033
Aliquot Volume (L, g, F):	24.023
Target Conc. (pCi/L, g, F):	0.10
Uncertainty (Calculated):	0.501
Result (pCi/L, g, F):	4.792
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.057
Numerical Performance Indicator:	5.097
Percent Recovery:	0.496
Status vs Numerical Indicator:	0.22
Status vs Recovery:	101.15%
Upper % Recovery Limits:	N/A
Lower % Recovery Limits:	Pass
	125%
	75%

Duplicate Sample Assessment	
Sample I.D.:	2594503
Duplicate Sample I.D.:	92625631020
Sample Result (pCi/L, g, F):	0.042
Sample Result Counting Uncertainty (pCi/L, g, F):	0.070
Sample Duplicate Result (pCi/L, g, F):	0.033
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.065
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	0.192
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	25.02%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:		
Sample I.D.:		
Sample MS I.D.:		
Sample MSD I.D.:		
Spike I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		
Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):		
MS Aliquot (L, g, F):		
MS Target Conc. (pCi/L, g, F):		
MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):		
MS Spike Uncertainty (calculated):		
MSD Spike Uncertainty (calculated):		
Sample Result:		
Sample Result Counting Uncertainty (pCi/L, g, F):		
Sample Matrix Spike Result:		
Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		
MS Numerical Performance Indicator:		
MSD Numerical Performance Indicator:		
MS Percent Recovery:		
MSD Percent Recovery:		
MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:		
MS Status vs Recovery:		
MSD Status vs Recovery:		
MS/MSD Upper % Recovery Limits:		
MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	
% RPD Limit:	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

***Batch must be re-assessed due to unacceptable precision. N/A

VAM 10/7/22

VAM 10/7/22

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: RMS
Date: 9/29/2022
Worklist: 69056
Matrix: DW



Method Blank Assessment	
MB Sample ID	2599417
MB concentration:	0.066
M/B Counting Uncertainty:	0.104
MB MDC:	0.234
MB Numerical Performance Indicator:	1.23
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		Y
Count Date:	10/11/2022	LCS069056
Spike I.D.:	19-033	10/11/2022
Decay Corrected Spike Concentration (pCi/mL):	24.023	24.023
Volume Used (mL):	0.10	0.10
Aliquot Volume (L, g, F):	0.503	0.503
Target Conc. (pCi/L, g, F):	4.772	4.776
Uncertainty (Calculated):	0.057	0.057
Result (pCi/L, g, F):	4.561	5.048
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.462	0.491
Numerical Performance Indicator:	-0.89	1.08
Percent Recovery:	95.59%	105.68%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	125%	125%
Lower % Recovery Limits:	75%	75%

Duplicate Sample Assessment	
Sample I.D.:	LCS069056
Duplicate Sample I.D.:	LCS069056
Sample Result (pCi/L, g, F):	4.561
Sample Result Counting Uncertainty (pCi/L, g, F):	0.462
Sample Duplicate Result (pCi/L, g, F):	5.048
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.491
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-1.414
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	10.03%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

MS/MSD 1	MS/MSD 2
<p>Sample Matrix Spike Control Assessment</p> <p>Sample Collection Date: Sample I.D.: Sample MS I.D.: Sample MSD I.D.: Spike I.D.:</p> <p>MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): Spike Volume Used in MSD (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated):</p> <p>Sample Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Result: Matrix Spike Result Counting Uncertainty (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F): MS Numerical Performance Indicator: MSD Numerical Performance Indicator: MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:</p>	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	Sample MS I.D.:
Sample MSD I.D.:	Sample Matrix Spike Result:
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result:	Duplicate Numerical Performance Indicator:
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
Duplicate Numerical Performance Indicator:	MS/MSD Duplicate Status vs Numerical Indicator:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	MS/MSD Duplicate Status vs RPD:
MS/MSD Duplicate Status vs RPD:	% RPD Limit:

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

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10/11/22

Quality Control Sample Performance Assessment

Analyst: **Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-226
Analyst: RMS
Date: 9/30/2022
Worklist: 69072
Matrix: DW



Method Blank Assessment	
MB Sample ID	2600355
MB Concentration:	0.044
M/B Counting Uncertainty:	0.069
MB MDC:	0.152
MB Numerical Performance Indicator:	1.24
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS ID	Y or N?
LCS69072	Y
Count Date:	10/12/2022
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.023
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.505
Target Conc. (pCi/L, g, F):	4.758
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	5.119
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.487
Numerical Performance Indicator:	1.44
Percent Recovery:	107.59%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	2600355
Duplicate Sample I.D.:	92624384013
Sample Result (pCi/L, g, F):	0.044
Sample Result Counting Uncertainty (pCi/L, g, F):	0.069
Sample Duplicate Result (pCi/L, g, F):	0.020
Sample Duplicate Counting Uncertainty (pCi/L, g, F):	0.055
Are sample and/or duplicate results below RL?	See Below ##
Duplicate Numerical Performance Indicator:	0.520
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	73.02%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

***Determinations resuppressed due to unacceptable precision: N/A

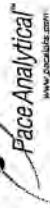
Sample Matrix Spike Control Assessment	
Sample Collection Date:	MS/MSD 1
Sample I.D.:	MS/MSD 2
Sample MS I.D.:	
Sample MSD I.D.:	
Spike I.D.:	
M/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
MS Spike Uncertainty (calculated):	
M/MSD Spike Uncertainty (calculated):	
Sample Result:	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	
M/MSD Upper % Recovery Limits:	
M/MSD Lower % Recovery Limits:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	
% RPD Limit:	

Signature

LAM 10/13/22

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 9/28/2022
Worklist: 69055
Matrix: WT

Method Blank Assessment	
MB Sample ID	2599416
MB concentration:	0.037
MB 2 Sigma CSU:	0.270
MB MDC:	0.626
MB Numerical Performance Indicator:	0.27
MB Status vs Numerical Indicator:	Pass
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	Y
LCS69055	LCS69055
Count Date:	10/4/2022
Spike I.D.:	22-029
Decay Corrected Spike Concentration (pCi/mL):	19.874
Volume Used (mL):	0.20
Aliquot Volume (L, g, F):	0.805
Target Conc. (pCi/L, g, F):	4.940
Uncertainty (Calculated):	0.356
Result (pCi/L, g, F):	4.442
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	0.977
Numerical Performance Indicator:	-0.94
Percent Recovery:	89.91%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	135%
Lower % Recovery Limits:	60%

Duplicate Sample Assessment	
Sample I.D.:	LCS69055
Duplicate Sample I.D.:	LCS69055
Sample Result (pCi/L, g, F):	4.189
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.917
Sample Duplicate Result (pCi/L, g, F):	4.442
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.977
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	-0.370
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	5.70%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

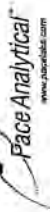
Comments:

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Sample Matrix Spike Control Assessment	
Sample Collection Date:	MS/MSD 1
Sample I.D.:	MS/MSD 2
Sample MS I.D.:	
Sample MSD I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
MS Spike Uncertainty (calculated):	
MSD Spike Uncertainty (calculated):	
Sample Result 2 Sigma CSU (pCi/L, g, F):	
Sample Matrix Spike Result:	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	
MS/MSD Upper % Recovery Limits:	
MS/MSD Lower % Recovery Limits:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	
% RPD Limit:	

Quality Control Sample Performance Assessment



Analyst **Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228
Analyst: VAL
Date: 9/26/2022
Worklist: 68983
Matrix: WT

Method Blank Assessment

MB Sample ID	2594500
MB concentration:	-0.343
M/B 2 Sigma CSU:	0.266
MB MDC:	0.703
MB Numerical Performance Indicator:	-2.52
MB Status vs Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment

LCSD (Y or N)?	Y
LCS68983	LCS68983
Count Date:	10/4/2022
Spike I.D.:	10/4/2022
Decay Corrected Spike Concentration (pCi/mL):	22-029
Volume Used (mL):	19.873
Aliquot Volume (L, g, F):	0.20
Target Conc. (pCi/L, g, F):	0.810
Uncertainty (Calculated):	4.909
Result (pCi/L, g, F):	0.353
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	3.327
Numerical Performance Indicator:	0.797
Percent Recovery:	-3.56
Status vs Numerical Indicator:	67.77%
Upper % Recovery Limits:	N/A
Lower % Recovery Limits:	Pass
	135%
	60%

Duplicate Sample Assessment

Sample I.D.:	LCS68983
Duplicate Sample I.D.:	LCS68983
Sample Result (pCi/L, g, F):	3.835
Sample Duplicate Result (pCi/L, g, F):	0.896
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	3.327
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):	0.797
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	0.830
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	13.22%
Duplicate Status vs Numerical Indicator:	Pass
Duplicate Status vs RPD:	Pass
% RPD Limit:	36%

Sample Matrix Spike Control Assessment

Sample Collection Date:	Sample I.D.:	MS/MSD 1	MS/MSD 2
Sample MS I.D.:	Sample MSD I.D.:		
Sample I.D.:	Sample I.D.:		
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	Spike Volume Used in MS (mL):		
Spike Volume Used in MSD (mL):	MS Aliquot (L, g, F):		
MS Target Conc. (pCi/L, g, F):	MSD Aliquot (L, g, F):		
MSD Target Conc. (pCi/L, g, F):	MSD Spike Uncertainty (calculated):		
MS Spike Uncertainty (calculated):	Sample Result:		
MSD Spike Uncertainty (calculated):	Sample Result 2 Sigma CSU (pCi/L, g, F):		
Sample Result:	Sample Matrix Spike Result:		
Sample Result 2 Sigma CSU (pCi/L, g, F):	Sample Matrix Spike Duplicate Result:		
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	MS Numerical Performance Indicator:		
MS Numerical Performance Indicator:	MS Percent Recovery:		
MS Percent Recovery:	MSD Percent Recovery:		
MS Status vs Numerical Indicator:	MS Status vs Numerical Indicator:		
MSD Status vs Numerical Indicator:	MS Status vs Recovery:		
MSD Status vs Recovery:	MS/MSD Upper % Recovery Limits:		
MS/MSD Upper % Recovery Limits:	MS/MSD Lower % Recovery Limits:		
MS/MSD Lower % Recovery Limits:			

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.:	Sample I.D.:
Sample MS I.D.:	Sample MS I.D.:
Sample MSD I.D.:	Sample MSD I.D.:
Sample Matrix Spike Result:	Sample Matrix Spike Result:
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result:
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	Duplicate Numerical Performance Indicator:
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	Duplicate Numerical Performance Indicator:
Duplicate Numerical Performance Indicator:	(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	MS/MSD Duplicate Status vs Numerical Indicator:
MS/MSD Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs RPD:
MS/MSD Duplicate Status vs RPD:	% RPD Limit:
% RPD Limit:	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

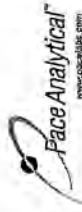
Comments:

Handwritten signatures and initials

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
 Analyst: VAL
 Date: 9/30/2022
 Worklist: 69073
 Matrix: WT



Method Blank Assessment

MB Sample ID: 2600360
 MB Concentration: 0.590
 MB 2 Sigma CSU: 0.382
 MB MDC: 0.710
 MB Numerical Performance Indicator: 3.02
 MB Status vs. Numerical Indicator: Fail*
 MB Status vs. MDC: Pass

Laboratory Control Sample Assessment

Count Date:	LCS/MSD 1	Y
10/10/2022	LCS/MSD 1	
22-029	22-029	
19.834	19.834	
0.20	0.20	
0.808	0.810	
4.907	4.895	
0.353	0.352	
6.528	6.766	
1.362	1.419	
2.23	2.51	
133.05%	138.22%	
N/A	Warning	
Pass	Fall High**	
135%	135%	
60%	60%	

Duplicate Sample Assessment

Sample I.D.:	LCS/MSD 1	Y
LCS/MSD 1	LCS/MSD 1	
6.528	6.528	
1.382	1.382	
6.766	6.766	
1.419	1.419	
NO	NO	
-0.235	-0.235	
3.81%	3.81%	
Pass	Pass	
35%	35%	

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date: Sample I.D.: Sample MS I.D.: Sample MSD I.D.: Spike I.D.: MS/MSD Decay Corrected Spike Concentration (pCi/mL): Spike Volume Used in MS (mL): MS Aliquot (L, g, F): MS Target Conc. (pCi/L, g, F): MSD Aliquot (L, g, F): MSD Target Conc. (pCi/L, g, F): MS Spike Uncertainty (calculated): MSD Spike Uncertainty (calculated): Sample Result: Sample Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Result: Matrix Spike Result 2 Sigma CSU (pCi/L, g, F): Sample Matrix Spike Duplicate Result: Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F): MS Numerical Performance Indicator: MSD Numerical Performance Indicator: MS Percent Recovery: MSD Percent Recovery: MS Status vs Numerical Indicator: MSD Status vs Numerical Indicator: MS Status vs Recovery: MSD Status vs Recovery: MS/MSD Upper % Recovery Limits: MS/MSD Lower % Recovery Limits:		

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.:	MS/MSD 1	MS/MSD 2
Sample I.D.	Sample I.D.	Sample I.D.
Sample MS I.D.	Sample MS I.D.	Sample MS I.D.
Sample Matrix Spike Result:	Sample Matrix Spike Result:	Sample Matrix Spike Result:
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):
Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result:	Sample Matrix Spike Duplicate Result:
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):
Duplicate Numerical Performance Indicator:	Duplicate Numerical Performance Indicator:	Duplicate Numerical Performance Indicator:
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	(Based on the Percent Recoveries) MS/MSD Duplicate RPD:
MS/MSD Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs Numerical Indicator:	MS/MSD Duplicate Status vs Numerical Indicator:
% RPD Limit:	% RPD Limit:	% RPD Limit:

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

*If the lowest activity sample in this batch is greater than ten times the blank value, the blank is acceptable; otherwise, this batch must be reprocessed.
 **If all sample results are below MDC, the batch is acceptable, otherwise this batch must be reprocessed due to LCS/MSD failure.

MB activity < MDC, Pass

NI < 3 acceptable for L10/MSD

Quiliver

10-11-22

1 of 1

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 10/5/2022
Worklist: 69145
Matrix: WT

Method Blank Assessment

MB Sample ID: 2605315
MB concentration: 0.660
MB 2 Sigma CSU: 0.393
MB MDC: 0.716

MB Numerical Performance Indicator: 3.29
MB Status vs Numerical Indicator: Fail*

MB Status vs. MDC: Pass

Laboratory Control Sample Assessment	LCSd (Y or N)?	
	LCS69145	Y
Count Date:	10/11/2022	LCS69145
Spike I.D.:	22-029	10/11/2022
Decay Corrected Spike Concentration (pCi/mL):	19.827	19.827
Volume Used (mL):	0.20	0.20
Aliquot Volume (L, g, F):	0.806	0.806
Target Conc. (pCi/L, g, F):	4.914	4.922
Uncertainty (Calculated):	0.354	0.354
Result (pCi/L, g, F):	4.534	4.396
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):	1.047	0.980
Numerical Performance Indicator:	-0.50	-0.99
Percent Recovery:	94.32%	89.31%
Status vs Numerical Indicator:	N/A	N/A
Status vs Recovery:	Pass	Pass
Upper % Recovery Limits:	135%	135%
Lower % Recovery Limits:	60%	60%

Duplicate Sample Assessment

Sample I.D.: LCS69145
Duplicate Sample I.D.: LCS69145

Sample Result (pCi/L, g, F): 4.634
Sample Result 2 Sigma CSU (pCi/L, g, F): 1.047
Sample Duplicate Result (pCi/L, g, F): 4.396
Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F): 0.980

Are sample and/or duplicate results below RL? NO

Duplicate Numerical Performance Indicator: 0.326
Duplicate (LCS/LCSD Percent Recoveries) Duplicate RPD: 5.45%

Duplicate Status vs Numerical Indicator: Pass
Duplicate Status vs RPD: Pass
% RPD Limit: 36%

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
<p>Sample Collection Date:</p> <p>Sample I.D.:</p> <p>Sample MS I.D.:</p> <p>Sample MSD I.D.:</p> <p>Spike I.D.:</p> <p>MS/MSD Decay Corrected Spike Concentration (pCi/mL):</p> <p>Spike Volume Used in MS (mL):</p> <p>Spike Volume Used in MSD (mL):</p> <p>MS Aliquot (L, g, F):</p> <p>MS Target Conc. (pCi/L, g, F):</p> <p>MSD Aliquot (L, g, F):</p> <p>MSD Target Conc. (pCi/L, g, F):</p> <p>MS Spike Uncertainty (calculated):</p> <p>MSD Spike Uncertainty (calculated):</p> <p>Sample Result:</p> <p>Sample Result 2 Sigma CSU (pCi/L, g, F):</p> <p>Sample Matrix Spike Result:</p> <p>Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):</p> <p>Sample Matrix Spike Duplicate Result:</p> <p>Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):</p> <p>MS Numerical Performance Indicator:</p> <p>MSD Numerical Performance Indicator:</p> <p>MS Percent Recovery:</p> <p>MSD Percent Recovery:</p> <p>MS Status vs Numerical Indicator:</p> <p>MSD Status vs Numerical Indicator:</p> <p>MS Status vs Recovery:</p> <p>MSD Status vs Recovery:</p> <p>MS/MSD Upper % Recovery Limits:</p> <p>MS/MSD Lower % Recovery Limits:</p>		

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.:

Sample MS I.D.:

Sample MSD I.D.:

Sample Matrix Spike Result:

Sample Matrix Spike Duplicate Result:

Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):

Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):

Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):

Duplicate Numerical Performance Indicator:

(Based on the Percent Recoveries)/MS/MSD Duplicate RPD:

MS/MSD Duplicate Status vs Numerical Indicator:

MS/MSD Duplicate Status vs RPD:

% RPD Limit:

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments: 4.634 is low activity sample in this batch is greater than test times the blank value; the blank is acceptable; otherwise this batch must be re-prepped.

low activity = well, Pass
10/12/22

September 23, 2022

Andrea McClure
WSP/Golder
5170 Peachtree Road
Building 100, Suite 300
Atlanta, GA 30341

RE: Project: Plant McDonough Supplemental
Pace Project No.: 92624826

Dear Andrea McClure:

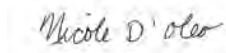
Enclosed are the analytical results for sample(s) received by the laboratory on September 09, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Stephen Benda, Southern Company
Noelia Gangi, Georgia Power
Daniela Herrera, Golder
Ben Hodges, Georgia Power
Kristen Jurinko
Laura Midkiff, Georgia Power
Karim Minkara, Golder Associates - Atlanta
J. Shelby Mobley, Southern Company

Charles Norton, Southern Company
Ms. Lauren Petty, Southern Company
Dawn Prell, Golder Associates Inc.
Michael Smilley, Georgia Power
Yong Cheng Soo, WSP/Golder
Tina Sullivan, ERM



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant McDonough Supplemental

Pace Project No.: 92624826

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001

South Carolina Drinking Water Cert. #: 99006003

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Louisiana DoH Drinking Water #: LA029

Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

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SAMPLE SUMMARY

Project: Plant McDonough Supplemental

Pace Project No.: 92624826

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92624826001	B-116D	Water	09/08/22 12:42	09/09/22 15:50
92624826002	DUP-2	Water	09/08/22 00:00	09/09/22 15:50
92624826003	B-118	Water	09/09/22 12:00	09/09/22 15:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant McDonough Supplemental

Pace Project No.: 92624826

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92624826001	B-116D	EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	CDC	3
92624826002	DUP-2	EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	CDC	3
92624826003	B-118	EPA 6010D	DRB	5
		EPA 6020B	CW1	13
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		SM 2320B-2011	SMS	3
		EPA 300.0 Rev 2.1 1993	CDC	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Supplemental
Pace Project No.: 92624826

Sample: B-116D **Lab ID: 92624826001** Collected: 09/08/22 12:42 Received: 09/09/22 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer						09/09/22 17:41		
pH	5.97	Std. Units					09/09/22 17:41		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Iron	0.087	mg/L	0.040	0.025	1	09/21/22 12:19	09/21/22 21:29	7439-89-6	
Sodium	7.7	mg/L	1.0	0.58	1	09/21/22 12:19	09/21/22 21:29	7440-23-5	
Calcium	10.1	mg/L	1.0	0.12	1	09/21/22 12:19	09/21/22 21:29	7440-70-2	
Magnesium	3.4	mg/L	0.050	0.012	1	09/21/22 12:19	09/21/22 21:29	7439-95-4	
Potassium	2.2	mg/L	0.20	0.15	1	09/21/22 12:19	09/23/22 11:26	7440-09-7	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	09/21/22 17:50	09/22/22 19:20	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/21/22 17:50	09/22/22 19:20	7440-38-2	
Barium	0.017	mg/L	0.0050	0.00067	1	09/21/22 17:50	09/22/22 19:20	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/21/22 17:50	09/22/22 19:20	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/21/22 17:50	09/22/22 19:20	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/21/22 17:50	09/22/22 19:20	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/21/22 17:50	09/22/22 19:20	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/21/22 17:50	09/22/22 19:20	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/21/22 17:50	09/22/22 19:20	7439-92-1	
Lithium	0.0054J	mg/L	0.030	0.00073	1	09/21/22 17:50	09/22/22 19:20	7439-93-2	
Molybdenum	ND	mg/L	0.010	0.00074	1	09/21/22 17:50	09/22/22 19:20	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/21/22 17:50	09/22/22 19:20	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/21/22 17:50	09/22/22 19:20	7440-28-0	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	09/22/22 14:00	09/22/22 17:53	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	82.0	mg/L	25.0	10.0	1		09/14/22 11:33		
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2320B Alkalinity

Analytical Method: SM 2320B-2011
Pace Analytical Services - Asheville

Alkalinity, Bicarbonate (CaCO ₃)	50.3	mg/L	5.0	5.0	1		09/14/22 17:56		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/14/22 17:56		
Alkalinity, Total as CaCO ₃	50.3	mg/L	5.0	5.0	1		09/14/22 17:56		

300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	2.4	mg/L	1.0	0.60	1		09/13/22 19:57	16887-00-6	
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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Supplemental

Pace Project No.: 92624826

Sample: B-116D **Lab ID: 92624826001** Collected: 09/08/22 12:42 Received: 09/09/22 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.065J	mg/L	0.10	0.050	1		09/13/22 19:57	16984-48-8	
Sulfate	0.54J	mg/L	1.0	0.50	1		09/13/22 19:57	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Supplemental
Pace Project No.: 92624826

Sample: DUP-2		Lab ID: 92624826002		Collected: 09/08/22 00:00	Received: 09/09/22 15:50	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Iron	0.10	mg/L	0.040	0.025	1	09/21/22 12:19	09/21/22 21:34	7439-89-6		
Sodium	8.1	mg/L	1.0	0.58	1	09/21/22 12:19	09/21/22 21:34	7440-23-5		
Calcium	10.6	mg/L	1.0	0.12	1	09/21/22 12:19	09/21/22 21:34	7440-70-2		
Magnesium	3.6	mg/L	0.050	0.012	1	09/21/22 12:19	09/21/22 21:34	7439-95-4		
Potassium	2.5	mg/L	0.20	0.15	1	09/21/22 12:19	09/23/22 11:31	7440-09-7		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	09/21/22 17:50	09/22/22 19:38	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0022	1	09/21/22 17:50	09/22/22 19:38	7440-38-2		
Barium	0.017	mg/L	0.0050	0.00067	1	09/21/22 17:50	09/22/22 19:38	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	09/21/22 17:50	09/22/22 19:38	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	09/21/22 17:50	09/22/22 19:38	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	09/21/22 17:50	09/22/22 19:38	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	09/21/22 17:50	09/22/22 19:38	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	09/21/22 17:50	09/22/22 19:38	7440-48-4		
Lead	ND	mg/L	0.0010	0.00089	1	09/21/22 17:50	09/22/22 19:38	7439-92-1		
Lithium	0.0056J	mg/L	0.030	0.00073	1	09/21/22 17:50	09/22/22 19:38	7439-93-2		
Molybdenum	ND	mg/L	0.010	0.00074	1	09/21/22 17:50	09/22/22 19:38	7439-98-7		
Selenium	ND	mg/L	0.0050	0.0014	1	09/21/22 17:50	09/22/22 19:38	7782-49-2		
Thallium	ND	mg/L	0.0010	0.00018	1	09/21/22 17:50	09/22/22 19:38	7440-28-0		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	09/22/22 14:00	09/22/22 17:56	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	87.0	mg/L	25.0	10.0	1		09/14/22 11:33			
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	50.8	mg/L	5.0	5.0	1		09/14/22 18:03			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	5.0	1		09/14/22 18:03			
Alkalinity, Total as CaCO3	50.8	mg/L	5.0	5.0	1		09/14/22 18:03			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	2.4	mg/L	1.0	0.60	1		09/13/22 20:12	16887-00-6		
Fluoride	0.065J	mg/L	0.10	0.050	1		09/13/22 20:12	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		09/13/22 20:12	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Supplemental
Pace Project No.: 92624826

Sample: B-118 **Lab ID: 92624826003** Collected: 09/09/22 12:00 Received: 09/09/22 15:50 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/09/22 17:41		
pH	6.49	Std. Units			1		09/09/22 17:41		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Potassium	2.3	mg/L	0.20	0.15	1	09/21/22 12:19	09/22/22 21:25	7440-09-7	
Iron	0.14	mg/L	0.040	0.025	1	09/21/22 12:19	09/21/22 21:38	7439-89-6	
Sodium	10.0	mg/L	1.0	0.58	1	09/21/22 12:19	09/21/22 21:38	7440-23-5	
Calcium	5.2	mg/L	1.0	0.12	1	09/21/22 12:19	09/21/22 21:38	7440-70-2	
Magnesium	2.0	mg/L	0.050	0.012	1	09/21/22 12:19	09/21/22 21:38	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/21/22 17:50	09/22/22 19:44	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/21/22 17:50	09/22/22 19:44	7440-38-2	
Barium	0.022	mg/L	0.0050	0.00067	1	09/21/22 17:50	09/22/22 19:44	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/21/22 17:50	09/22/22 19:44	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/21/22 17:50	09/22/22 19:44	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/21/22 17:50	09/22/22 19:44	7440-43-9	
Chromium	0.0017J	mg/L	0.0050	0.0011	1	09/21/22 17:50	09/22/22 19:44	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/21/22 17:50	09/22/22 19:44	7440-48-4	
Lead	ND	mg/L	0.0010	0.00089	1	09/21/22 17:50	09/22/22 19:44	7439-92-1	
Lithium	0.0024J	mg/L	0.030	0.00073	1	09/21/22 17:50	09/22/22 19:44	7439-93-2	
Molybdenum	0.0047J	mg/L	0.010	0.00074	1	09/21/22 17:50	09/22/22 19:44	7439-98-7	
Selenium	ND	mg/L	0.0050	0.0014	1	09/21/22 17:50	09/22/22 19:44	7782-49-2	
Thallium	ND	mg/L	0.0010	0.00018	1	09/21/22 17:50	09/22/22 19:44	7440-28-0	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/22/22 14:00	09/22/22 17:59	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	78.0	mg/L	25.0	10.0	1		09/14/22 11:36		
2320B Alkalinity									
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville									
Alkalinity, Bicarbonate (CaCO ₃)	35.2	mg/L	5.0	5.0	1		09/14/22 18:10		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	5.0	1		09/14/22 18:10		
Alkalinity, Total as CaCO ₃	35.2	mg/L	5.0	5.0	1		09/14/22 18:10		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	3.1	mg/L	1.0	0.60	1		09/13/22 20:27	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough Supplemental

Pace Project No.: 92624826

Sample: B-118 **Lab ID: 92624826003** Collected: 09/09/22 12:00 Received: 09/09/22 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Fluoride	0.080J	mg/L	0.10	0.050	1		09/13/22 20:27	16984-48-8	
Sulfate	2.8	mg/L	1.0	0.50	1		09/13/22 20:27	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Supplemental
Pace Project No.: 92624826

QC Batch: 724698 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92624826001, 92624826002, 92624826003

METHOD BLANK: 3775652 Matrix: Water
Associated Lab Samples: 92624826001, 92624826002, 92624826003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	09/21/22 19:48	
Iron	mg/L	ND	0.040	0.025	09/21/22 19:48	
Magnesium	mg/L	ND	0.050	0.012	09/21/22 19:48	
Potassium	mg/L	ND	0.20	0.15	09/21/22 19:48	
Sodium	mg/L	ND	1.0	0.58	09/21/22 19:48	

LABORATORY CONTROL SAMPLE: 3775653

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	
Iron	mg/L	1	1.0	101	80-120	
Magnesium	mg/L	1	1.0	104	80-120	
Potassium	mg/L	1	1.0	103	80-120	
Sodium	mg/L	1	1.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3775654 3775655

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92624373001 Result	Spike Conc.	Spike Conc.	Result						
Calcium	mg/L	73.2	1	1	71.7	72.8	-152	-37	75-125	2	20 M1
Iron	mg/L	1.9	1	1	2.9	2.9	101	100	75-125	0	20
Magnesium	mg/L	25.2	1	1	25.7	25.7	49	52	75-125	0	20 M1
Potassium	mg/L	8.2	1	1	9.0	9.1	75	90	75-125	2	20
Sodium	mg/L	19.9	1	1	20.3	20.6	38	68	75-125	1	20 M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Supplemental
Pace Project No.: 92624826

QC Batch: 724857 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92624826001, 92624826002, 92624826003

METHOD BLANK: 3776475 Matrix: Water
Associated Lab Samples: 92624826001, 92624826002, 92624826003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	09/22/22 16:16	
Arsenic	mg/L	ND	0.0050	0.0022	09/22/22 16:16	
Barium	mg/L	ND	0.0050	0.00067	09/22/22 16:16	
Beryllium	mg/L	ND	0.00050	0.000054	09/22/22 16:16	
Boron	mg/L	ND	0.040	0.0086	09/22/22 16:16	
Cadmium	mg/L	ND	0.00050	0.00011	09/22/22 16:16	
Chromium	mg/L	ND	0.0050	0.0011	09/22/22 16:16	
Cobalt	mg/L	ND	0.0050	0.00039	09/22/22 16:16	
Lead	mg/L	ND	0.0010	0.00089	09/22/22 16:16	
Lithium	mg/L	ND	0.030	0.00073	09/22/22 16:16	
Molybdenum	mg/L	ND	0.010	0.00074	09/22/22 16:16	
Selenium	mg/L	ND	0.0050	0.0014	09/22/22 16:16	
Thallium	mg/L	ND	0.0010	0.00018	09/22/22 16:16	

LABORATORY CONTROL SAMPLE: 3776476

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	103	80-120	
Arsenic	mg/L	0.1	0.096	96	80-120	
Barium	mg/L	0.1	0.096	96	80-120	
Beryllium	mg/L	0.1	0.098	98	80-120	
Boron	mg/L	1	1.0	100	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.098	98	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Lead	mg/L	0.1	0.097	97	80-120	
Lithium	mg/L	0.1	0.098	98	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	
Selenium	mg/L	0.1	0.095	95	80-120	
Thallium	mg/L	0.1	0.097	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3776477 3776478

Parameter	Units	92622406010 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Antimony	mg/L	0.0011J	0.1	0.10	0.1	0.10	99	104	75-125	5	20	
Arsenic	mg/L	ND	0.1	0.093	0.1	0.098	93	98	75-125	5	20	

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QUALITY CONTROL DATA

Project: Plant McDonough Supplemental

Pace Project No.: 92624826

Parameter	Units	92622406010		3776477		3776478		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Barium	mg/L	0.010	0.1	0.1	0.10	0.11	89	96	75-125	6	20			
Beryllium	mg/L	ND	0.1	0.1	0.096	0.097	96	97	75-125	1	20			
Boron	mg/L	0.012J	1	1	1.0	1.0	100	103	75-125	3	20			
Cadmium	mg/L	ND	0.1	0.1	0.094	0.095	94	95	75-125	1	20			
Chromium	mg/L	0.0066	0.1	0.1	0.10	0.10	96	96	75-125	0	20			
Cobalt	mg/L	ND	0.1	0.1	0.096	0.096	96	96	75-125	0	20			
Lead	mg/L	ND	0.1	0.1	0.094	0.093	94	92	75-125	2	20			
Lithium	mg/L	0.0012J	0.1	0.1	0.096	0.098	95	97	75-125	2	20			
Molybdenum	mg/L	ND	0.1	0.1	0.099	0.099	99	99	75-125	0	20			
Selenium	mg/L	ND	0.1	0.1	0.093	0.095	93	95	75-125	2	20			
Thallium	mg/L	ND	0.1	0.1	0.095	0.095	95	95	75-125	0	20			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Supplemental
Pace Project No.: 92624826

QC Batch: 724426 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92624826001, 92624826002, 92624826003

METHOD BLANK: 3774367 Matrix: Water
Associated Lab Samples: 92624826001, 92624826002, 92624826003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	09/22/22 17:16	

LABORATORY CONTROL SAMPLE: 3774368

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3774369 3774370

Parameter	Units	92624373001		3774370		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	0.00014J	0.0025	0.0025	0.0025	93	93	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Supplemental
Pace Project No.: 92624826

QC Batch: 722886 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92624826001, 92624826002, 92624826003

METHOD BLANK: 3766455 Matrix: Water
Associated Lab Samples: 92624826001, 92624826002, 92624826003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10.0	09/14/22 11:30	

LABORATORY CONTROL SAMPLE: 3766456

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	384	96	80-120	

SAMPLE DUPLICATE: 3766458

Parameter	Units	92624840004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	620000 ug/L	680	9	10	

SAMPLE DUPLICATE: 3767354

Parameter	Units	92624372007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	252	297	16	10	R1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Supplemental
Pace Project No.: 92624826

QC Batch: 723206 Analysis Method: SM 2320B-2011
QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92624826001, 92624826002, 92624826003

METHOD BLANK: 3768028 Matrix: Water
Associated Lab Samples: 92624826001, 92624826002, 92624826003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	5.0	09/14/22 14:56	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	5.0	09/14/22 14:56	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	5.0	09/14/22 14:56	

LABORATORY CONTROL SAMPLE: 3768029

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.2	100	80-120	

LABORATORY CONTROL SAMPLE: 3768030

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	50.8	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3768031 3768032

Parameter	Units	92625359004		3768031		3768032		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Alkalinity, Total as CaCO3	mg/L	324	50	50	353	349	58	51	80-120	1	25 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3768033 3768034

Parameter	Units	92624372011		3768033		3768034		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Alkalinity, Total as CaCO3	mg/L	134	50	50	193	185	118	102	80-120	4	25

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough Supplemental
Pace Project No.: 92624826

QC Batch: 722843 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92624826001, 92624826002, 92624826003

METHOD BLANK: 3766296 Matrix: Water
Associated Lab Samples: 92624826001, 92624826002, 92624826003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	09/13/22 12:35	
Fluoride	mg/L	ND	0.10	0.050	09/13/22 12:35	
Sulfate	mg/L	ND	1.0	0.50	09/13/22 12:35	

LABORATORY CONTROL SAMPLE: 3766297

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.4	101	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	50.8	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3766298 3766299

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92624945004	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	938	50	50	975	975	73	74	90-110	0	10	M1	
Fluoride	mg/L	ND	2.5	2.5	3.3J	3.8J	132	151	90-110		10	M1	
Sulfate	mg/L	3180	50	50	3170	3160	-30	-43	90-110	0	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3766300 3766301

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92624372011	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	5.4	50	50	57.1	58.0	103	105	90-110	2	10		
Fluoride	mg/L	0.082J	2.5	2.5	2.4	2.4	92	92	90-110	0	10		
Sulfate	mg/L	96.6	50	50	150	153	106	113	90-110	2	10	M1	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant McDonough Supplemental
Pace Project No.: 92624826

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough Supplemental
Pace Project No.: 92624826

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92624826001	B-116D				
92624826003	B-118				
92624826001	B-116D	EPA 3010A	724698	EPA 6010D	724853
92624826002	DUP-2	EPA 3010A	724698	EPA 6010D	724853
92624826003	B-118	EPA 3010A	724698	EPA 6010D	724853
92624826001	B-116D	EPA 3005A	724857	EPA 6020B	724980
92624826002	DUP-2	EPA 3005A	724857	EPA 6020B	724980
92624826003	B-118	EPA 3005A	724857	EPA 6020B	724980
92624826001	B-116D	EPA 7470A	724426	EPA 7470A	725130
92624826002	DUP-2	EPA 7470A	724426	EPA 7470A	725130
92624826003	B-118	EPA 7470A	724426	EPA 7470A	725130
92624826001	B-116D	SM 2540C-2015	722886		
92624826002	DUP-2	SM 2540C-2015	722886		
92624826003	B-118	SM 2540C-2015	722886		
92624826001	B-116D	SM 2320B-2011	723206		
92624826002	DUP-2	SM 2320B-2011	723206		
92624826003	B-118	SM 2320B-2011	723206		
92624826001	B-116D	EPA 300.0 Rev 2.1 1993	722843		
92624826002	DUP-2	EPA 300.0 Rev 2.1 1993	722843		
92624826003	B-118	EPA 300.0 Rev 2.1 1993	722843		

REPORT OF LABORATORY ANALYSIS

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Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: Georgia Power

Project #

WO#: 92624826



Courier: Fed Ex UPS USPS Client
 Commercial Pace Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 9/9/22 JM

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer: IR Gun ID: 230 Type of Ice: Wet Blue None

Biological Tissue Frozen? Yes No N/A

Cooler Temp: 2.4 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 2.4

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?
 Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9	
-Includes Date/Time/ID/Analysis Matrix: <u>WJ</u>			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/T me: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, OI and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Project

WO#: 92624826

PM: NMG

Due Date: 09/23/22

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2SO3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DGSU-40 mL Amber Unpreserved vials (N/A)		
1	2	1			1																								
2	2	1			1																								
3	2	1			1																								
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers).



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A
Required Client Information:

Company: Georgia Power - Coal Combustion Residues
 Address: 2480 Warner Road
 Atlanta, GA 30339
 Email: JBUCKER@SOUTHERNCO.COM
 Phone: (470) 620-6176
 Requested Due Date: 10 Day TAT

Section B
Requested Project Information:

Report To: Lauren Colker
 Copy To: Colker
 Purchase Order #: [Blank]
 Project Name: Plant McDonough Supplemental Sampling Network
 Project #: SL16894952

Section C
Invoice Information:

Attention: scs@psc.state.ga.us
 Company Name: [Blank]
 Address: [Blank]
 Price Profile #: [Blank]

Regulatory Agency: [Blank]
 State / Location: GA

ITEM #	MATRIX	CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES				ANALYSES TEST	Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	pH = 5.97, Fe2 = 0.0 mg/L 4826
									Unpreserved - Ice	H2SO4	HNO3 + Ice	HCl					
1	B-1180	WG	G	G	9/6/2022	12:42		6	3	3							
2	DUP-2	WG	G	G	9/6/2022	-		6	3	3							
3	B-118	WG	G	G	9/9/2022	12:00		8	3	5							
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	
13																	
14																	

REWORKED BY / AFFILIATION: [Blank]
 DATE: 09/10/22
 TIME: 15:50
 ACCEPTED BY / AFFILIATION: [Signature]
 DATE: 09/12/22
 TIME: 15:50

TEMP in C: [Blank]
 Received on Ice (Y/N): [Blank]
 Custody Sealed Cooler (Y/N): [Blank]
 Samples Intact (Y/N): [Blank]

November 04, 2022

Andrea McClure
WSP/Golder
5170 Peachtree Road
Building 100, Suite 300
Atlanta, GA 30341

RE: Project: McDonough Supplemental Rads-Revised Report
Pace Project No.: 92624832

Dear Andrea McClure:

Enclosed are the analytical results for sample(s) received by the laboratory on September 09, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

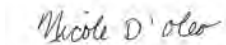
The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Greensburg

Revision 1: Issued on 11/4/22 to include Radium QC Sheets.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Stephen Benda, Southern Company
Noelia Gangi, Georgia Power
Daniela Herrera, Golder
Ben Hodges, Georgia Power
Kristen Jurinko
Laura Midkiff, Georgia Power
Karim Minkara, Golder Associates - Atlanta
J. Shelby Mobley, Southern Company

Charles Norton, Southern Company
Ms. Lauren Petty, Southern Company
Dawn Prell, Golder Associates Inc.
Michael Smilley, Georgia Power
Yong Cheng Soo, WSP/Golder
Tina Sullivan, ERM



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: McDonough Supplemental Rads-Revised Report
Pace Project No.: 92624832

Pace Analytical Services Pennsylvania

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
ANAB DOD-ELAP Rad Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification #: PA01547
Connecticut Certification #: PH-0694
Delaware Certification
EPA Region 4 DW Rad
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Florida: Cert E871149 SEKS WET
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: KY90133
KY WW Permit #: KY0098221
KY WW Permit #: KY0000221
Louisiana DHH/TNI Certification #: LA180012
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: 2017020
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification #: 9991

Missouri Certification #: 235
Montana Certification #: Cert0082
Nebraska Certification #: NE-OS-29-14
Nevada Certification #: PA014572018-1
New Hampshire/TNI Certification #: 297617
New Jersey/TNI Certification #: PA051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Ohio EPA Rad Approval: #41249
Oregon/TNI Certification #: PA200002-010
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: 02867
Texas/TNI Certification #: T104704188-17-3
Utah/TNI Certification #: PA014572017-9
USDA Soil Permit #: P330-17-00091
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Approve List for Rad
Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: McDonough Supplemental Rads-Revised Report
Pace Project No.: 92624832

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92624832001	B-116D	Water	09/08/22 12:42	09/09/22 15:50
92624832002	DUP-2	Water	09/08/22 00:00	09/09/22 15:50
92624832003	B-118	Water	09/09/22 12:00	09/09/22 15:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: McDonough Supplemental Rads-Revised Report

Pace Project No.: 92624832

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92624832001	B-116D	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92624832002	DUP-2	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
92624832003	B-118	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

PASI-PA = Pace Analytical Services - Greensburg

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough Supplemental Rads-Revised Report

Pace Project No.: 92624832

Sample: B-116D **Lab ID: 92624832001** Collected: 09/08/22 12:42 Received: 09/09/22 15:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
	Pace Analytical Services - Greensburg					
Radium-226	EPA 9315	0.124 ± 0.0932 (0.143) C:94% T:NA	pCi/L	10/02/22 10:25	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	0.562 ± 0.399 (0.777) C:76% T:84%	pCi/L	09/28/22 11:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	0.686 ± 0.492 (0.920)	pCi/L	10/03/22 12:21	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough Supplemental Rads-Revised Report

Pace Project No.: 92624832

Sample: DUP-2 **Lab ID: 92624832002** Collected: 09/08/22 00:00 Received: 09/09/22 15:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.187 ± 0.108 (0.140) C:93% T:NA	pCi/L	10/02/22 10:25	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.247 ± 0.291 (0.614) C:81% T:98%	pCi/L	09/28/22 11:36	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.434 ± 0.399 (0.754)	pCi/L	10/03/22 12:21	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: McDonough Supplemental Rads-Revised Report

Pace Project No.: 92624832

Sample: B-118 **Lab ID: 92624832003** Collected: 09/09/22 12:00 Received: 09/09/22 15:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	0.182 ± 0.108 (0.147) C:94% T:NA	pCi/L	10/02/22 10:25	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	0.605 ± 0.375 (0.700) C:80% T:81%	pCi/L	09/28/22 11:36	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	0.787 ± 0.483 (0.847)	pCi/L	10/03/22 12:21	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough Supplemental Rads-Revised Report

Pace Project No.: 92624832

QC Batch:	533110	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92624832001, 92624832002, 92624832003

METHOD BLANK: 2586601 Matrix: Water

Associated Lab Samples: 92624832001, 92624832002, 92624832003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.00759 ± 0.0468 (0.133) C:88% T:NA	pCi/L	10/02/22 10:24	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: McDonough Supplemental Rads-Revised Report

Pace Project No.: 92624832

QC Batch:	533111	Analysis Method:	EPA 9320
QC Batch Method:	EPA 9320	Analysis Description:	9320 Radium 228
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 92624832001, 92624832002, 92624832003

METHOD BLANK: 2586603 Matrix: Water

Associated Lab Samples: 92624832001, 92624832002, 92624832003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.798 ± 0.368 (0.604) C:81% T:85%	pCi/L	09/28/22 11:36	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: McDonough Supplemental Rads-Revised Report

Pace Project No.: 92624832

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval).

Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: McDonough Supplemental Rads-Revised Report
Pace Project No.: 92624832

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92624832001	B-116D	EPA 9315	533110		
92624832002	DUP-2	EPA 9315	533110		
92624832003	B-118	EPA 9315	533110		
92624832001	B-116D	EPA 9320	533111		
92624832002	DUP-2	EPA 9320	533111		
92624832003	B-118	EPA 9320	533111		
92624832001	B-116D	Total Radium Calculation	536982		
92624832002	DUP-2	Total Radium Calculation	536982		
92624832003	B-118	Total Radium Calculation	536982		

REPORT OF LABORATORY ANALYSIS

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Document Name:
Sample Condition Upon Receipt (SCUR)
 Document No.:
F-CAR-CS-033-Rev.08

Document Revised: November 15, 2021
 Page 1 of 2
 Issuing Authority
 Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: Georgia Power

Project

WO# : 92624832



Courier: Fed Ex UPS USPS Client
 Commercial Pace Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 9/9/22 JM

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 230 Type of Ice: Wet Blue None

Cooler Temp: 2.4 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 2.4

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>WJ</u>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO# : 92624832

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Project

PM: NMG

Due Date: 09/30/22

CLIENT: GA-GA Power

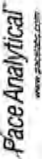
Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 Vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BPIN	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)			
1		2	1																												
2		2	1																												
3		2	1																												
4																															
5																															
6																															
7																															
8																															
9																															
10																															
11																															
12																															

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers).

Quality Control Sample Performance Assessment



Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-226
Analyst: RMS
Date: 9/20/2022
Worklist: 68887
Matrix: DW

Method Blank Assessment	
MB Sample ID	2596601
MB Concentration:	0.006
M/B Counting Uncertainty:	0.047
MB MDC:	0.133
MB Numerical Performance Indicator:	0.32
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCSID (Y or N)?	N
LCS68887	LCS068887
Count Date:	10/27/2022
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.023
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.505
Target Conc. (pCi/L, g, F):	4.760
Uncertainty (Calculated):	0.057
Result (pCi/L, g, F):	3.983
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.431
Numerical Performance Indicator:	-3.46
Percent Recovery:	83.89%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	92624632001
Duplicate Sample I.D.:	92624632001DUP
Duplicate Result (pCi/L, g, F):	0.124
Sample Result Counting Uncertainty (pCi/L, g, F):	0.091
Sample Duplicate Result (pCi/L, g, F):	0.071
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.074
Are sample and/or duplicate results below RL?	See Below #
Duplicate Numerical Performance Indicator:	0.874
Duplicate RPD:	53.80%
Duplicate Status vs Numerical Indicator:	N/A
Duplicate Status vs RPD:	Fail***
% RPD Limit:	25%

Sample Matrix Spike Control Assessment	
Sample Collection Date:	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample I.D.:	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	
Spike Volume Used in MS (mL):	
Spike Volume Used in MSD (mL):	
MS Aliquot (L, g, F):	
MS Target Conc. (pCi/L, g, F):	
MSD Aliquot (L, g, F):	
MSD Target Conc. (pCi/L, g, F):	
MS Spike Uncertainty (calculated):	
MSD Spike Uncertainty (calculated):	
Sample Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Result:	
Sample Matrix Spike Duplicate Result:	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
MS Numerical Performance Indicator:	
MSD Numerical Performance Indicator:	
MS Percent Recovery:	
MSD Percent Recovery:	
MS Status vs Numerical Indicator:	
MSD Status vs Numerical Indicator:	
MS Status vs Recovery:	
MSD Status vs Recovery:	
MS/MSD Upper % Recovery Limits:	
MS/MSD Lower % Recovery Limits:	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	
Sample MS I.D.:	
Sample MSD I.D.:	
Sample Matrix Spike Result:	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	
Sample Matrix Spike Duplicate Result:	
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	
Duplicate Numerical Performance Indicator:	
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	
MS/MSD Duplicate Status vs Numerical Indicator:	
MS/MSD Duplicate Status vs RPD:	
% RPD Limit:	

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:

***Batch must be prepared to unacceptable precision. N/A

Am 10/3/22

Am 10/3/22

Quality Control Sample Performance Assessment

Analyst Must Manually Enter All Fields Highlighted in Yellow.

Test: Ra-228
Analyst: VAL
Date: 9/19/2022
Worklist: 68888
Matrix: WT



Method Blank Assessment

MB Sample ID: 2586603
 MB concentration: 0.798
 MB 2 Sigma CSU: 0.368
 MB MDC: 0.804
 MB Numerical Performance Indicator: 4.25
 MB Status vs Numerical Indicator: Fail*
 MB Status vs MDC: See Comment*

Count Date:	LCS (Y or N)?	Y
9/28/2022	LCS D68888	
22-029		22-029
19.913		19.913
0.20		0.20
0.809		0.809
4.927		4.925
0.355		0.355
5.626		5.197
1.255		1.158
1.05		0.44
114.19%		105.52%
N/A		N/A
Pass		Pass
135%		135%
60%		60%

Laboratory Control Sample Assessment

Sample Collection Date:
 Sample I.D.:
 Sample MS I.D.:
 Sample MSD I.D.:
 Spike I.D.:

MS/MSD Decay Corrected Spike Concentration (pCi/mL):
 Spike Volume Used in MS (mL):
 Spike Volume Used in MSD (mL):
 MS Aliquot (L, g, F):
 MS Target Conc. (pCi/L, g, F):
 MSD Aliquot (L, g, F):
 MSD Target Conc. (pCi/L, g, F):
 MS Spike Uncertainty (calculated):
 MSD Spike Uncertainty (calculated):

Sample Result:
 Sample Result 2 Sigma CSU (pCi/L, g, F):
 Sample Matrix Spike Result:
 Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):
 Sample Matrix Spike Duplicate Result:
 Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):
 MS Numerical Performance Indicator:
 MSD Numerical Performance Indicator:
 MS Percent Recovery:
 MSD Percent Recovery:
 MS Status vs Numerical Indicator:
 MSD Status vs Numerical Indicator:
 MS/MSD Upper % Recovery Limits:
 MS/MSD Lower % Recovery Limits:

Duplicate Sample Assessment

Sample I.D.:
 Duplicate Sample I.D.:
 Sample Result (pCi/L, g, F):
 Sample Duplicate Result (pCi/L, g, F):
 Sample Result 2 Sigma CSU (pCi/L, g, F):
 Sample Duplicate Result 2 Sigma CSU (pCi/L, g, F):
 Are sample and/or duplicate results below RL? NO
 Duplicate Numerical Performance Indicator:
 Duplicate Numerical Performance Indicator:
 Duplicate RPD:
 Duplicate Status vs Numerical Indicator:
 Duplicate Status vs RPD:
 % RPD Limit: 36%

Enter Duplicate sample IDs if other than LCS/LCSD in the space below.

Matrix Spike/Matrix Spike Duplicate Sample Assessment

Sample I.D.:
 Sample MS I.D.:
 Sample MSD I.D.:
 Sample Matrix Spike Result:
 Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):
 Sample Matrix Spike Duplicate Result:
 Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):
 Duplicate Numerical Performance Indicator:
 Duplicate Numerical Performance Indicator:
 (Based on the Percent Recoveries) MS/MSD Duplicate RPD:
 MS/MSD Duplicate Status vs Numerical Indicator:
 MS/MSD Duplicate Status vs RPD:
 % RPD Limit:

Evaluation of duplicate precision is not applicable if either the sample or duplicate results are below the MDC.

Comments:
 *The method blank result is below the reporting limit for this analysis and is acceptable.

Handwritten signature and date: 9/29/22

September 23, 2022

Andrea McClure
WSP/Golder
5170 Peachtree Road
Building 100, Suite 300
Atlanta, GA 30341

RE: Project: McDonough AP-1 Risk Assessment
Pace Project No.: 92624830

Dear Andrea McClure:

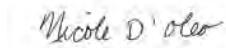
Enclosed are the analytical results for sample(s) received by the laboratory on September 09, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Stephen Benda, Southern Company
Noelia Gangi, Georgia Power
Daniela Herrera, Golder
Ben Hodges, Georgia Power
Kristen Jurinko
Laura Midkiff, Georgia Power
Karim Minkara, Golder Associates - Atlanta
J. Shelby Mobley, Southern Company
Charles Norton, Southern Company

Ms. Lauren Petty, Southern Company
Dawn Prell, Golder Associates Inc.
Michael Smilley, Georgia Power
Yong Cheng Soo, WSP/Golder
Tina Sullivan, ERM



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: McDonough AP-1 Risk Assessment

Pace Project No.: 92624830

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001

South Carolina Drinking Water Cert. #: 99006003

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Louisiana DoH Drinking Water #: LA029

Virginia/VELAP Certification #: 460221

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: McDonough AP-1 Risk Assessment

Pace Project No.: 92624830

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92624830001	B-73	Water	09/08/22 14:55	09/09/22 15:50
92624830002	B-62	Water	09/09/22 11:25	09/09/22 15:50
92624830003	B-68	Water	09/09/22 10:44	09/09/22 15:50

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SAMPLE ANALYTE COUNT

Project: McDonough AP-1 Risk Assessment
Pace Project No.: 92624830

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92624830001	B-73	EPA 6020B	CW1	1
92624830002	B-62	EPA 6020B	CW1	1
92624830003	B-68	EPA 6020B	CW1	2

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

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ANALYTICAL RESULTS

Project: McDonough AP-1 Risk Assessment

Pace Project No.: 92624830

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: B-73									
Lab ID: 92624830001									
Collected: 09/08/22 14:55 Received: 09/09/22 15:50 Matrix: Water									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/09/22 17:46		
pH	6.63	Std. Units			1		09/09/22 17:46		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Arsenic	0.019	mg/L	0.0050	0.0022	1	09/21/22 17:50	09/22/22 19:50	7440-38-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: McDonough AP-1 Risk Assessment

Pace Project No.: 92624830

Sample: B-62		Lab ID: 92624830002		Collected: 09/09/22 11:25		Received: 09/09/22 15:50		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/09/22 17:47		
pH	6.22	Std. Units			1		09/09/22 17:47		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Cobalt	ND	mg/L	0.0050	0.00039	1	09/21/22 17:50	09/22/22 19:56	7440-48-4	

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ANALYTICAL RESULTS

Project: McDonough AP-1 Risk Assessment

Pace Project No.: 92624830

Sample: B-68 **Lab ID: 92624830003** Collected: 09/09/22 10:44 Received: 09/09/22 15:50 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
------------	---------	-------	-----------------	-----	----	----------	----------	---------	------

Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer						09/09/22 17:47		
pH	6.64	Std. Units			1		09/09/22 17:47		

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Arsenic	0.51	mg/L	0.0050	0.0022	1	09/21/22 17:50	09/22/22 20:02	7440-38-2	
Molybdenum	0.17	mg/L	0.010	0.00074	1	09/21/22 17:50	09/22/22 20:02	7439-98-7	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: McDonough AP-1 Risk Assessment
Pace Project No.: 92624830

QC Batch: 724857 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92624830001, 92624830002, 92624830003

METHOD BLANK: 3776475 Matrix: Water
Associated Lab Samples: 92624830001, 92624830002, 92624830003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.0050	0.0022	09/22/22 16:16	
Cobalt	mg/L	ND	0.0050	0.00039	09/22/22 16:16	
Molybdenum	mg/L	ND	0.010	0.00074	09/22/22 16:16	

LABORATORY CONTROL SAMPLE: 3776476

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	0.1	0.096	96	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3776477 3776478

Parameter	Units	92622406010 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Arsenic	mg/L	ND	0.1	0.093	0.1	0.098	93	98	75-125	5	20	
Cobalt	mg/L	ND	0.1	0.096	0.1	0.096	96	96	75-125	0	20	
Molybdenum	mg/L	ND	0.1	0.099	0.1	0.099	99	99	75-125	0	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: McDonough AP-1 Risk Assessment

Pace Project No.: 92624830

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: McDonough AP-1 Risk Assessment

Pace Project No.: 92624830

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92624830001	B-73				
92624830002	B-62				
92624830003	B-68				
92624830001	B-73	EPA 3005A	724857	EPA 6020B	724980
92624830002	B-62	EPA 3005A	724857	EPA 6020B	724980
92624830003	B-68	EPA 3005A	724857	EPA 6020B	724980

REPORT OF LABORATORY ANALYSIS

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Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: Georgia Power

Project #:

WO#: 92624830



Courier: Commercial Fed Ex Pace UPS USPS Other: Client

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 9/9/22

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A JM

Thermometer: IR Gun ID: 230 Type of Ice: Wet Blue None

Cooler Temp: 2.4 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 2.4

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: <u>WJ</u>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

WO# : 92624830

PM: NMG

Due Date: 09/23/22

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

CLIENT: GA-GA Power

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1																													
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers).

September 28, 2022

Andrea McClure
WSP/Golder
5170 Peachtree Road
Building 100, Suite 300
Atlanta, GA 30341

RE: Project: McDonough AP-1,2,3/4 Risk
Pace Project No.: 92625185

Dear Andrea McClure:


Enclosed are the analytical results for sample(s) received by the laboratory between September 13, 2022 and September 16, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Stephen Benda, Southern Company
Noelia Gangi, Georgia Power
Daniela Herrera, Golder
Ben Hodges, Georgia Power
Kristen Jurinko
Laura Midkiff, Georgia Power
Karim Minkara, Golder Associates - Atlanta
J. Shelby Mobley, Southern Company

Charles Norton, Southern Company
Ms. Lauren Petty, Southern Company
Dawn Prell, Golder Associates Inc.
Michael Smilley, Georgia Power
Yong Cheng Soo, WSP/Golder
Tina Sullivan, ERM



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: McDonough AP-1,2,3/4 Risk

Pace Project No.: 92625185

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001

South Carolina Drinking Water Cert. #: 99006003

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Louisiana DoH Drinking Water #: LA029

Virginia/VELAP Certification #: 460221

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

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SAMPLE SUMMARY

Project: McDonough AP-1,2,3/4 Risk

Pace Project No.: 92625185

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92625185001	B-79	Water	09/12/22 10:05	09/13/22 10:30
92625185002	B-54	Water	09/13/22 09:40	09/14/22 09:53
92625185003	B-64	Water	09/13/22 14:15	09/14/22 09:53
92625185004	B-78	Water	09/13/22 14:14	09/14/22 09:53
92625185005	B-76	Water	09/13/22 09:54	09/14/22 09:53
92625185006	B-77	Water	09/13/22 14:21	09/14/22 09:53
92625185007	B-63	Water	09/14/22 12:56	09/15/22 08:20
92625185008	B-74	Water	09/14/22 11:02	09/15/22 08:20
92625185009	B-66	Water	09/16/22 10:10	09/16/22 16:30
92625185010	B-88	Water	09/16/22 10:44	09/16/22 16:30
92625185011	B-82	Water	09/16/22 12:15	09/16/22 16:30

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SAMPLE ANALYTE COUNT

Project: McDonough AP-1,2,3/4 Risk

Pace Project No.: 92625185

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92625185001	B-79	EPA 6020B	CW1	1
92625185002	B-54	EPA 6020B	CW1	1
92625185003	B-64	EPA 6020B	CW1	1
92625185004	B-78	EPA 6020B	CW1	1
92625185005	B-76	EPA 6020B	CW1	2
92625185006	B-77	EPA 6020B	CW1	2
92625185007	B-63	EPA 6020B	CW1	2
92625185008	B-74	EPA 6020B	CW1	2
92625185009	B-66	EPA 6020B	CW1	2
92625185010	B-88	EPA 6020B	CW1	1
92625185011	B-82	EPA 6020B	CW1	2

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

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ANALYTICAL RESULTS

Project: McDonough AP-1,2,3/4 Risk

Pace Project No.: 92625185

Sample: B-79		Lab ID: 92625185001		Collected: 09/12/22 10:05		Received: 09/13/22 10:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/19/22 05:42		
pH	4.92	Std. Units			1		09/19/22 05:42		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Lithium	0.0028J	mg/L	0.030	0.00073	1	09/26/22 09:44	09/26/22 21:03	7439-93-2	

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ANALYTICAL RESULTS

Project: McDonough AP-1,2,3/4 Risk

Pace Project No.: 92625185

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: B-54									
Lab ID: 92625185002									
Collected: 09/13/22 09:40									
Received: 09/14/22 09:53									
Matrix: Water									
Field Data									
Analytical Method:									
Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/19/22 05:45		
pH	5.34	Std. Units			1		09/19/22 05:45		
6020 MET ICPMS									
Analytical Method: EPA 6020B									
Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Lithium	0.0058J	mg/L	0.030	0.00073	1	09/26/22 09:44	09/26/22 21:27	7439-93-2	

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ANALYTICAL RESULTS

Project: McDonough AP-1,2,3/4 Risk

Pace Project No.: 92625185

Sample: B-64		Lab ID: 92625185003		Collected: 09/13/22 14:15		Received: 09/14/22 09:53		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/19/22 05:45		
pH	5.00	Std. Units			1		09/19/22 05:45		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Lithium	0.013J	mg/L	0.030	0.00073	1	09/26/22 09:44	09/26/22 21:33	7439-93-2	

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ANALYTICAL RESULTS

Project: McDonough AP-1,2,3/4 Risk

Pace Project No.: 92625185

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: B-78									
Lab ID: 92625185004									
Collected: 09/13/22 14:14 Received: 09/14/22 09:53 Matrix: Water									
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/19/22 05:44		
pH	4.56	Std. Units			1		09/19/22 05:44		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Lithium	0.011J	mg/L	0.030	0.00073	1	09/26/22 09:44	09/26/22 21:39	7439-93-2	

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ANALYTICAL RESULTS

Project: McDonough AP-1,2,3/4 Risk

Pace Project No.: 92625185

Sample: B-76 **Lab ID: 92625185005** Collected: 09/13/22 09:54 Received: 09/14/22 09:53 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer				1		09/19/22 05:45		
pH	6.05	Std. Units			1		09/19/22 05:45		

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Cobalt	0.21	mg/L	0.0050	0.00039	1	09/26/22 09:44	09/26/22 21:45	7440-48-4	
Lithium	0.0067J	mg/L	0.030	0.00073	1	09/26/22 09:44	09/26/22 21:45	7439-93-2	

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ANALYTICAL RESULTS

Project: McDonough AP-1,2,3/4 Risk

Pace Project No.: 92625185

Sample: B-77 **Lab ID: 92625185006** Collected: 09/13/22 14:21 Received: 09/14/22 09:53 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer						09/19/22 05:48		
pH	6.34	Std. Units			1		09/19/22 05:48		

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Cobalt	ND	mg/L	0.0050	0.00039	1	09/26/22 09:44	09/26/22 22:02	7440-48-4	
Lithium	0.0022J	mg/L	0.030	0.00073	1	09/26/22 09:44	09/26/22 22:02	7439-93-2	

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ANALYTICAL RESULTS

Project: McDonough AP-1,2,3/4 Risk

Pace Project No.: 92625185

Sample: B-63 **Lab ID: 92625185007** Collected: 09/14/22 12:56 Received: 09/15/22 08:20 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer						09/15/22 17:19		
pH	5.31	Std. Units			1		09/15/22 17:19		

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Cobalt	0.043	mg/L	0.0050	0.00039	1	09/26/22 09:44	09/26/22 22:50	7440-48-4	
Lithium	0.0072J	mg/L	0.030	0.00073	1	09/26/22 09:44	09/26/22 22:50	7439-93-2	

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ANALYTICAL RESULTS

Project: McDonough AP-1,2,3/4 Risk

Pace Project No.: 92625185

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: B-74									
Lab ID: 92625185008									
Collected: 09/14/22 11:02									
Received: 09/15/22 08:20									
Matrix: Water									
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer						09/15/22 17:19		
pH	6.01	Std. Units			1		09/15/22 17:19		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Arsenic	0.0054	mg/L	0.0050	0.0022	1	09/26/22 09:44	09/26/22 22:56	7440-38-2	
Molybdenum	0.042	mg/L	0.010	0.00074	1	09/26/22 09:44	09/26/22 22:56	7439-98-7	

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ANALYTICAL RESULTS

Project: McDonough AP-1,2,3/4 Risk

Pace Project No.: 92625185

Sample: B-66 **Lab ID: 92625185009** Collected: 09/16/22 10:10 Received: 09/16/22 16:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer				1		09/19/22 10:34		
pH	8.60	Std. Units			1		09/19/22 10:34		

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Arsenic	ND	mg/L	0.0050	0.0022	1	09/26/22 09:44	09/26/22 23:26	7440-38-2	
Cobalt	0.012	mg/L	0.0050	0.00039	1	09/26/22 09:44	09/26/22 23:26	7440-48-4	

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ANALYTICAL RESULTS

Project: McDonough AP-1,2,3/4 Risk

Pace Project No.: 92625185

Sample: B-88		Lab ID: 92625185010		Collected: 09/16/22 10:44	Received: 09/16/22 16:30	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/19/22 10:34		
pH	5.47	Std. Units			1		09/19/22 10:34		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Cobalt	0.0013J	mg/L	0.0050	0.00039	1	09/26/22 09:44	09/26/22 23:32	7440-48-4	

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ANALYTICAL RESULTS

Project: McDonough AP-1,2,3/4 Risk

Pace Project No.: 92625185

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: B-82									
Lab ID: 92625185011									
Collected: 09/16/22 12:15 Received: 09/16/22 16:30 Matrix: Water									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/19/22 10:34		
pH	5.02	Std. Units			1		09/19/22 10:34		
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Arsenic	ND	mg/L	0.0050	0.0022	1	09/26/22 09:44	09/26/22 23:38	7440-38-2	
Cobalt	0.0018J	mg/L	0.0050	0.00039	1	09/26/22 09:44	09/26/22 23:38	7440-48-4	

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QUALITY CONTROL DATA

Project: McDonough AP-1,2,3/4 Risk
Pace Project No.: 92625185

QC Batch:	725627	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3005A	Analysis Description:	6020 MET
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92625185001, 92625185002, 92625185003, 92625185004, 92625185005, 92625185006, 92625185007, 92625185008, 92625185009, 92625185010, 92625185011

METHOD BLANK: 3780267 Matrix: Water
Associated Lab Samples: 92625185001, 92625185002, 92625185003, 92625185004, 92625185005, 92625185006, 92625185007, 92625185008, 92625185009, 92625185010, 92625185011

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.0050	0.0022	09/26/22 20:51	
Cobalt	mg/L	ND	0.0050	0.00039	09/26/22 20:51	
Lithium	mg/L	ND	0.030	0.00073	09/26/22 20:51	
Molybdenum	mg/L	ND	0.010	0.00074	09/26/22 20:51	

LABORATORY CONTROL SAMPLE: 3780268

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Lithium	mg/L	0.1	0.11	107	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3780269 3780270

Parameter	Units	92625185001 Result	MS		MSD		% Rec		% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	% Rec				
Arsenic	mg/L	ND	0.1	0.1	0.099	0.098	99	98	75-125	2	20	
Cobalt	mg/L	0.0036J	0.1	0.1	0.097	0.095	93	91	75-125	2	20	
Lithium	mg/L	0.0028J	0.1	0.1	0.11	0.11	106	102	75-125	3	20	
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.10	102	103	75-125	0	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: McDonough AP-1,2,3/4 Risk

Pace Project No.: 92625185

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: McDonough AP-1,2,3/4 Risk

Pace Project No.: 92625185

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92625185001	B-79				
92625185002	B-54				
92625185003	B-64				
92625185004	B-78				
92625185005	B-76				
92625185006	B-77				
92625185007	B-63				
92625185008	B-74				
92625185009	B-66				
92625185010	B-88				
92625185011	B-82				
92625185001	B-79	EPA 3005A	725627	EPA 6020B	725817
92625185002	B-54	EPA 3005A	725627	EPA 6020B	725817
92625185003	B-64	EPA 3005A	725627	EPA 6020B	725817
92625185004	B-78	EPA 3005A	725627	EPA 6020B	725817
92625185005	B-76	EPA 3005A	725627	EPA 6020B	725817
92625185006	B-77	EPA 3005A	725627	EPA 6020B	725817
92625185007	B-63	EPA 3005A	725627	EPA 6020B	725817
92625185008	B-74	EPA 3005A	725627	EPA 6020B	725817
92625185009	B-66	EPA 3005A	725627	EPA 6020B	725817
92625185010	B-88	EPA 3005A	725627	EPA 6020B	725817
92625185011	B-82	EPA 3005A	725627	EPA 6020B	725817

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DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Meridianville Atlanta Kernersville

WO#: 92625185



Sample Condition Upon Receipt

Client Name: Georgia Power

Project #:

Courier: Commercial Fed-Ex Pace UPS USPS Client Other:

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 09/13/22 JM

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 083 Type of Ice: Wet Blue None

Cooler Temp: 1.9 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 1.9

USDA Regulated Soil (N/A, water sample) Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4. 10 DAY TAT
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix:	wg	
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO# : 92625185

Project

PM: NMG

Due Date: 09/27/22

CLIENT: GA-GA Power

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TCC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP45-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGfU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
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pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

GA Power

Project #:

5185

Courier: Commercial Fed Ex Pace UPS USPS Other: Client

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 9/14/22 JMR

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer:

IR Gun ID:

230

Type of Ice:

Wet

Blue

None

Biological Tissue Frozen?

Yes

No

N/A

Cooler Temp:

3.2

Correction Factor:

Add/Subtract (°C)

0.0

Temp should be above freezing to 6°C

Samples out of temp criteria Samples on ice, cooling process has begun

Cooler Temp Corrected (°C):

3.2

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix:	WW	
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted:

Date/Time:

Project Manager SCURF Review:

Date:

Project Manager SRF Review:

Date:



DC#_ Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9A-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
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pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.



Document Name:
Sample Condition Upon Receipt (SCUR)
 Document No.:
 F-CAR-CS-033-Rev.08

Document Revised: November 15, 2021
 Page 1 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition
 Upon Receipt

Client Name: GA Power Proj: _____

WO#: 92625185
 PM: NMG Due Date: 09/27/22
 CLIENT: GA-GA Power

Courier: Commercial Fed Ex UPS USPS Client
 Pace Other: _____

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 9/15/22
COB

Packing Material: Bubble Wrap Bubble Bags None Other
 Thermometer: IR Gun ID: 230 Type of Ice: Wet Blue None

Biological Tissue Frozen?
 Yes No N/A

Cooler Temp: 3.8 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 3.8

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?
 Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A -Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A -Includes Date/Time/ID/Analysis Matrix: <u>W</u>	9.
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers: _____

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



Document Name:
Bottle Identification Form (BIF)
 Document No.:
 F-CAR-CS-043-Rev.01

Document Issued: November 15, 2021
 Page 1 of 1
 Issuing Authority:
 Pace Carolinas Quality Office

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project

WO#: 92625185

PM: NMG

Due Date: 09/27/22

CLIENT: GA-GA Power

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHG

**Bottom half of box is to list number of bottles

Matrix	Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (3 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG6U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)				
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pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers).



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Knoxville

Sample Condition Upon Receipt

Client Name: Georgia Power

Project

WO#: 92625185

PM: NMG Due Date: 09/27/22

CLIENT: GA-GA Power

Courier: Commercial Fed Ex UPS USPS Client Other:

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 9/17/22 JM

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer: IR Gun ID: 230 Correction Factor: 3.3 Add/Subtract (°C) 0.0 Type of Ice: Wet Blue None

Biological Tissue Frozen? Yes No N/A

Cooler Temp: 3.3

Temp should be above freezing to 6°C Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 3.3

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States. CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

Chain of Custody Present?	Yes	No	N/A	1.	Comments/Discrepancy:
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4.	
Sufficient Volume?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.	
Correct Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Containers Intact?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.	
-Includes Date/Time/ID/Analysis Matrix: WG					
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	10.	
Trip Blank Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

CLIENT NOTIFICATION/RESOLUTION

Lot ID of split containers:

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO#: 92625185

Project

PM: NMG

Due Date: 09/27/22

CLIENT: GA-GA Power

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9A-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2SO3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
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pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

November 03, 2022

Kelley Sharpe
ARCADIS - Atlanta
2839 Paces Ferry Rd
STE 900
Atlanta, GA 30339

RE: Project: Plant McDonough CCR-Ash Pond
Pace Project No.: 92633519

Dear Kelley Sharpe:

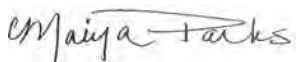
Enclosed are the analytical results for sample(s) received by the laboratory on October 28, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Peachtree Corners, GA

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Maiya Parks
maiya.parks@pacelabs.com
(770)734-4200
Project Manager

Enclosures

cc: Joju Abraham, Georgia Power-CCR
Ben Hodges, Georgia Power
Warren Johnson, ARCADIS - Atlanta
Allison Keefer, Southern Company
Laura Midkiff, Georgia Power
Tina Sullivan, ERM



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Plant McDonough CCR-Ash Pond
Pace Project No.: 92633519

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092
Florida DOH Certification #: E87315
Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381
South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Plant McDonough CCR-Ash Pond

Pace Project No.: 92633519

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92633519001	UT01_US	Water	10/27/22 09:58	10/28/22 09:50
92633519002	UT02	Water	10/27/22 10:25	10/28/22 09:50
92633519003	UT03	Water	10/27/22 10:13	10/28/22 09:50
92633519004	UT01_DS	Water	10/27/22 10:35	10/28/22 09:50
92633519005	CR-0.1	Water	10/27/22 11:50	10/28/22 09:50
92633519006	CR+0.2	Water	10/27/22 11:38	10/28/22 09:50
92633519007	CR+0.4	Water	10/27/22 11:30	10/28/22 09:50

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Plant McDonough CCR-Ash Pond

Pace Project No.: 92633519

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92633519001	UT01_US	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	KH	3	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	SMS	2	PASI-A
92633519002	UT02	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	KH	2	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
92633519003	UT03	SM 2320B-2011	SMS	2	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	KH	3	PASI-GA
92633519004	UT01_DS	SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	SMS	2	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB	4	PASI-GA
92633519005	CR-0.1	EPA 6020B	KH	3	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	SMS	2	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92633519006	CR+0.2	EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	KH	3	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	SMS	2	PASI-A
92633519007	CR+0.4	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	DRB	4	PASI-GA
		EPA 6020B	KH	5	PASI-GA
		SM 2540C-2015	DL1	1	PASI-GA
		SM 2320B-2011	SMS	2	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Plant McDonough CCR-Ash Pond
Pace Project No.: 92633519

Sample: UT01_US		Lab ID: 92633519001	Collected: 10/27/22 09:58	Received: 10/28/22 09:50	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA						
Potassium	3.6	mg/L	0.20	1	10/31/22 10:32	10/31/22 15:53	7440-09-7	
Sodium	11.9	mg/L	1.0	1	10/31/22 10:32	10/31/22 15:53	7440-23-5	
Calcium	14.2	mg/L	1.0	1	10/31/22 10:32	10/31/22 15:53	7440-70-2	
Magnesium	2.7	mg/L	0.050	1	10/31/22 10:32	10/31/22 15:53	7439-95-4	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA						
Arsenic	ND	mg/L	0.0050	1	10/31/22 10:06	10/31/22 19:40	7440-38-2	
Boron	0.059	mg/L	0.040	1	10/31/22 10:06	10/31/22 19:40	7440-42-8	
Molybdenum	ND	mg/L	0.010	1	10/31/22 10:06	10/31/22 19:40	7439-98-7	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA						
Total Dissolved Solids	51.0	mg/L	25.0	1		11/01/22 16:09		MW
2320B Alkalinity		Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville						
Alkalinity, Bicarbonate (CaCO ₃)	40.5	mg/L	5.0	1		11/01/22 11:53		
Alkalinity, Total as CaCO ₃	40.5	mg/L	5.0	1		11/01/22 11:53		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville						
Chloride	11.8	mg/L	1.0	1		10/31/22 03:34	16887-00-6	
Fluoride	0.30	mg/L	0.10	1		10/31/22 03:34	16984-48-8	
Sulfate	11.9	mg/L	1.0	1		10/31/22 03:34	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant McDonough CCR-Ash Pond
Pace Project No.: 92633519

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Sample: UT02 Lab ID: 92633519002 Collected: 10/27/22 10:25 Received: 10/28/22 09:50 Matrix: Water								
6010D ATL ICP Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Potassium	3.6	mg/L	0.20	1	10/31/22 10:32	10/31/22 15:58	7440-09-7	
Sodium	12.2	mg/L	1.0	1	10/31/22 10:32	10/31/22 15:58	7440-23-5	
Calcium	15.2	mg/L	1.0	1	10/31/22 10:32	10/31/22 15:58	7440-70-2	
Magnesium	2.8	mg/L	0.050	1	10/31/22 10:32	10/31/22 15:58	7439-95-4	
6020 MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Arsenic	ND	mg/L	0.0050	1	10/31/22 10:06	10/31/22 19:46	7440-38-2	
Boron	0.092	mg/L	0.040	1	10/31/22 10:06	10/31/22 19:46	7440-42-8	
2540C Total Dissolved Solids Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	116	mg/L	25.0	1		11/01/22 16:09		MW
2320B Alkalinity Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	42.7	mg/L	5.0	1		11/01/22 11:59		
Alkalinity, Total as CaCO ₃	42.7	mg/L	5.0	1		11/01/22 11:59		
300.0 IC Anions 28 Days Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	11.6	mg/L	1.0	1		10/31/22 03:49	16887-00-6	
Fluoride	0.28	mg/L	0.10	1		10/31/22 03:49	16984-48-8	
Sulfate	13.6	mg/L	1.0	1		10/31/22 03:49	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant McDonough CCR-Ash Pond
Pace Project No.: 92633519

Sample: UT03	Lab ID: 92633519003	Collected: 10/27/22 10:13	Received: 10/28/22 09:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	3.6	mg/L	0.20	1	10/31/22 10:32	10/31/22 16:03	7440-09-7	
Sodium	12.1	mg/L	1.0	1	10/31/22 10:32	10/31/22 16:03	7440-23-5	
Calcium	16.6	mg/L	1.0	1	10/31/22 10:32	10/31/22 16:03	7440-70-2	
Magnesium	3.4	mg/L	0.050	1	10/31/22 10:32	10/31/22 16:03	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Arsenic	ND	mg/L	0.0050	1	10/31/22 10:06	10/31/22 19:52	7440-38-2	
Boron	0.21	mg/L	0.040	1	10/31/22 10:06	10/31/22 19:52	7440-42-8	
Molybdenum	ND	mg/L	0.010	1	10/31/22 10:06	10/31/22 19:52	7439-98-7	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	92.0	mg/L	25.0	1		11/01/22 16:09		MW
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	43.5	mg/L	5.0	1		11/01/22 12:06		
Alkalinity, Total as CaCO ₃	43.5	mg/L	5.0	1		11/01/22 12:06		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	11.0	mg/L	1.0	1		10/31/22 04:05	16887-00-6	
Fluoride	0.27	mg/L	0.10	1		10/31/22 04:05	16984-48-8	
Sulfate	16.7	mg/L	1.0	1		10/31/22 04:05	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant McDonough CCR-Ash Pond
Pace Project No.: 92633519

Sample: UT01_DS	Lab ID: 92633519004	Collected: 10/27/22 10:35	Received: 10/28/22 09:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	3.4	mg/L	0.20	1	10/31/22 10:32	10/31/22 16:08	7440-09-7	
Sodium	11.1	mg/L	1.0	1	10/31/22 10:32	10/31/22 16:08	7440-23-5	
Calcium	15.1	mg/L	1.0	1	10/31/22 10:32	10/31/22 16:08	7440-70-2	
Magnesium	3.0	mg/L	0.050	1	10/31/22 10:32	10/31/22 16:08	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Arsenic	ND	mg/L	0.0050	1	10/31/22 10:06	10/31/22 19:58	7440-38-2	
Boron	0.16	mg/L	0.040	1	10/31/22 10:06	10/31/22 19:58	7440-42-8	
Molybdenum	ND	mg/L	0.010	1	10/31/22 10:06	10/31/22 19:58	7439-98-7	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	167	mg/L	25.0	1		11/01/22 16:09		D6,MW
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity,Bicarbonate (CaCO3)	46.6	mg/L	5.0	1		11/01/22 12:12		
Alkalinity, Total as CaCO3	46.6	mg/L	5.0	1		11/01/22 12:12		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	10.9	mg/L	1.0	1		10/31/22 04:21	16887-00-6	
Fluoride	0.26	mg/L	0.10	1		10/31/22 04:21	16984-48-8	
Sulfate	15.3	mg/L	1.0	1		10/31/22 04:21	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant McDonough CCR-Ash Pond

Pace Project No.: 92633519

Sample: CR-0.1	Lab ID: 92633519005	Collected: 10/27/22 11:50	Received: 10/28/22 09:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	4.3	mg/L	0.20	1	10/31/22 10:32	10/31/22 16:12	7440-09-7	
Sodium	13.8	mg/L	1.0	1	10/31/22 10:32	10/31/22 16:12	7440-23-5	
Calcium	8.1	mg/L	1.0	1	10/31/22 10:32	10/31/22 16:12	7440-70-2	
Magnesium	2.4	mg/L	0.050	1	10/31/22 10:32	10/31/22 16:12	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	0.041	mg/L	0.040	1	10/31/22 10:06	10/31/22 20:16	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	10/31/22 10:06	10/31/22 20:16	7440-48-4	
Lithium	ND	mg/L	0.030	1	10/31/22 10:06	10/31/22 20:16	7439-93-2	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	42.0	mg/L	25.0	1		11/01/22 16:09		MW
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	27.4	mg/L	5.0	1		11/01/22 12:19		
Alkalinity, Total as CaCO ₃	27.4	mg/L	5.0	1		11/01/22 12:19		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	12.7	mg/L	1.0	1		10/31/22 05:08	16887-00-6	
Fluoride	0.19	mg/L	0.10	1		10/31/22 05:08	16984-48-8	
Sulfate	9.1	mg/L	1.0	1		10/31/22 05:08	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant McDonough CCR-Ash Pond
Pace Project No.: 92633519

Sample: CR+0.2	Lab ID: 92633519006	Collected: 10/27/22 11:38	Received: 10/28/22 09:50	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A								
Pace Analytical Services - Peachtree Corners, GA								
Potassium	4.3	mg/L	0.20	1	10/31/22 10:32	10/31/22 16:17	7440-09-7	
Sodium	12.9	mg/L	1.0	1	10/31/22 10:32	10/31/22 16:17	7440-23-5	
Calcium	7.8	mg/L	1.0	1	10/31/22 10:32	10/31/22 16:17	7440-70-2	
Magnesium	2.3	mg/L	0.050	1	10/31/22 10:32	10/31/22 16:17	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A								
Pace Analytical Services - Peachtree Corners, GA								
Boron	ND	mg/L	0.040	1	10/31/22 10:06	10/31/22 20:22	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	10/31/22 10:06	10/31/22 20:22	7440-48-4	
Lithium	ND	mg/L	0.030	1	10/31/22 10:06	10/31/22 20:22	7439-93-2	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015								
Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	36.0	mg/L	25.0	1		11/01/22 16:09		MW
2320B Alkalinity								
Analytical Method: SM 2320B-2011								
Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	27.0	mg/L	5.0	1		11/01/22 12:25		
Alkalinity, Total as CaCO ₃	27.0	mg/L	5.0	1		11/01/22 12:25		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993								
Pace Analytical Services - Asheville								
Chloride	11.9	mg/L	1.0	1		10/31/22 05:24	16887-00-6	
Fluoride	0.18	mg/L	0.10	1		10/31/22 05:24	16984-48-8	
Sulfate	7.7	mg/L	1.0	1		10/31/22 05:24	14808-79-8	

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ANALYTICAL RESULTS

Project: Plant McDonough CCR-Ash Pond
Pace Project No.: 92633519

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Sample: CR+0.4 Lab ID: 92633519007 Collected: 10/27/22 11:30 Received: 10/28/22 09:50 Matrix: Water								
6010D ATL ICP								
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Potassium	4.3	mg/L	0.20	1	10/31/22 10:32	10/31/22 16:22	7440-09-7	
Sodium	12.8	mg/L	1.0	1	10/31/22 10:32	10/31/22 16:22	7440-23-5	
Calcium	7.7	mg/L	1.0	1	10/31/22 10:32	10/31/22 16:22	7440-70-2	
Magnesium	2.3	mg/L	0.050	1	10/31/22 10:32	10/31/22 16:22	7439-95-4	
6020 MET ICPMS								
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Arsenic	ND	mg/L	0.0050	1	10/31/22 10:06	10/31/22 20:28	7440-38-2	
Boron	ND	mg/L	0.040	1	10/31/22 10:06	10/31/22 20:28	7440-42-8	
Cobalt	ND	mg/L	0.0050	1	10/31/22 10:06	10/31/22 20:28	7440-48-4	
Lithium	ND	mg/L	0.030	1	10/31/22 10:06	10/31/22 20:28	7439-93-2	
Molybdenum	ND	mg/L	0.010	1	10/31/22 10:06	10/31/22 20:28	7439-98-7	
2540C Total Dissolved Solids								
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	55.0	mg/L	25.0	1		11/01/22 16:09		
2320B Alkalinity								
Analytical Method: SM 2320B-2011 Pace Analytical Services - Asheville								
Alkalinity, Bicarbonate (CaCO ₃)	27.3	mg/L	5.0	1		11/01/22 12:31		
Alkalinity, Total as CaCO ₃	27.3	mg/L	5.0	1		11/01/22 12:31		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	11.7	mg/L	1.0	1		10/31/22 05:40	16887-00-6	
Fluoride	0.18	mg/L	0.10	1		10/31/22 05:40	16984-48-8	
Sulfate	7.6	mg/L	1.0	1		10/31/22 05:40	14808-79-8	

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QUALITY CONTROL DATA

Project: Plant McDonough CCR-Ash Pond
Pace Project No.: 92633519

QC Batch: 733725 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92633519001, 92633519002, 92633519003, 92633519004, 92633519005, 92633519006, 92633519007

METHOD BLANK: 3818800 Matrix: Water
Associated Lab Samples: 92633519001, 92633519002, 92633519003, 92633519004, 92633519005, 92633519006, 92633519007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	10/31/22 14:27	
Magnesium	mg/L	ND	0.050	10/31/22 14:27	
Potassium	mg/L	ND	0.20	10/31/22 14:27	
Sodium	mg/L	ND	1.0	10/31/22 14:27	

LABORATORY CONTROL SAMPLE: 3818801

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.1	105	80-120	
Magnesium	mg/L	1	1.0	103	80-120	
Potassium	mg/L	1	1.0	102	80-120	
Sodium	mg/L	1	1.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3818802 3818803

Parameter	Units	92633366005 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Calcium	mg/L	114000 ug/L	1	116	1	118	196	385	75-125	2	20	M1
Magnesium	mg/L	27400 ug/L	1	28.8	1	29.3	138	185	75-125	2	20	M1
Potassium	mg/L	36900 ug/L	1	38.3	1	39.1	143	222	75-125	2	20	M1
Sodium	mg/L	266000 ug/L	1	270	1	275	337	867	75-125	2	20	M1

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

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QUALITY CONTROL DATA

Project: Plant McDonough CCR-Ash Pond
Pace Project No.: 92633519

QC Batch: 733721 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92633519001, 92633519002, 92633519003, 92633519004, 92633519005, 92633519006, 92633519007

METHOD BLANK: 3818794 Matrix: Water
Associated Lab Samples: 92633519001, 92633519002, 92633519003, 92633519004, 92633519005, 92633519006, 92633519007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/L	ND	0.0050	10/31/22 17:53	
Boron	mg/L	ND	0.040	10/31/22 17:53	
Cobalt	mg/L	ND	0.0050	10/31/22 17:53	
Lithium	mg/L	ND	0.030	10/31/22 17:53	
Molybdenum	mg/L	ND	0.010	10/31/22 17:53	

LABORATORY CONTROL SAMPLE: 3818795

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/L	0.1	0.10	100	80-120	
Boron	mg/L	1	1.1	108	80-120	
Cobalt	mg/L	0.1	0.11	105	80-120	
Lithium	mg/L	0.1	0.10	104	80-120	
Molybdenum	mg/L	0.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3818796 3818797

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92633223001 Result	Spike Conc.	Spike Conc.	Result						
Arsenic	mg/L	2.3J ug/L	0.1	0.1	0.10	0.10	102	99	75-125	3	20
Boron	mg/L	24.7J ug/L	1	1	1.1	1.1	105	108	75-125	3	20
Cobalt	mg/L	6.9J ug/L	0.1	0.1	0.11	0.11	104	101	75-125	3	20
Lithium	mg/L	ND	0.1	0.1	0.10	0.10	101	104	75-125	2	20
Molybdenum	mg/L	ND	0.1	0.1	0.10	0.097	103	96	75-125	7	20

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough CCR-Ash Pond
Pace Project No.: 92633519

QC Batch: 734041 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92633519001, 92633519002, 92633519003, 92633519004, 92633519005, 92633519006, 92633519007

METHOD BLANK: 3820511 Matrix: Water
Associated Lab Samples: 92633519001, 92633519002, 92633519003, 92633519004, 92633519005, 92633519006, 92633519007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	11/01/22 16:09	

LABORATORY CONTROL SAMPLE: 3820512

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	379	95	80-120	

SAMPLE DUPLICATE: 3820513

Parameter	Units	92632809001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2370	2160	9	10	

SAMPLE DUPLICATE: 3820514

Parameter	Units	92633519004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	167	74.0	77	10	D6,MW

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough CCR-Ash Pond

Pace Project No.: 92633519

QC Batch: 733493 Analysis Method: SM 2320B-2011
 QC Batch Method: SM 2320B-2011 Analysis Description: 2320B Alkalinity
 Laboratory: Pace Analytical Services - Asheville
 Associated Lab Samples: 92633519001, 92633519002, 92633519003, 92633519004, 92633519005, 92633519006, 92633519007

METHOD BLANK: 3817756 Matrix: Water
 Associated Lab Samples: 92633519001, 92633519002, 92633519003, 92633519004, 92633519005, 92633519006, 92633519007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	11/01/22 11:33	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	11/01/22 11:33	

LABORATORY CONTROL SAMPLE: 3817757

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	55.0	110	80-120	

LABORATORY CONTROL SAMPLE: 3817758

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	50	49.5	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3817759 3817760

Parameter	Units	92633455004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	34.3	50	50	84.9	84.0	101	99	80-120	1	25	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3817761 3817762

Parameter	Units	92633455005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	198	50	50	245	260	94	125	80-120	6	25 M1	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Plant McDonough CCR-Ash Pond

Pace Project No.: 92633519

QC Batch:	733691	Analysis Method:	EPA 300.0 Rev 2.1 1993
QC Batch Method:	EPA 300.0 Rev 2.1 1993	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Asheville
Associated Lab Samples:	92633519001, 92633519002, 92633519003, 92633519004, 92633519005, 92633519006, 92633519007		

METHOD BLANK:	3818694	Matrix:	Water
Associated Lab Samples:	92633519001, 92633519002, 92633519003, 92633519004, 92633519005, 92633519006, 92633519007		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	10/31/22 01:59	
Fluoride	mg/L	ND	0.10	10/31/22 01:59	
Sulfate	mg/L	ND	1.0	10/31/22 01:59	

LABORATORY CONTROL SAMPLE: 3818695						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.1	100	90-110	
Fluoride	mg/L	2.5	2.6	104	90-110	
Sulfate	mg/L	50	50.4	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3818696												3818697	
Parameter	Units	92633612001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
Chloride	mg/L	1.1	50	50	50.5	50.2	99	98	90-110	1	10		
Fluoride	mg/L	0.14	2.5	2.5	2.7	2.6	101	100	90-110	0	10		
Sulfate	mg/L	ND	50	50	49.9	49.5	98	98	90-110	1	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3818698												3818699	
Parameter	Units	92633523002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
Chloride	mg/L	12.0	50	50	61.7	61.4	100	99	90-110	1	10		
Fluoride	mg/L	0.17	2.5	2.5	2.7	2.7	101	101	90-110	0	10		
Sulfate	mg/L	7.0	50	50	57.2	56.9	100	100	90-110	1	10		

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Plant McDonough CCR-Ash Pond

Pace Project No.: 92633519

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

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

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

MW Due to matrix interference, achieving a constant weight is not possible.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Plant McDonough CCR-Ash Pond
Pace Project No.: 92633519

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92633519001	UT01_US	EPA 3010A	733725	EPA 6010D	733811
92633519002	UT02	EPA 3010A	733725	EPA 6010D	733811
92633519003	UT03	EPA 3010A	733725	EPA 6010D	733811
92633519004	UT01_DS	EPA 3010A	733725	EPA 6010D	733811
92633519005	CR-0.1	EPA 3010A	733725	EPA 6010D	733811
92633519006	CR+0.2	EPA 3010A	733725	EPA 6010D	733811
92633519007	CR+0.4	EPA 3010A	733725	EPA 6010D	733811
92633519001	UT01_US	EPA 3005A	733721	EPA 6020B	733812
92633519002	UT02	EPA 3005A	733721	EPA 6020B	733812
92633519003	UT03	EPA 3005A	733721	EPA 6020B	733812
92633519004	UT01_DS	EPA 3005A	733721	EPA 6020B	733812
92633519005	CR-0.1	EPA 3005A	733721	EPA 6020B	733812
92633519006	CR+0.2	EPA 3005A	733721	EPA 6020B	733812
92633519007	CR+0.4	EPA 3005A	733721	EPA 6020B	733812
92633519001	UT01_US	SM 2540C-2015	734041		
92633519002	UT02	SM 2540C-2015	734041		
92633519003	UT03	SM 2540C-2015	734041		
92633519004	UT01_DS	SM 2540C-2015	734041		
92633519005	CR-0.1	SM 2540C-2015	734041		
92633519006	CR+0.2	SM 2540C-2015	734041		
92633519007	CR+0.4	SM 2540C-2015	734041		
92633519001	UT01_US	SM 2320B-2011	733493		
92633519002	UT02	SM 2320B-2011	733493		
92633519003	UT03	SM 2320B-2011	733493		
92633519004	UT01_DS	SM 2320B-2011	733493		
92633519005	CR-0.1	SM 2320B-2011	733493		
92633519006	CR+0.2	SM 2320B-2011	733493		
92633519007	CR+0.4	SM 2320B-2011	733493		
92633519001	UT01_US	EPA 300.0 Rev 2.1 1993	733691		
92633519002	UT02	EPA 300.0 Rev 2.1 1993	733691		
92633519003	UT03	EPA 300.0 Rev 2.1 1993	733691		
92633519004	UT01_DS	EPA 300.0 Rev 2.1 1993	733691		
92633519005	CR-0.1	EPA 300.0 Rev 2.1 1993	733691		
92633519006	CR+0.2	EPA 300.0 Rev 2.1 1993	733691		
92633519007	CR+0.4	EPA 300.0 Rev 2.1 1993	733691		

REPORT OF LABORATORY ANALYSIS

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CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Page: 1 Of 1

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:		Regulatory Agency	
Company: ARCADIS Atlanta		Report To: Joju Abraham, Allison Keefer, Ben Hodges		Attention: Joju Abraham			
Address: 2839 Paces Ferry Rd Atlanta, GA 30339		Copy To: Warren Johnson		Company Name: GPC			
Email: warren.johnson@arcadis.com		Purchase Order #: SCS10382775		Address:			
Phone: 678.485.5288 Fax:		Project Name: Plant McDonough		Pace Quote:		State / Location	
Requested Due Date: 5 day TAT		Project #:		Pace Project Manager: Mayia.Parks@pacelabs.com,		GA	
				Pace Profile #: 2239			

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample Ids must be unique	MATRIX Drinking Water Water Waste Water Product Soil/Solid Oil Wipe Air Other Tissue	CODE DW WT WW P SL OL WP AR OT TS	COLLECTED		SAMPLE TEMP AT COLLECTION	Preservatives											# OF CONTAINERS	Y/N	Requested Analysis Filtered (Y/N)											Residual Chlorine (Y/N)					
				START			END		Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2SO3	Methanol	Other	Analyses Test			CCR App III ¹	Major Ions ²	Arsenic (As)	Cobalt (Co)	Lithium (Li)	Molybdenum (Mo)											
				DATE	TIME		DATE	TIME																		DATE	TIME	DATE	TIME	DATE		TIME	DATE	TIME	DATE	TIME
1	UT01_US	WS	G	10/27/2022	0958																															
2	UT02	WS	G	10/27/2022	1025																															
3	UT03	WS	G	10/27/2022	1013																															
4	UT01_DS	WS	G	10/27/2022	1035																															
5	CR-0.1	WS	G	10/27/2022	1150																															
6	CR+0.2	WS	G	10/27/2022	1138																															
7	CR+0.4	WS	G	10/27/2022	1130																															
8																																				
9																																				
10																																				
11																																				
12																																				

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
CCR App III ¹ - Boron (B), Calcium (Ca), Chloride (Cl), Fluoride (F), Sulfate, Total Dissolved Solids Major Ions - Magnesium (Mg), Sodium (Na), Potassium (K), Total Alkalinity, Bicarbonate Alkalinity	<i>[Signature]</i> / Arcadis	10/28/22	0950	<i>[Signature]</i> Charles Hartz / Pace Labs	10/28/22	0950	

WO#: 92633519



SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: *[Signature]* Garrett Gombowski 10/28

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)



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

Project #:

WO#: 92633519

Courier: Fed Ex UPS USPS Client Commercial Pace Other: _____

PM: MP Due Date: 11/04/22 CLIENT: GA-ArcadAt1

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 10/28/22

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Yes No N/A

Thermometer:

IR Gun ID: 214 Type of Ice: Wet Blue None

Cooler Temp: 3.3 Correction Factor: 0.0 Add/Subtract (°C)

Temp should be above freezing to 6°C Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 3.3

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-Pace Containers Used?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Includes Date/Time/ID/Analysis Matrix:	W		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO#: 92633519

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

PM: MP

Due Date: 11/04/22

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

CLIENT: GA-ArcadAt1

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	2	1																										
2	2	1																										
3	2	1																										
4	2	1																										
5	2	1																										
6	2	1																										
7	2	1																										
8																												
9																												
10																												
11																												
12																												

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DENR Certification Office (i.e. Out of hold, incorrect preservative, out of temp, incorrect containers.

APPENDIX B

Data Validation Summary

**Quality Control Review of Analytical Data- Ash Pond AP-1
Submitted by Pace Analytical Services, LLC
September 2022**

This narrative presents results of the quality control (QC) data review performed on analytical data submitted by Pace Analytical Services, LLC. for groundwater samples collected at Plant McDonough CCR Ash Pond AP-1 between September 7 and October 27, 2022. The chemical data were reviewed to identify quality issues which could affect the use of the data for decision making purposes.

Information regarding the primary sample locations, analytical parameters, QC samples, sampling dates, and laboratory sample delivery group (SDG) designations is summarized in Table 1. In accordance with groundwater monitoring and corrective action procedures discussed in Title 40 CFR, Subpart D - Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments, the samples were analyzed for detection monitoring constituents listed in 40 CFR, Part 257, Appendix III and assessment monitoring constituents listed in 40 CFR, Part 257, Appendix IV. Groundwater samples were also analyzed for alkalinity. Test methods included Inductively Coupled Plasma- Mass Spectrometry (ICP-MS) (USEPA Method 6020B), Mercury in Liquid Wastes (USEPA Method 7470A), Inductively Coupled Plasma (ICP) (6010D), Determination of Inorganic Anions By Ion Chromatography (USEPA Method 300.0), Total Dissolved Solids (TDS) (Standard Methods 2540C), Radium-226 (USEPA Method 9315) and Radium-228 (USEPA Method 9320). Additional surface water samples were collected and analyzed for Total Metals (USEPA Method 6020B), Cations (6010D), Anions (300.0), Alkalinity by Titration through Standard Method 2320B (SM2320B), and TDS (SM 2540C).

Data were reviewed in accordance with the US EPA Region IV Data Validation Standard Operating Procedures for Contract Laboratory Program (CLP) Inorganic Data by Inductively Coupled Plasma – Atomic Emission Spectroscopy and Inductively Coupled Plasma – Mass Spectroscopy (September 2011, Rev. 2.0), US EPA Region IV Data Validation Standard Operating Procedures for CLP Mercury Data by Cold Vapor Atomic Absorption (September 2011, Rev. 2.0), the National Functional Guidelines for Inorganic Superfund Methods Data Review (November 2020), and US Department of Energy, Evaluation of Radiochemical Data Usability (April 1997). The review included an assessment of the results for completeness, precision (laboratory duplicates, matrix spike/matrix spike duplicates), accuracy (laboratory control samples and matrix spike samples), and blank contamination (including field, equipment and laboratory blanks). Additionally, sample procedures, holding times and chains-of-custody were reviewed. Where there was a discrepancy between the QC criteria in the guidelines and the QC criterion established in the analytic methodology, method-specific criteria or professional judgment was used.

DATA QUALITY OBJECTIVES

- Laboratory Precision:** Laboratory goals for precision were met, with the exception of TDS as described in the qualification section below.
- Field Precision:** Field goals for precision were met.
- Accuracy:** Laboratory goals for accuracy were met, with the exception of mercury as described in the qualification section below.
- Detection Limits and Blanks:** Project goals for detection limits were met. Certain samples were diluted due to elevated concentrations of target analytes. Dilutions do not require qualifications based on USEPA guidelines. Detection and reporting limits of non-detect compounds are elevated proportional to the dilution when undiluted sample results are not provided by the laboratory. The data usability of diluted results was

evaluated by the data user in the context of site-wide characterization. Detections were found in certain blank results, as described in the qualification sections below.

Completeness:	There were no rejected analytical results for this event, resulting in a completion of 100%.
Holding Times:	All holding time requirements were met in accordance with specific analytical methods.

QUALIFICATIONS

In general, chemical results for the samples collected at the Site were qualified on the basis of precision or accuracy, or on the basis of professional judgment. The following definitions provide brief explanations of the qualifiers which may have been assigned to data by the laboratory.

- J** The analyte was reported above the method detection limit and below the reporting limit. The concentration reported is an estimated value.
- J+** The analyte was reported above the method detection limit; however, the concentration reported is an estimated value that may be biased high.
- U** The analyte was not detected above the method detection limit.
- UJ** The analyte was not detected above the method detection limit and the associated numerical value is the approximate concentration of the analyte in the sample.

The data generated as part of this sampling event met the QC criteria established in the respective analytical methods and data validation guidelines except as specified below. Although these qualifications were applied to some data from samples collected at the site and reported in sample delivery groups (SDGs) listed in Table 1, qualifications may not have been required or applied to all samples collected. A summary of sample qualifications can be found in Table 2.

- Mercury result in sample DGWC-37 from SDG 92624372 was qualified as non-detect, estimated bias high (UJ) when the associated MS/MSD recovery and RPD exceeded laboratory criteria.
- TDS results in sample DGWC-67 from SDG 92624372 and UT01_DS from SDG 92633519 were qualified as estimated (J) when the associated lab duplicate exceeded the relative percent difference criteria. Certain TDS results from SDG 92633519 were unable to achieve a constant weight due to matrix interference during analysis. The TDS results were qualified as J, estimated.
- Radium-228 results in samples from SDGs 92624378, 92624384, and 92624383 were qualified as non-detect (U) and minimum detectable concentrations were raised to the original sample results, when the analyte was detected at a similar concentration in an associated field and laboratory blank samples or the two-sigma (2σ) Normalized Absolute Difference (NAD) of the original results is less than 2.58. Total radium in samples from SDGs 92624378, 92624384, and 92624383 were qualified as estimated bias high (J+) when the associated Radium-228 qualified U for blank contamination and the associated Radium-226 is greater than minimum detectable concentration (MDC).

As described above, 100% of the results were acceptable for project use.

REFERENCE

Paar, J.G. & Porterfield, D.R. *Evaluation of Radiochemical Data Usability*. United States Department of Energy, Office of Environmental Restoration and Waste Management, Oak Ridge National Laboratory, April 1997.

USEPA, November 2020, National, Office of Superfund Remediation and Technology Innovation, *National Functional Guidelines for Inorganic Superfund Methods Data Review*, Revision 0.0.

USEPA, September 2011, Region 4, Science and Ecosystem Support Division, Quality Assurance Section, MTSB, *Data Validation Standard Operating Procedures for Contract Laboratory Program Inorganic Data By Inductively Coupled Plasma – Atomic Emission Spectroscopy and Inductively Coupled Plasma – Mass Spectroscopy*, Revision 2.0.

USEPA, September 2011, Region 4, Science and Ecosystem Support Division, Quality Assurance Section, MTSB, *Data Validation Standard Operating Procedures for Contract Laboratory Program Mercury Data By Cold Vapor Atomic Absorption*, Revision 2.0.

TABLE 1

Sample Summary Table
SCS Plant McDonough

SDGs	Field Identification	Collection Date	Lab Identification	Matrix	QC Samples	Analyses								
						Field pH	Total Metals (EPA 6020B)	Cations (EPA 6010D)	Anions (EPA 300.0)	Total Mercury (EPA 7470A)	TDS (SM 2540C-2011)	Alkalinity (SM 2320B)	Radium-226 (EPA 9315)	Radium-228 (EPA 9320)
92624376	DGWA-70A	9/7/2022	92624376001	WG	-	X	X	X	X	X	X	X	-	-
92624376	DGWA-71	9/7/2022	92624376002	WG	-	X	X	X	X	X	X	X	-	-
92624376	DGWA-53	9/8/2022	92624376003	WG	-	X	X	X	X	X	X	X	-	-
92624378	DGWA-70A	9/7/2022	92624378001	WG	-	-	-	-	-	-	-	-	X	X
92624378	DGWA-71	9/8/2022	92624378002	WG	-	-	-	-	-	-	-	-	X	X
92624378	DGWA-53	9/8/2022	92624378003	WG	-	-	-	-	-	-	-	-	X	X
92624372	DGWC-39	9/7/2022	92624372001	WG	-	X	X	X	X	X	X	X	-	-
92624372	DGWC-40	9/7/2022	92624372002	WG	-	X	X	X	X	X	X	X	-	-
92624372	DGWC-68A	9/7/2022	92624372003	WG	-	X	X	X	X	X	X	X	-	-
92624372	FB-1	9/7/2022	92624372004	WQ	FB (DGWC-39)	X	X	X	X	X	X	X	-	-
92624372	DUP-1	9/7/2022	92624372005	WG	FD (DGWC-40)	X	X	X	X	X	X	X	-	-
92624372	DGWC-69	9/7/2022	92624372006	WG	-	X	X	X	X	X	X	X	-	-
92624372	DGWC-67	9/8/2022	92624372007	WG	-	X	X	X	X	X	X	X	-	-
92624372	DGWC-121	9/8/2022	92624372008	WG	-	X	X	X	X	X	X	X	-	-
92624372	EB-1	9/8/2022	92624372009	WQ	EB (DGWC-67)	X	X	X	X	X	X	X	-	-
92624372	FB-2	9/8/2022	92624372010	WQ	FB (DGWC-121)	X	X	X	X	X	X	X	-	-
92624372	DGWC-37	9/8/2022	92624372011	WG	-	X	X	X	X	X	X	X	-	-
92624372	DGWC-38	9/12/2022	92624372012	WG	-	X	X	X	X	X	X	X	-	-
92624372	FB-3	9/12/2022	92624372013	WQ	FB (DGWC-38)	X	X	X	X	X	X	X	-	-
92624384	DGWC-39	9/7/2022	92624384001	WG	-	-	-	-	-	-	-	-	X	X
92624384	DGWC-40	9/7/2022	92624384002	WG	-	-	-	-	-	-	-	-	X	X
92624384	DGWC-68A	9/7/2022	92624384003	WG	-	-	-	-	-	-	-	-	X	X
92624384	FB-1	9/7/2022	92624384004	WQ	FB (DGWC-39)	-	-	-	-	-	-	-	X	X
92624384	DUP-1	9/7/2022	92624384005	WG	FD (DGWC-40)	-	-	-	-	-	-	-	X	X
92624384	DGWC-69	9/7/2022	92624384006	WG	-	-	-	-	-	-	-	-	X	X
92624384	DGWC-67	9/8/2022	92624384007	WG	-	-	-	-	-	-	-	-	X	X
92624384	DGWC-121	9/8/2022	92624384008	WG	-	-	-	-	-	-	-	-	X	X
92624384	EB-1	9/8/2022	92624384009	WQ	EB (DGWC-67)	-	-	-	-	-	-	-	X	X
92624384	FB-2	9/8/2022	92624384010	WQ	FB (DGWC-121)	-	-	-	-	-	-	-	X	X
92624384	DGWC-37	9/9/2022	92624384011	WG	-	-	-	-	-	-	-	-	X	X
92624384	DGWC-38	9/12/2022	92624384012	WG	-	-	-	-	-	-	-	-	X	X
92624384	FB-3	9/12/2022	92624384013	WQ	FB (DGWC-38)	-	-	-	-	-	-	-	X	X
92624373	B-105D	9/7/2022	92624373001	WG	-	X	X	X	X	X	X	X	-	-
92624373	B-112D	9/7/2022	92624373002	WG	-	X	X	X	X	X	X	X	-	-
92625181	B-113D	9/12/2022	92625181001	WG	-	X	X	X	X	X	X	X	-	-
92625181	EB-2	9/12/2022	92625181002	WQ	EB (B-113D)	X	X	X	X	X	X	X	-	-
92625217	B-113D	9/12/2022	92625217001	WG	-	-	-	-	-	-	-	-	X	X
92625217	EB-2	9/12/2022	92625217002	WQ	EB (B-113D)	-	-	-	-	-	-	-	X	X
92625217	B-105D	9/7/2022	92624383001	WG	-	-	-	-	-	-	-	-	X	X
92625217	B-112D	9/7/2022	92624383002	WG	-	-	-	-	-	-	-	-	X	X
92624373	B-100	9/8/2022	92624373003	WG	-	X	X	X	X	X	X	X	-	-
92624373	B-62	9/8/2022	92624373004	WG	-	X	X	X	X	X	X	X	-	-
92624383	B-100	9/8/2022	92624383003	WG	-	-	-	-	-	-	-	-	X	X
92624383	B-62	9/8/2022	92624383004	WG	-	-	-	-	-	-	-	-	X	X
92625189	B-90	9/13/2022	92625189001	WG	-	X	X	-	-	-	-	-	-	-
92625189	B-91	9/13/2022	92625189002	WG	-	X	X	-	-	-	-	-	-	-
92625189	B-95	9/13/2022	92625189003	WG	-	X	X	-	-	-	-	-	-	-
92625189	B-99	9/13/2022	92625189004	WG	-	X	X	-	-	-	-	-	-	-
92625189	B-119D	9/13/2022	92625189005	WG	-	X	X	X	X	X	X	X	-	-
92625189	Dup-3	9/13/2022	92625189006	WG	FD (B-119D)	-	X	X	X	X	X	X	-	-
92625189	B-96	9/14/2022	92625189007	WG	-	X	X	-	-	-	-	-	-	-
92625189	B-122D	9/14/2022	92625189008	WG	-	X	X	X	X	X	X	X	-	-
92625189	EB-4	9/14/2022	92625189009	WQ	EB (B-122D)	-	X	X	X	X	X	X	-	-
92625189	B-117D	9/14/2022	92625189010	WG	-	X	X	X	X	X	X	X	-	-
92625189	B-123D	9/14/2022	92625189011	WG	-	X	X	X	X	X	X	X	-	-
92625212	B-119D	9/12/2022	92625212001	WG	-	-	-	-	-	-	-	-	X	X
92625212	Dup-3	9/12/2022	92625212002	WG	FD (B-119D)	-	-	-	-	-	-	-	X	X
92625212	B-122D	9/14/2022	92625212003	WG	-	-	-	-	-	-	-	-	X	X
92625212	EB-4	9/14/2022	92625212004	WQ	EB (B-122D)	-	-	-	-	-	-	-	X	X
92625212	B-117D	9/15/2022	92625212005	WG	-	-	-	-	-	-	-	-	X	X
92625212	B-123D	9/20/2022	92625212006	WG	-	-	-	-	-	-	-	-	X	X
92624826	B-116D	9/8/2022	92624826001	WG	-	X	X	X	X	X	X	X	-	-
92624826	DUP-2	9/8/2022	92624826002	WG	FD (B-116D)	X	X	X	X	X	X	X	-	-
92624826	B-118	9/9/2022	92624826003	WG	-	X	X	X	X	X	X	X	-	-
92624832	B-116D	9/8/2022	92624832001	WG	-	-	-	-	-	-	-	-	X	X
92624832	DUP-2	9/8/2022	92624832002	WG	FD (B-116D)	-	-	-	-	-	-	-	X	X
92624832	B-118	9/9/2022	92624832003	WG	-	-	-	-	-	-	-	-	X	X

TABLE 1
Sample Summary Table
SCS Plant McDonough

SDGs	Field Identification	Collection Date	Lab Identification	Matrix	QC Samples	Analyses								
						Field pH	Total Metals (EPA 6020B)	Cations (EPA 6010D)	Anions (EPA 300.0)	Total Mercury (EPA 7470A)	TDS (SM 2540C-2011)	Alkalinity (SM 2320B)	Radium-226 (EPA 9315)	Radium-228 (EPA 9320)
92625185	B-79	9/12/2022	92625185001	WG	-	X	X	-	-	-	-	-	-	-
92625185	B-54	9/13/2022	92625185002	WG	-	X	X	-	-	-	-	-	-	-
92625185	B-64	9/13/2022	92625185003	WG	-	X	X	-	-	-	-	-	-	-
92625185	B-78	9/13/2022	92625185004	WG	-	X	X	-	-	-	-	-	-	-
92625185	B-76	9/13/2022	92625185005	WG	-	X	X	-	-	-	-	-	-	-
92625185	B-77	9/13/2022	92625185006	WG	-	X	X	-	-	-	-	-	-	-
92625185	B-63	9/14/2022	92625185007	WG	-	X	X	-	-	-	-	-	-	-
92625185	B-74	9/14/2022	92625185008	WG	-	X	X	-	-	-	-	-	-	-
92625185	B-66	9/16/2022	92625185009	WG	-	X	X	-	-	-	-	-	-	-
92625185	B-88	9/16/2022	92625185010	WG	-	X	X	-	-	-	-	-	-	-
92625185	B-82	9/16/2022	92625185011	WG	-	X	X	-	-	-	-	-	-	-
92633519	UT01_US	10/27/2022	92633519001	WS	-	-	X	X	X	-	X	X	-	-
92633519	UT02	10/27/2022	92633519002	WS	-	-	X	X	X	-	X	X	-	-
92633519	UT03	10/27/2022	92633519003	WS	-	-	X	X	X	-	X	X	-	-
92633519	UT01_DS	10/27/2022	92633519004	WS	-	-	X	X	X	-	X	X	-	-
92633519	CR-0.1	10/27/2022	92633519005	WS	-	-	X	X	X	-	X	X	-	-
92633519	CR+0.2	10/27/2022	92633519006	WS	-	-	X	X	X	-	X	X	-	-
92633519	CR+0.4	10/27/2022	92633519007	WS	-	-	X	X	X	-	X	X	-	-

Abbreviations:

- SDG- Sample Delivery Group
- QC - Quality Control
- SM - Standard Method
- WG - Groundwater
- WQ - Water Quality control
- WS - Surface Water
- FD - Field Duplicate
- TDS - Total Dissolved Solids

TABLE 2
Qualifier Summary Table
SCS Plant McDonough

SDG	Sample Name	Constituent	New Result	New RL or MDC	Qualifier	Reason
92624372	DGWC-37	Mercury	-	-	UJ	MS and RPD outside QC criteria
92624372	DGWC-67	TDS	-	-	J	Laboratory duplicate outside QC criteria
92624378	DGWA-53	Radium 228	-	0.814	U	Method blank contamination
92624378	DGWA-53	Total Radium	-	-	J+	Method blank contamination
92624384	DGWC-67	Radium 228	-	0.555	U	Equipment blank contamination
92624384	DGWC-121	Radium 228	-	1.64	U	Field blank contamination
92624384	DGWC-121	Total Radium	-	-	J+	Field blank contamination
92624383	B-62	Radium 228	-	1.33	U	Method blank contamination
92624383	B-62	Total Radium	-	-	J+	Method blank contamination
92633519	UT01_US	TDS	-	-	J	Inconsistent weight due to matrix interference
92633519	UT02	TDS	-	-	J	Inconsistent weight due to matrix interference
92633519	UT03	TDS	-	-	J	Inconsistent weight due to matrix interference
92633519	UT01_DS	TDS	-	-	J	Inconsistent weight due to matrix interference, laboratory duplicate contamination.
92633519	CR-0.1	TDS	-	-	J	Inconsistent weight due to matrix interference
92633519	CR+0.2	TDS	-	-	J	Inconsistent weight due to matrix interference

Abbreviations:

RL : Reporting limit

MDC : Minimum detectable concentration

SDG : Sample delivery group

TDS: Total Dissolved Solids

Qualifier

UJ: non-detect, estimated

J: estimated

J+: estimated, bias high

J-: estimated, bias low

APPENDIX B

Laboratory Accreditation



July 14, 2022

RE: Georgia Commercial Laboratory Accreditation Rule

Stipulation Requirements for Analysis of Non-Potable Water and Solid and Chemical Materials
Georgia state law requires any person submitting data to the GA Environmental Protection Division for regulatory purposes to stipulate that the laboratory responsible for preparing the data is approved or accredited to perform analysis of environmental samples. This stipulation must be included within each report or may be submitted in a separate document with the first report of the calendar year; alternatively, the attached scope of accreditation may be submitted in lieu of a stipulation.

The information provided below may be used to generate a stipulation for data reporting purposes:

Name of Laboratory:	Pace Analytical Services, LLC – Asheville, NC
Name of Accrediting Agency:	Commonwealth of Virginia Department of General Services Division of Consolidated Laboratory Services [Primary NELAP Accreditation]
Accreditation Number:	460222
Scopes of Accreditation:	Non-Potable Water Solid and Chemical Materials
Accreditation Effective Date:	June 15, 2022
Accreditation Expiration Date:	June 14, 2023

For additional information regarding the Georgia Commercial Laboratory Accreditation Rule, please contact the Georgia Environmental Protection Division at 404-656-4713.

Sincerely,

Jacob Cottrell
Quality Manager

[O] 828.417.6052
jacob.cottrell@pacelabs.com
2225 Riverside Drive, Asheville, NC 28804



June 15, 2022

Stipulation of Approval for Commercial Laboratory

According to Georgia State Law (O.C.G.A. 12-2-9) Commercial Rules for Commercial Laboratory Accreditation, any person submitting data to EPD prepared by a commercial laboratory shall stipulate that the laboratory is approved (Chapter 391-3-26-.05). The following information is provided as requested.

Laboratory	Pace Analytical Services, LLC 9800 Kinsey Avenue, Suite 100 Huntersville, NC 28078 Phone: 704.875.9092
Accredited By:	Commonwealth of Virginia, Department of General Services: Accrediting NELAP Authority
Accreditation ID:	Laboratory ID#: 460221
Scope:	Clean Water Act - Extractable Organics, Pesticides, PCB's, Volatile Organics RCRA/CERCLA - Extractable Organics, Pesticides, PCB's, Volatile Organics
Effective:	June 15, 2022
Expires:	June 14, 2023

Any question regarding this stipulation of approval may be directed to Pace Analytical at 704.875.9092. Thank you for your business and please do not hesitate to contact us if we can be of further assistance.

Sincerely,

Ross Simmons

Quality Assurance Manager

[O] 704.875.9092 [F] 704.875.9091
9800 Kinsey Avenue, Suite 100, Huntersville, NC 28078

PACELABS.COM



Pace Analytical Services, LLC
110 Technology Parkway
Peachtree Corners, GA 30092

Phone: 770.734.4200
Fax: 770.734.4201
www.pacelabs.com

Stipulation of Approval for Commercial Environmental Laboratories

Pursuant to the *Rules and Regulations of the State of Georgia* (O.C.G.A. 12-2-9) and *Rule 391-3-26.05* for “Commercial Environmental Laboratories”, any person submitting data prepared by a commercial analytical laboratory to the Division for regulatory purposes shall stipulate that the laboratory is approved.

The stipulations for which Pace-Atlanta is approved, is as follows:

Laboratory:	Pace Analytical Services, LLC – Atlanta GA 110 Technology Parkway Peachtree Corners, GA 30092 Phone: (770) 734-4200 Fax: (770) 734-4201
Accredited By:	<u>Authority</u> Florida Department of Health (FL - DOH) <u>Program</u> Florida Environmental Laboratory Certification Program (TNI/NELAP)
Accreditation ID:	E87315
Scope of Accreditation:	<u>Non-Potable Water (NPW)</u> -General Chemistry (Wet Chemistry) -Metals -Microbiology <u>Solid and Chemical Materials (SCM)</u> -General Chemistry -Metals - Microbiology
Effective Dates:	July 1, 2022 – June 30, 2023

Any question regarding this stipulation of approval may be directed to Pace-Atlanta at (770) 734-4200. Thank you for your business and please do not hesitate to contact us if we can be of further assistance.

Sincerely,

Ross Simmons
Quality Manager – Atlanta Laboratory
Pace Analytical Services, LLC



GEORGIA

DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

Richard E. Dunn, Director

Watershed Protection Branch
2 Martin Luther King, Jr. Drive
Suite 1152, East Tower
Atlanta, Georgia 30334
404-463-1511

Mr. William Billings, Laboratory Director
Pace Analytical Services, LLC - Pittsburgh
1638 Roseytown Road, Suites 2, 3 and 4
Greensburg, PA 15601

June 14, 2022

RE: Certification by Reciprocity
Pace Analytical Services, Inc. - Pittsburgh
Georgia ID #C040

Dear Mr. Billings:

The Georgia Department of Natural Resources, Environmental Protection Division (EPD) is in receipt of all required data necessary to fulfill your laboratory's request for Certification by Reciprocity in Georgia for the analysis of the parameters listed in the attached certificate. Therefore, in accordance with the Georgia Safe Drinking Water Act of 1977 (Sections 12-5-170 through 12-5-193, O.C.G.A.) and the Rules for Safe Drinking Water (Chapter 391-3-5), this certification is valid until March 31, 2023. This certificate is contingent upon continued Certification by the Commonwealth of Pennsylvania's Department of Environmental Protection and is non-transferable. This certificate is also contingent upon continued acceptable semi-annual Proficiency Testing results.

If Pace Analytical Services, LLC – Pittsburgh's certification status is downgraded for any analyte/method by your Primary Accrediting Agency, the GA Certification Program must be notified. Any downgrade will result in the withdrawal of reciprocity for that analyte.

Prior to the expiration of this certification, please contact your accrediting/certifying authority and request that the following information be forwarded to me at lynne.grubb@dnr.ga.gov.

1. Copies of the most current on-site report, and proposed and accepted corrective actions
2. Copies of the Certificate and scope of accreditation listing analytes

For additional information please feel free to contact Lynne Grubb at 470-604-9528.

Sincerely,

Lynne Grubb
Laboratory Certification Officer
Drinking Water Compliance Unit

Sean Earley
Program Manager
Drinking Water Compliance Unit

ANALYTE	CERTIFIED BY	METHOD
RADIONUCLIDES		
Gross Alpha	PA DEP	900.0, SM 7110C
Gross Beta	PA DEP	900.0
Radium 226	PA DEP	903.0, 903.1
Radium 228	PA DEP	904.0
Uranium	PA DEP	ASTM D5174-97

APPENDIX C

**Well Condition Assessment Forms and Well
Maintenance and Repair Documentation**

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: DGWA-53

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date: Access overgrown vegetation

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: DGWA-70A

Date: 9/6/2022

	Yes	No	N/A
--	-----	----	-----

1) Location/Identification

- | | | | |
|--|---|---|--|
| A Is the well visible and accessible? | X | | |
| B Is the well properly identified with correct well ID? | X | | |
| C Is the well in a high traffic area and does the well require protection from traffic? | | X | |
| D Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | | |

2) Protective Casing

- | | | | |
|---|---|--|--|
| A Is the protective casing free from apparent damage and able to be secured? | X | | |
| B Is the casing free of degradation or deterioration? | X | | |
| C Does the casing have a functioning weep hole? | X | | |
| D Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | | |
| E Is the well locked and is the lock in good condition? | X | | |

3) Surface Pad

- | | | | |
|---|---|--|--|
| A Is the well pad in good condition (not cracked/broken)? | X | | |
| B Is the well pad sloped away from the protective casing? | X | | |
| C Is the well pad in complete contact with the ground surface and stable? | X | | |
| D Is the well pad in complete contact with the protective casing? | X | | |
| E Is the pad surface clean (not covered with sediment or debris)? | X | | |

4) Internal Casing

- | | | | |
|---|---|--|--|
| A Does the cap prevent entry of foreign material into the well? | X | | |
| B Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | | |
| C Is the well properly vented for equilibration of air pressure? | X | | |
| D Is the survey point clearly marked on the inner casing? | X | | |
| E Is the depth of the well consistent with the original well log? | X | | |
| F Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | | |

5) Sampling: Groundwater Wells Only

- | | | | |
|--|---|---|--|
| A Does water recharge adequately when purged? | X | | |
| B If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | | |
| C Does the well require redevelopment (low flow/turbidity)? | | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: DGWA-71

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date: Overgrown vegetation

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: DGWC-37

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: DGWC-38

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: DGWC-39

Date: 9/6/2022

	Yes	No	N/A
--	-----	----	-----

1) Location/Identification

- | | | | |
|--|---|---|--|
| A Is the well visible and accessible? | X | | |
| B Is the well properly identified with correct well ID? | X | | |
| C Is the well in a high traffic area and does the well require protection from traffic? | | X | |
| D Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | | |

2) Protective Casing

- | | | | |
|---|---|--|--|
| A Is the protective casing free from apparent damage and able to be secured? | X | | |
| B Is the casing free of degradation or deterioration? | X | | |
| C Does the casing have a functioning weep hole? | X | | |
| D Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | | |
| E Is the well locked and is the lock in good condition? | X | | |

3) Surface Pad

- | | | | |
|---|---|--|--|
| A Is the well pad in good condition (not cracked/broken)? | X | | |
| B Is the well pad sloped away from the protective casing? | X | | |
| C Is the well pad in complete contact with the ground surface and stable? | X | | |
| D Is the well pad in complete contact with the protective casing? | X | | |
| E Is the pad surface clean (not covered with sediment or debris)? | X | | |

4) Internal Casing

- | | | | |
|---|---|--|--|
| A Does the cap prevent entry of foreign material into the well? | X | | |
| B Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | | |
| C Is the well properly vented for equilibration of air pressure? | X | | |
| D Is the survey point clearly marked on the inner casing? | X | | |
| E Is the depth of the well consistent with the original well log? | X | | |
| F Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | | |

5) Sampling: Groundwater Wells Only

- | | | | |
|---|---|---|--|
| A Does water recharge adequately when purged?
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | | |
| B Does the well require redevelopment (low flow/turbidity)? | X | | |
| C | | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: DGWC-40

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: DGWC-67

Date: 9/6/2022

	Yes	No	N/A
--	-----	----	-----

1) Location/Identification

- | | | | |
|--|---|---|--|
| A Is the well visible and accessible? | X | | |
| B Is the well properly identified with correct well ID? | X | | |
| C Is the well in a high traffic area and does the well require protection from traffic? | | X | |
| D Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | | |

2) Protective Casing

- | | | | |
|---|---|--|--|
| A Is the protective casing free from apparent damage and able to be secured? | X | | |
| B Is the casing free of degradation or deterioration? | X | | |
| C Does the casing have a functioning weep hole? | X | | |
| D Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | | |
| E Is the well locked and is the lock in good condition? | X | | |

3) Surface Pad

- | | | | |
|---|---|--|--|
| A Is the well pad in good condition (not cracked/broken)? | X | | |
| B Is the well pad sloped away from the protective casing? | X | | |
| C Is the well pad in complete contact with the ground surface and stable? | X | | |
| D Is the well pad in complete contact with the protective casing? | X | | |
| E Is the pad surface clean (not covered with sediment or debris)? | X | | |

4) Internal Casing

- | | | | |
|---|---|--|--|
| A Does the cap prevent entry of foreign material into the well? | X | | |
| B Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | | |
| C Is the well properly vented for equilibration of air pressure? | X | | |
| D Is the survey point clearly marked on the inner casing? | X | | |
| E Is the depth of the well consistent with the original well log? | X | | |
| F Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | | |

5) Sampling: Groundwater Wells Only

- | | | | |
|---|---|--|--|
| A Does water recharge adequately when purged?
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | | |
| B Does the well require redevelopment (low flow/turbidity)? | X | | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: DGWC-68A

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: DGWC-69

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | |
|---|---|---|
| A Is the well visible and accessible? | X | |
| B Is the well properly identified with correct well ID? | X | |
| C Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | |
|--|---|--|
| A Is the protective casing free from apparent damage and able to be secured? | X | |
| B Is the casing free of degradation or deterioration? | X | |
| C Does the casing have a functioning weep hole? | X | |
| D Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | |
|--|---|--|
| A Is the well pad in good condition (not cracked/broken)? | X | |
| B Is the well pad sloped away from the protective casing? | X | |
| C Is the well pad in complete contact with the ground surface and stable? | X | |
| D Is the well pad in complete contact with the protective casing? | X | |
| E Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | |
|--|---|--|
| A Does the cap prevent entry of foreign material into the well? | X | |
| B Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C Is the well properly vented for equilibration of air pressure? | X | |
| D Is the survey point clearly marked on the inner casing? | X | |
| E Is the depth of the well consistent with the original well log? | X | |
| F Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | |
|---|---|--|
| A Does water recharge adequately when purged? If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| B Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: DGWC-121

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-3

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-6

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-7

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|---|
| A | Is the well pad in good condition (not cracked/broken)? | | X |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date: Bollard missing

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-16

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-18

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-24

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-25

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-26

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-28

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-29

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-31

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-41

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-50

Date: 9/6/2022

	Yes	No	N/A
--	-----	----	-----

1) Location/Identification

- | | | | |
|--|---|---|--|
| A Is the well visible and accessible? | X | | |
| B Is the well properly identified with correct well ID? | X | | |
| C Is the well in a high traffic area and does the well require protection from traffic? | | X | |
| D Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | | |

2) Protective Casing

- | | | | |
|---|---|--|--|
| A Is the protective casing free from apparent damage and able to be secured? | X | | |
| B Is the casing free of degradation or deterioration? | X | | |
| C Does the casing have a functioning weep hole? | X | | |
| D Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | | |
| E Is the well locked and is the lock in good condition? | X | | |

3) Surface Pad

- | | | | |
|---|---|--|--|
| A Is the well pad in good condition (not cracked/broken)? | X | | |
| B Is the well pad sloped away from the protective casing? | X | | |
| C Is the well pad in complete contact with the ground surface and stable? | X | | |
| D Is the well pad in complete contact with the protective casing? | X | | |
| E Is the pad surface clean (not covered with sediment or debris)? | X | | |

4) Internal Casing

- | | | | |
|---|---|--|--|
| A Does the cap prevent entry of foreign material into the well? | X | | |
| B Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | | |
| C Is the well properly vented for equilibration of air pressure? | X | | |
| D Is the survey point clearly marked on the inner casing? | X | | |
| E Is the depth of the well consistent with the original well log? | X | | |
| F Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | | |

5) Sampling: Groundwater Wells Only

- | | | | |
|---|---|---|--|
| A Does water recharge adequately when purged?
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | | |
| B Does the well require redevelopment (low flow/turbidity)? | X | | |
| C Does the well require redevelopment (low flow/turbidity)? | | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-51

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-52

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-54

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-55

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-56

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-57

Date: 9/6/2022

	Yes	No	N/A
--	-----	----	-----

1) Location/Identification

- | | | | |
|--|---|---|--|
| A Is the well visible and accessible? | X | | |
| B Is the well properly identified with correct well ID? | X | | |
| C Is the well in a high traffic area and does the well require protection from traffic? | | X | |
| D Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | | |

2) Protective Casing

- | | | | |
|---|---|--|--|
| A Is the protective casing free from apparent damage and able to be secured? | X | | |
| B Is the casing free of degradation or deterioration? | X | | |
| C Does the casing have a functioning weep hole? | X | | |
| D Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | | |
| E Is the well locked and is the lock in good condition? | X | | |

3) Surface Pad

- | | | | |
|---|---|--|--|
| A Is the well pad in good condition (not cracked/broken)? | X | | |
| B Is the well pad sloped away from the protective casing? | X | | |
| C Is the well pad in complete contact with the ground surface and stable? | X | | |
| D Is the well pad in complete contact with the protective casing? | X | | |
| E Is the pad surface clean (not covered with sediment or debris)? | X | | |

4) Internal Casing

- | | | | |
|---|---|--|--|
| A Does the cap prevent entry of foreign material into the well? | X | | |
| B Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | | |
| C Is the well properly vented for equilibration of air pressure? | X | | |
| D Is the survey point clearly marked on the inner casing? | X | | |
| E Is the depth of the well consistent with the original well log? | X | | |
| F Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | | |

5) Sampling: Groundwater Wells Only

- | | | | |
|--|---|---|--|
| A Does water recharge adequately when purged? If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | | |
| B Does the well require redevelopment (low flow/turbidity)? | X | | |
| C | | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-58

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-59

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements?

X

7) Corrective actions as needed, by date: Overgrown vegetation

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-60

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-61

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-62

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-63

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date: Damaged manhole lid

Signature and Seal of PE/PG responsible for inspection _____

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-64

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date: Well lock and bar destroyed

Signature and Seal of PE/PG responsible for inspection _____

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-65

Date: 9/6/2022

	Yes	No	N/A
--	-----	----	-----

1) Location/Identification

- | | | | |
|--|---|---|--|
| A Is the well visible and accessible? | X | | |
| B Is the well properly identified with correct well ID? | X | | |
| C Is the well in a high traffic area and does the well require protection from traffic? | | X | |
| D Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | | |

2) Protective Casing

- | | | | |
|---|---|---|--|
| A Is the protective casing free from apparent damage and able to be secured? | | X | |
| B Is the casing free of degradation or deterioration? | X | | |
| C Does the casing have a functioning weep hole? | X | | |
| D Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | | |
| E Is the well locked and is the lock in good condition? | X | | |

3) Surface Pad

- | | | | |
|---|---|--|--|
| A Is the well pad in good condition (not cracked/broken)? | X | | |
| B Is the well pad sloped away from the protective casing? | X | | |
| C Is the well pad in complete contact with the ground surface and stable? | X | | |
| D Is the well pad in complete contact with the protective casing? | X | | |
| E Is the pad surface clean (not covered with sediment or debris)? | X | | |

4) Internal Casing

- | | | | |
|---|---|--|--|
| A Does the cap prevent entry of foreign material into the well? | X | | |
| B Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | | |
| C Is the well properly vented for equilibration of air pressure? | X | | |
| D Is the survey point clearly marked on the inner casing? | X | | |
| E Is the depth of the well consistent with the original well log? | X | | |
| F Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | | |

5) Sampling: Groundwater Wells Only

- | | | | |
|---|---|--|--|
| A Does water recharge adequately when purged?
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | | |
| B Does the well require redevelopment (low flow/turbidity)? | X | | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements?

	X		
--	---	--	--

7) Corrective actions as needed, by date:

			Broken bolt holes
--	--	--	-------------------

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-66

Date: 9/6/2022

	Yes	No	N/A
--	-----	----	-----

1) Location/Identification

- | | | | |
|--|---|---|--|
| A Is the well visible and accessible? | X | | |
| B Is the well properly identified with correct well ID? | X | | |
| C Is the well in a high traffic area and does the well require protection from traffic? | | X | |
| D Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | | |

2) Protective Casing

- | | | | |
|---|---|--|--|
| A Is the protective casing free from apparent damage and able to be secured? | X | | |
| B Is the casing free of degradation or deterioration? | X | | |
| C Does the casing have a functioning weep hole? | X | | |
| D Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | | |
| E Is the well locked and is the lock in good condition? | X | | |

3) Surface Pad

- | | | | |
|---|---|--|--|
| A Is the well pad in good condition (not cracked/broken)? | X | | |
| B Is the well pad sloped away from the protective casing? | X | | |
| C Is the well pad in complete contact with the ground surface and stable? | X | | |
| D Is the well pad in complete contact with the protective casing? | X | | |
| E Is the pad surface clean (not covered with sediment or debris)? | X | | |

4) Internal Casing

- | | | | |
|---|---|--|--|
| A Does the cap prevent entry of foreign material into the well? | X | | |
| B Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | | |
| C Is the well properly vented for equilibration of air pressure? | X | | |
| D Is the survey point clearly marked on the inner casing? | X | | |
| E Is the depth of the well consistent with the original well log? | X | | |
| F Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | | |

5) Sampling: Groundwater Wells Only

- | | | | |
|---|---|--|--|
| A Does water recharge adequately when purged?
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | | |
| B Does the well require redevelopment (low flow/turbidity)? | X | | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-68

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-72

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-73

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-74

Date: 9/6/2022

	Yes	No	N/A
--	-----	----	-----

1) Location/Identification

- | | | | |
|--|---|---|--|
| A Is the well visible and accessible? | X | | |
| B Is the well properly identified with correct well ID? | X | | |
| C Is the well in a high traffic area and does the well require protection from traffic? | | X | |
| D Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | | |

2) Protective Casing

- | | | | |
|---|---|--|--|
| A Is the protective casing free from apparent damage and able to be secured? | X | | |
| B Is the casing free of degradation or deterioration? | X | | |
| C Does the casing have a functioning weep hole? | X | | |
| D Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | | |
| E Is the well locked and is the lock in good condition? | X | | |

3) Surface Pad

- | | | | |
|---|---|--|--|
| A Is the well pad in good condition (not cracked/broken)? | X | | |
| B Is the well pad sloped away from the protective casing? | X | | |
| C Is the well pad in complete contact with the ground surface and stable? | X | | |
| D Is the well pad in complete contact with the protective casing? | X | | |
| E Is the pad surface clean (not covered with sediment or debris)? | X | | |

4) Internal Casing

- | | | | |
|---|---|--|--|
| A Does the cap prevent entry of foreign material into the well? | X | | |
| B Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | | |
| C Is the well properly vented for equilibration of air pressure? | X | | |
| D Is the survey point clearly marked on the inner casing? | X | | |
| E Is the depth of the well consistent with the original well log? | X | | |
| F Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | | |

5) Sampling: Groundwater Wells Only

- | | | | |
|--|---|---|--|
| A Does water recharge adequately when purged? If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | | |
| B Does the well require redevelopment (low flow/turbidity)? | X | | |
| C | | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-76

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-77

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-78

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date: Overgrown vegetation

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-79

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-80

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|---|
| A | Is the well pad in good condition (not cracked/broken)? | | X |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date: Two bollards missing

Signature and Seal of PE/PG responsible for inspection _____

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-81

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-82

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date: No weep hole

Signature and Seal of PE/PG responsible for inspection _____

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-83

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-85

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-86

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-87

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date: Overgrown vegetation

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-88

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date: Overgrown vegetation

Signature and Seal of PE/PG responsible for inspection _____

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-89

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date: Broken bolt hole

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-90

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | |
|--|---|--|
| A Is the well visible and accessible? | X | |
| B Is the well properly identified with correct well ID? | X | |
| C Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | |
|---|---|--|
| A Is the protective casing free from apparent damage and able to be secured? | X | |
| B Is the casing free of degradation or deterioration? | X | |
| C Does the casing have a functioning weep hole? | X | |
| D Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | |
|---|---|--|
| A Is the well pad in good condition (not cracked/broken)? | X | |
| B Is the well pad sloped away from the protective casing? | X | |
| C Is the well pad in complete contact with the ground surface and stable? | X | |
| D Is the well pad in complete contact with the protective casing? | X | |
| E Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | |
|---|---|--|
| A Does the cap prevent entry of foreign material into the well? | X | |
| B Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C Is the well properly vented for equilibration of air pressure? | X | |
| D Is the survey point clearly marked on the inner casing? | X | |
| E Is the depth of the well consistent with the original well log? | X | |
| F Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | |
|---|---|--|
| A Does water recharge adequately when purged?
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| B Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date: Overgrown vegetation

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-91

Date: 9/6/2022

	Yes	No	N/A
--	-----	----	-----

1) Location/Identification

- | | | | |
|--|---|---|--|
| A Is the well visible and accessible? | X | | |
| B Is the well properly identified with correct well ID? | X | | |
| C Is the well in a high traffic area and does the well require protection from traffic? | | X | |
| D Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | | |

2) Protective Casing

- | | | | |
|---|---|---|--|
| A Is the protective casing free from apparent damage and able to be secured? | X | | |
| B Is the casing free of degradation or deterioration? | X | | |
| C Does the casing have a functioning weep hole? | X | | |
| D Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | | X | |
| E Is the well locked and is the lock in good condition? | X | | |

3) Surface Pad

- | | | | |
|---|---|--|--|
| A Is the well pad in good condition (not cracked/broken)? | X | | |
| B Is the well pad sloped away from the protective casing? | X | | |
| C Is the well pad in complete contact with the ground surface and stable? | X | | |
| D Is the well pad in complete contact with the protective casing? | X | | |
| E Is the pad surface clean (not covered with sediment or debris)? | X | | |

4) Internal Casing

- | | | | |
|---|---|--|--|
| A Does the cap prevent entry of foreign material into the well? | X | | |
| B Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | | |
| C Is the well properly vented for equilibration of air pressure? | X | | |
| D Is the survey point clearly marked on the inner casing? | X | | |
| E Is the depth of the well consistent with the original well log? | X | | |
| F Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | | |

5) Sampling: Groundwater Wells Only

- | | | | |
|--|---|---|--|
| A Does water recharge adequately when purged? | X | | |
| B If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | | |
| C Does the well require redevelopment (low flow/turbidity)? | | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date: Flooded annulus

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-92

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-93

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-94

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date: Need flat well cap, lock bar

Signature and Seal of PE/PG responsible for inspection _____

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-95

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date: Off site well, no lock bar

Signature and Seal of PE/PG responsible for inspection _____

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-96

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date: Off site well, no lock bar

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-97

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements?

	X	
--	---	--

7) Corrective actions as needed, by date:

	Off site well, no lock bar	

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-98

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements?

X

7) Corrective actions as needed, by date:

Off site well, no lock bar

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-99

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-100

Date: 9/6/2022

Yes	No	N/A
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1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-101D

Date: 9/6/2022

	Yes	No	N/A
--	-----	----	-----

1) Location/Identification

- | | | | |
|--|---|---|--|
| A Is the well visible and accessible? | X | | |
| B Is the well properly identified with correct well ID? | X | | |
| C Is the well in a high traffic area and does the well require protection from traffic? | | X | |
| D Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | | |

2) Protective Casing

- | | | | |
|---|---|--|--|
| A Is the protective casing free from apparent damage and able to be secured? | X | | |
| B Is the casing free of degradation or deterioration? | X | | |
| C Does the casing have a functioning weep hole? | X | | |
| D Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | | |
| E Is the well locked and is the lock in good condition? | X | | |

3) Surface Pad

- | | | | |
|---|---|--|--|
| A Is the well pad in good condition (not cracked/broken)? | X | | |
| B Is the well pad sloped away from the protective casing? | X | | |
| C Is the well pad in complete contact with the ground surface and stable? | X | | |
| D Is the well pad in complete contact with the protective casing? | X | | |
| E Is the pad surface clean (not covered with sediment or debris)? | X | | |

4) Internal Casing

- | | | | |
|---|---|--|--|
| A Does the cap prevent entry of foreign material into the well? | X | | |
| B Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | | |
| C Is the well properly vented for equilibration of air pressure? | X | | |
| D Is the survey point clearly marked on the inner casing? | X | | |
| E Is the depth of the well consistent with the original well log? | X | | |
| F Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | | |

5) Sampling: Groundwater Wells Only

- | | | | |
|---|---|--|--|
| A Does water recharge adequately when purged?
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | | |
| B Does the well require redevelopment (low flow/turbidity)? | X | | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-102D

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-103D

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-104D

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-105D

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-106D

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date: Two bollards fallen, overgrown

Signature and Seal of PE/PG responsible for inspection _____

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-107D

Date: 9/6/2022

	Yes	No	N/A
--	-----	----	-----

1) Location/Identification

- | | | | |
|--|---|---|--|
| A Is the well visible and accessible? | X | | |
| B Is the well properly identified with correct well ID? | X | | |
| C Is the well in a high traffic area and does the well require protection from traffic? | | X | |
| D Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | | |

2) Protective Casing

- | | | | |
|---|---|--|--|
| A Is the protective casing free from apparent damage and able to be secured? | X | | |
| B Is the casing free of degradation or deterioration? | X | | |
| C Does the casing have a functioning weep hole? | X | | |
| D Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | | |
| E Is the well locked and is the lock in good condition? | X | | |

3) Surface Pad

- | | | | |
|---|---|--|--|
| A Is the well pad in good condition (not cracked/broken)? | X | | |
| B Is the well pad sloped away from the protective casing? | X | | |
| C Is the well pad in complete contact with the ground surface and stable? | X | | |
| D Is the well pad in complete contact with the protective casing? | X | | |
| E Is the pad surface clean (not covered with sediment or debris)? | X | | |

4) Internal Casing

- | | | | |
|---|---|--|--|
| A Does the cap prevent entry of foreign material into the well? | X | | |
| B Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | | |
| C Is the well properly vented for equilibration of air pressure? | X | | |
| D Is the survey point clearly marked on the inner casing? | X | | |
| E Is the depth of the well consistent with the original well log? | X | | |
| F Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | | |

5) Sampling: Groundwater Wells Only

- | | | | |
|---|---|--|--|
| A Does water recharge adequately when purged?
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | | |
| B Does the well require redevelopment (low flow/turbidity)? | X | | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-108D

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-109D

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-110D

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-111D

Date: 9/6/2022

	Yes	No	N/A
--	-----	----	-----

1) Location/Identification

- | | | | |
|--|---|--|--|
| A Is the well visible and accessible? | X | | |
| B Is the well properly identified with correct well ID? | X | | |
| C Is the well in a high traffic area and does the well require protection from traffic? | X | | |
| D Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | | |

2) Protective Casing

- | | | | |
|---|---|--|--|
| A Is the protective casing free from apparent damage and able to be secured? | X | | |
| B Is the casing free of degradation or deterioration? | X | | |
| C Does the casing have a functioning weep hole? | X | | |
| D Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | | |
| E Is the well locked and is the lock in good condition? | X | | |

3) Surface Pad

- | | | | |
|---|---|--|--|
| A Is the well pad in good condition (not cracked/broken)? | X | | |
| B Is the well pad sloped away from the protective casing? | X | | |
| C Is the well pad in complete contact with the ground surface and stable? | X | | |
| D Is the well pad in complete contact with the protective casing? | X | | |
| E Is the pad surface clean (not covered with sediment or debris)? | X | | |

4) Internal Casing

- | | | | |
|---|---|--|--|
| A Does the cap prevent entry of foreign material into the well? | X | | |
| B Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | | |
| C Is the well properly vented for equilibration of air pressure? | X | | |
| D Is the survey point clearly marked on the inner casing? | X | | |
| E Is the depth of the well consistent with the original well log? | X | | |
| F Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | | |

5) Sampling: Groundwater Wells Only

- | | | | |
|---|---|--|--|
| A Does water recharge adequately when purged?
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | | |
| B Does the well require redevelopment (low flow/turbidity)? | X | | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date: Overgrown vegetation

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-112D

Date: 9/6/2022

	Yes	No	N/A
--	-----	----	-----

1) Location/Identification

- | | | | |
|--|---|---|--|
| A Is the well visible and accessible? | X | | |
| B Is the well properly identified with correct well ID? | X | | |
| C Is the well in a high traffic area and does the well require protection from traffic? | | X | |
| D Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | | |

2) Protective Casing

- | | | | |
|---|---|--|--|
| A Is the protective casing free from apparent damage and able to be secured? | X | | |
| B Is the casing free of degradation or deterioration? | X | | |
| C Does the casing have a functioning weep hole? | X | | |
| D Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | | |
| E Is the well locked and is the lock in good condition? | X | | |

3) Surface Pad

- | | | | |
|---|---|--|--|
| A Is the well pad in good condition (not cracked/broken)? | X | | |
| B Is the well pad sloped away from the protective casing? | X | | |
| C Is the well pad in complete contact with the ground surface and stable? | X | | |
| D Is the well pad in complete contact with the protective casing? | X | | |
| E Is the pad surface clean (not covered with sediment or debris)? | X | | |

4) Internal Casing

- | | | | |
|---|---|--|--|
| A Does the cap prevent entry of foreign material into the well? | X | | |
| B Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | | |
| C Is the well properly vented for equilibration of air pressure? | X | | |
| D Is the survey point clearly marked on the inner casing? | X | | |
| E Is the depth of the well consistent with the original well log? | X | | |
| F Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | | |

5) Sampling: Groundwater Wells Only

- | | | | |
|---|---|--|--|
| A Does water recharge adequately when purged?
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | | |
| B Does the well require redevelopment (low flow/turbidity)? | X | | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-113D

Date: 9/6/2022

	Yes	No	N/A
--	-----	----	-----

1) Location/Identification

- | | | | |
|--|---|---|--|
| A Is the well visible and accessible? | X | | |
| B Is the well properly identified with correct well ID? | X | | |
| C Is the well in a high traffic area and does the well require protection from traffic? | | X | |
| D Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | | X | |

2) Protective Casing

- | | | | |
|---|---|--|--|
| A Is the protective casing free from apparent damage and able to be secured? | X | | |
| B Is the casing free of degradation or deterioration? | X | | |
| C Does the casing have a functioning weep hole? | X | | |
| D Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | | |
| E Is the well locked and is the lock in good condition? | X | | |

3) Surface Pad

- | | | | |
|---|---|---|--|
| A Is the well pad in good condition (not cracked/broken)? | X | | |
| B Is the well pad sloped away from the protective casing? | X | | |
| C Is the well pad in complete contact with the ground surface and stable? | | X | |
| D Is the well pad in complete contact with the protective casing? | X | | |
| E Is the pad surface clean (not covered with sediment or debris)? | X | | |

4) Internal Casing

- | | | | |
|---|---|--|--|
| A Does the cap prevent entry of foreign material into the well? | X | | |
| B Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | | |
| C Is the well properly vented for equilibration of air pressure? | X | | |
| D Is the survey point clearly marked on the inner casing? | X | | |
| E Is the depth of the well consistent with the original well log? | X | | |
| F Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | | |

5) Sampling: Groundwater Wells Only

- | | | | |
|---|---|--|--|
| A Does water recharge adequately when purged?
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | | |
| B Does the well require redevelopment (low flow/turbidity)? | X | | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date: Wash out around well pad

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-115D

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-116D

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| B | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-117D

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date: Overgrown vegetation

Signature and Seal of PE/PG responsible for inspection _____

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-118

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-119D

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|---|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | | X |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|---|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | | X |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-120D

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-122D

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements?

X

7) Corrective actions as needed, by date:

Cracked well pad

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: B-123D

Date: 9/6/2022

	Yes	No	N/A
--	-----	----	-----

1) Location/Identification

- | | | | |
|--|---|---|--|
| A Is the well visible and accessible? | X | | |
| B Is the well properly identified with correct well ID? | X | | |
| C Is the well in a high traffic area and does the well require protection from traffic? | | X | |
| D Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | | |

2) Protective Casing

- | | | | |
|---|---|--|--|
| A Is the protective casing free from apparent damage and able to be secured? | X | | |
| B Is the casing free of degradation or deterioration? | X | | |
| C Does the casing have a functioning weep hole? | X | | |
| D Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | | |
| E Is the well locked and is the lock in good condition? | X | | |

3) Surface Pad

- | | | | |
|---|---|--|--|
| A Is the well pad in good condition (not cracked/broken)? | X | | |
| B Is the well pad sloped away from the protective casing? | X | | |
| C Is the well pad in complete contact with the ground surface and stable? | X | | |
| D Is the well pad in complete contact with the protective casing? | X | | |
| E Is the pad surface clean (not covered with sediment or debris)? | X | | |

4) Internal Casing

- | | | | |
|---|---|--|--|
| A Does the cap prevent entry of foreign material into the well? | X | | |
| B Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | | |
| C Is the well properly vented for equilibration of air pressure? | X | | |
| D Is the survey point clearly marked on the inner casing? | X | | |
| E Is the depth of the well consistent with the original well log? | X | | |
| F Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | | |

5) Sampling: Groundwater Wells Only

- | | | | |
|---|---|--|--|
| A Does water recharge adequately when purged?
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | | |
| B Does the well require redevelopment (low flow/turbidity)? | X | | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: AP-1-B-3

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: AP-1-B-7

Date: 9/6/2022

	Yes	No	N/A
--	-----	----	-----

1) Location/Identification

- | | | | |
|--|---|---|--|
| A Is the well visible and accessible? | X | | |
| B Is the well properly identified with correct well ID? | X | | |
| C Is the well in a high traffic area and does the well require protection from traffic? | | X | |
| D Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | | |

2) Protective Casing

- | | | | |
|---|---|--|--|
| A Is the protective casing free from apparent damage and able to be secured? | X | | |
| B Is the casing free of degradation or deterioration? | X | | |
| C Does the casing have a functioning weep hole? | X | | |
| D Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | | |
| E Is the well locked and is the lock in good condition? | X | | |

3) Surface Pad

- | | | | |
|---|---|--|--|
| A Is the well pad in good condition (not cracked/broken)? | X | | |
| B Is the well pad sloped away from the protective casing? | X | | |
| C Is the well pad in complete contact with the ground surface and stable? | X | | |
| D Is the well pad in complete contact with the protective casing? | X | | |
| E Is the pad surface clean (not covered with sediment or debris)? | X | | |

4) Internal Casing

- | | | | |
|---|---|--|--|
| A Does the cap prevent entry of foreign material into the well? | X | | |
| B Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | | |
| C Is the well properly vented for equilibration of air pressure? | X | | |
| D Is the survey point clearly marked on the inner casing? | X | | |
| E Is the depth of the well consistent with the original well log? | X | | |
| F Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | | |

5) Sampling: Groundwater Wells Only

- | | | | |
|---|---|---|--|
| A Does water recharge adequately when purged?
If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | | |
| B Does the well require redevelopment (low flow/turbidity)? | X | | |
| C | | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

Groundwater Monitoring Well Integrity Form

Site Name: Plant McDonough

Permit Number:

Well ID: AP-1-B-8

Date: 9/6/2022

Yes	No	N/A
-----	----	-----

1) Location/Identification

- | | | | |
|----------|--|---|--|
| A | Is the well visible and accessible? | X | |
| B | Is the well properly identified with correct well ID? | X | |
| C | Is the well in a high traffic area and does the well require protection from traffic? | X | |
| D | Is the drainage around the well acceptable? (no standing water, nor is well located in obvious drainage flow path) | X | |

2) Protective Casing

- | | | | |
|----------|---|---|--|
| A | Is the protective casing free from apparent damage and able to be secured? | X | |
| B | Is the casing free of degradation or deterioration? | X | |
| C | Does the casing have a functioning weep hole? | X | |
| D | Is the annular space between the casings clear of debris and water, or filled with pea gravel/sand? | X | |
| E | Is the well locked and is the lock in good condition? | X | |

3) Surface Pad

- | | | | |
|----------|---|---|--|
| A | Is the well pad in good condition (not cracked/broken)? | X | |
| B | Is the well pad sloped away from the protective casing? | X | |
| C | Is the well pad in complete contact with the ground surface and stable? | X | |
| D | Is the well pad in complete contact with the protective casing? | X | |
| E | Is the pad surface clean (not covered with sediment or debris)? | X | |

4) Internal Casing

- | | | | |
|----------|---|---|--|
| A | Does the cap prevent entry of foreign material into the well? | X | |
| B | Is the casing free of kinks/bends, or any obstructions from foreign objects (such as bailers)? | X | |
| C | Is the well properly vented for equilibration of air pressure? | X | |
| D | Is the survey point clearly marked on the inner casing? | X | |
| E | Is the depth of the well consistent with the original well log? | X | |
| F | Is the casing stable? (Does PVC move easily when touched or can be taken apart by hand due to lack of grout or use of slip couplings in construction) | X | |

5) Sampling: Groundwater Wells Only

- | | | | |
|----------|--|---|--|
| A | Does water recharge adequately when purged? | X | |
| B | If dedicated sampling equipment installed, is it in good condition and specified in the approved groundwater monitoring plan for the facility? | X | |
| C | Does the well require redevelopment (low flow/turbidity)? | X | |

6) Based on professional judgement, is the well construction / location appropriate to **1)** achieve the objectives of the Groundwater Monitoring Program and **2)** comply with the applicable regulatory requirements? X

7) Corrective actions as needed, by date:

Signature and Seal of PE/PG responsible for inspection

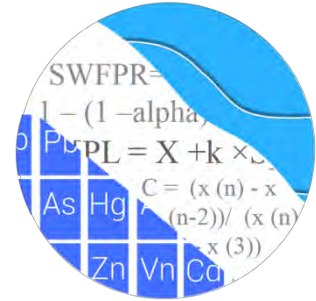
APPENDIX D

Statistical Analyses

GROUNDWATER STATS CONSULTING

February 28, 2023

Southern Company Services
Attn: Mr. Joju Abraham
241 Ralph McGill Blvd NE, Bin 10160
Atlanta, Georgia 30308-3374



Re: Plant McDonough Ash Pond (AP-1)
September 2022 Statistical Analysis

Dear Mr. Abraham,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the September 2022 Semi-Annual Groundwater Monitoring and Corrective Action Statistical summary of groundwater data for Georgia Power Company's Plant McDonough AP-1. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015), the Georgia Environmental Protection Division Rules for Solid Waste Management Chapter 391-3-4-.10 and follows the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling for the Appendix III parameters began in 2016, and at least 8 background samples were collected at each of the groundwater monitoring wells. The assessment wells were installed at various times since 2020 and have limited data. Semi-annual sampling of the majority of Appendix IV constituents has been performed for the groundwater monitoring wells for several years in accordance with the Georgia Department of Natural Resources, Environmental Protection Division groundwater monitoring regulations. A list of all parameters is provided below.

The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** DGWA-53, DGWA-70A, and DGWA-71
- **Downgradient wells:** DGWC-37, DGWC-38, DGWC-39, DGWC-40, DGWC-67, DGWC-68A, DGWC-69, and DGWC-121
- **Assessment wells:** B-62, B-100, B-105D, B-112D, and B-113D

Note that downgradient well DGWC-121 was installed in March 2022 and was first sampled in June 2022, for all constituents except combined radium 226 + 228, which was first sampled in September 2022. Data from this well are plotted on the time series graphs and box plots, and Appendix IV constituents will be evaluated using confidence intervals, which require a minimum of 4 samples, once a sufficient number of samples are available. Interwell prediction limits will be used to evaluate Appendix III data at these wells when a minimum of 8 samples are available.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Andrew Collins, Project Manager of Groundwater Stats Consulting. The analysis is prepared according to the recommended statistical methodology prepared in the Fall 2017 by Dr. Kirk Cameron, PhD Statistician with MacStat Consulting, primary author of the USEPA Unified Guidance.

The Coal Combustion Residual (CCR) program consists of the following constituents:

- **Appendix III** (Detection Monitoring) - boron, calcium, chloride, fluoride, pH, sulfate, and TDS
- **Appendix IV** (Assessment Monitoring) – antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, combined radium 226 + 228, fluoride, lead, lithium, mercury, molybdenum, selenium, and thallium

Note that when there are no detections present in downgradient wells for a given constituent, statistical analyses are not required. A summary of Appendix IV downgradient and assessment well/constituent pairs with 100% non-detects follows this letter.

Time series plots for Appendix III and IV parameters at all wells are provided for the purpose of screening data at these wells (Figure A). Additionally, a separate section of box plots is included for all constituents at upgradient and downgradient wells (Figure B). The time series plots are used to initially screen for suspected outliers and trends, while the box plots provide visual representation of variation within individual wells and between all wells. Note that due to flooding in well DGWC-68A during the September 2021 sample event, this well was, reportedly, re-developed and resamples were collected in October 2021 for arsenic, barium, chromium, cobalt, and pH. While the September 2021 reported results remain in the database for this well, these measurements were flagged as outliers. Values in background which have been flagged as outliers may be seen in a lighter font and as a disconnected symbol on the graphs. A summary of flagged outliers follows this report (Figure C).

In earlier analyses, data at all wells were evaluated for the following: 1) outliers; 2) trends; 3) most appropriate statistical method for Appendix III parameters based on site characteristics of groundwater data upgradient of the facility; and 4) eligibility of downgradient wells when intrawell statistical methods are recommended. Power curves were provided with the previous screening to demonstrate that the selected statistical methods for Appendix III parameters comply with the USEPA Unified Guidance. The EPA suggests the selected statistical method should provide at least 55% power at 3 standard deviations or at least 80% power at 4 standard deviations.

Summary of Statistical Methods – Appendix III Parameters:

Based on the earlier evaluation described above, the following method was selected:

- Interwell prediction limits, combined with a 1-of-2 resample plan for boron, calcium, chloride, fluoride, pH, sulfate, and TDS

Parametric prediction limits are utilized when the screened historical data follow a normal or transformed-normal distribution. When data cannot be normalized or the majority of data are non-detects, a nonparametric test is utilized. While the false positive rate associated with the parametric limits is based on an annual 10% (5% per semi-annual event) as recommended by the EPA Unified Guidance (2009), the false positive rate associated with the nonparametric limits is dependent upon the available background sample size, number of future comparisons, and verification resample plan. The distribution of data is tested using the Shapiro-Wilk/Shapiro-Francia test for normality. After testing for normality and performing any adjustments as discussed below (US EPA, 2009), data are analyzed using either parametric or non-parametric prediction limits. Non-detects are handled as follows:

- No statistical analyses are required on wells and analytes containing 100% non-detects (USEPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects in background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the most recent practical quantification limit (PQL) as reported by the laboratory.
- When data contain between 15-50% non-detects, the Kaplan-Meier non-detect adjustment is applied to the background data. This technique adjusts the mean and standard deviation of the historical concentrations to account for concentrations below the reporting limit.
- Nonparametric prediction limits are used on data containing greater than 50% non-detects.

Natural systems continuously evolve due to physical changes made to the environment. Examples include capping a landfill, paving areas near a well, or lining a drainage channel to prevent erosion. Periodic updating of background statistical limits is necessary to accommodate these types of changes. In the interwell case, prediction limits are updated with upgradient well data during each event after careful screening for any new outliers. In the intrawell case, data for all wells and constituents may be re-evaluated when a minimum of 4 new data points are available to determine whether earlier concentrations are representative of present-day groundwater quality. In some cases, the earlier portion of data may require deselection prior to construction of limits to provide sensitive limits that will rapidly detect changes in groundwater quality. Even though the data are excluded from the calculation, the values will continue to be reported and shown in tables and graphs.

Summary of Background Screening – Conducted in March 2019

Outlier Analysis

Time series plots are used to identify suspected outliers, or extreme values that would result in limits that are not representative of the current background data population. Suspected outliers at all wells for Appendix III and Appendix IV parameters are formally tested using Tukey's box plot method and, when identified, flagged in the computer database with "o" and deselected prior to construction of statistical limits.

Using the Tukey box plot method, several outliers were identified, and the reports were submitted with the screening. In cases where the most recent value was identified as an outlier, values were not flagged in the database at that time as they may represent a future trend. If future values do not remain at similar concentrations, these values will be flagged as outliers and deselected. Several low values exist in the data sets and appear on the graphs as possible low outliers relative to the laboratory's Practical Quantitation Limit. However, these values are observed trace values (i.e., measurements reported by the laboratory between the Method Detection Limit and the Practical Quantitation Limit) and, therefore, were not flagged as outliers.

Of the outliers identified by Tukey's method, only a few of these values were flagged in the database as all other values are similar to remaining measurements within a given well or neighboring wells or were non-detects.

Additionally, when any values are flagged in the database as outliers, they are plotted in a disconnected and lighter symbol on the time series graph. The accompanying data pages display the flagged value in a lighter font as well. A substitution of the most recent

reporting limit was applied when varying detection limits existed in data. When the reporting limit was higher than the Regional Screening Levels discussed below, non-detects were substituted with one half the reporting limit.

Seasonality

No obvious seasonal patterns were observed on the time series plots for any of the detected data; therefore, no deseasonalizing adjustments were made to the data. When seasonal patterns are observed, data may be deseasonalized so that the resulting limits will correctly account for the seasonality as a predictable pattern rather than random variation or a release.

Trend Test Evaluation

While trends may be identified by visual inspection, a quantification of the trend and its significance is needed. The Sen's Slope/Mann Kendall trend test was used to evaluate all data at each well to identify statistically significant increasing or decreasing trends. In the absence of suspected contamination, significant trending data are typically not included as part of the background data used for construction of prediction limits. This step serves to eliminate the trend and, thus, reduce variation in background. When statistically significant decreasing trends are present, all available data are evaluated to determine whether earlier concentration levels are significantly different than current reported concentrations and will be deselected as necessary. When any records of data are truncated for the reasons above, a summary report will be provided to show the date ranges used in construction of the statistical limits.

The results of the trend analyses were included with the previous screening and showed two statistically significant decreasing trends for the Appendix III parameters. The only trend identified in the upgradient wells was a statistically significant decreasing trend for sulfate in well DGWA-71. All trends noted were relatively low in magnitude when compared to average concentrations; therefore, no adjustments were made to the data sets.

Appendix III – Determination of Spatial Variation

The Analysis of Variance (ANOVA) was used to statistically evaluate differences in average concentrations among upgradient wells, which assists in identifying the most appropriate statistical approach. Interwell tests, which compare downgradient well data to statistical limits constructed from pooled upgradient well data, are appropriate when average concentrations are similar across upgradient wells. Intrawell tests, which compare

compliance data from a single well to screened historical data within the same well, are appropriate when upgradient wells exhibit spatial variation; when statistical limits constructed from upgradient wells are not representative of the current background data population; and when downgradient water quality is unimpacted compared to upgradient water quality for the same parameter.

The ANOVA identified no variation among upgradient well data for fluoride, making this constituent eligible for interwell analyses. Variation was noted for boron, calcium, chloride, pH, sulfate, and TDS which would indicate intrawell analyses may be most appropriate for these parameters. While data were further tested for intrawell eligibility during the screening, interwell methods will be used for all Appendix III constituents in accordance with Georgia EPD requirements.

Statistical Analysis of Appendix III Parameters – September 2022

Interwell Prediction Limits

Interwell prediction limits, combined with a 1-of-2 resample plan, were constructed using all historical upgradient well data through September 2022 (Figure D). Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The September 2022 sample event from each downgradient well is compared to the background limit to determine whether initial exceedances are present.

In the event of an initial exceedance of compliance well data, the 1-of-2 resample plan allows for collection of one additional sample to determine whether the initial exceedance is confirmed. When a resample confirms the initial exceedance, a statistically significant increase is identified, and further research would be required to identify the cause of the exceedance (i.e., impact from the site, natural variation, or an off-site source). If the resample falls within the statistical limit, the initial exceedance is considered to be a false positive result. Therefore, no exceedance is noted, and no further action is necessary. If no resample is collected, the original result is considered a confirmed exceedance. Several prediction limit exceedances were noted for Appendix III parameters. A summary table of the interwell prediction limits follows this letter. Exceedances were noted for the following well/constituent pairs:

- Boron: DGWC-37, GDWC-38, DGWC-39, DGWC-40, DGWC-67, DGWC-68A, and DGWC-69
- Calcium: DGWC-37, DGWC-38, DGWC-39, DGWC-40, DGWC-67, and DGWC-68A
- Chloride: DGWC-38, DGWC-40, and DGWC-67

- pH: DGWC-40 and DGWC-68A
- Sulfate: DGWC-37, DGWC-38, DGWC-39, DGWC-40, and DGWC-67
- TDS: DGWC-37, DGWC-38, DGWC-39, DGWC-40, and DGWC-68A

Trend Test Evaluation – Appendix III

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen’s Slope/Mann Kendall trend test at the 99% confidence level to determine whether concentrations are statistically increasing, decreasing, or stable (Figure E). Upgradient wells are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells. Similar patterns that are present in both upgradient and downgradient wells are an indication of natural variability in groundwater quality, unrelated to practices at the site. A summary of the trend test results follows this letter. Statistically significant trends were noted for the following well/constituent pairs:

Increasing trends:

- Chloride: DGWC-67

Decreasing trends:

- Calcium: DGWA-53 (upgradient)
- Chloride: DGWA-53 (upgradient) and DGWC-40
- Sulfate: DGWA-70A (upgradient), DGWA-71 (upgradient), DGWC-38, DGWC-39, and DGWC-40
- TDS: DGWA-53 (upgradient) and DGWC-39

Statistical Analysis of Appendix IV Parameters – September 2022

For Appendix IV parameters, confidence intervals for each downgradient well/constituent were compared against corresponding Groundwater Protection Standards (GWPS). GWPS were developed as described below. Downgradient well/constituent pairs that have 100% non-detects do not require analysis. Data from all wells for Appendix IV parameters are reassessed for outliers during each analysis prior to constructing statistical limits. No new values were flagged during this analysis and a complete list of flagged outliers follows this report (Figure C).

Interwell Upper Tolerance Limits

Interwell upper tolerance limits were used to calculate site-specific background limits from all available pooled upgradient well data through September 2022 for Appendix IV

constituents (Figure F). Parametric tolerance limits are used when data follow a normal or transformed-normal distribution such as for combined radium. When data contained greater than 50% non-detects or did not follow a normal or transformed-normal distribution, non-parametric tolerance limits were used.

Groundwater Protection Standards

The background limits were then used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and Georgia EPD Rule 391-3-4-.10(6)(a). On July 30, 2018, US EPA revised the Federal CCR rule updating GWPS for cobalt, lead, lithium, and molybdenum as described above in 40 CFR §257.95(h)(2). Effective on February 22, 2022, Georgia EPD incorporated the updated GWPS into the current Georgia EPD Rules for Solid Waste Management 391-3-4-.10(6)(a). In accordance with the updated Rules, the GWPS is:

- The maximum contaminant level (MCL) established under §141.62 and §141.66 of this title
- Where an MCL has not been established for a constituent, Federal and State CCR Rules specify levels for cobalt (0.006 mg/L), lead (0.015 mg/L), lithium (0.040 mg/L), and molybdenum (0.100 mg/L)
- The respective background level for a constituent when the background level is higher than the MCL or Federal CCR Rule identified GWPS

Following Georgia EPD Rule requirements and the Federal CCR requirements, GWPS were established for statistical comparison of Appendix IV constituents for this sample event (Figure G).

Confidence Intervals

To complete the statistical comparison to GWPS, confidence intervals were constructed for each of the Appendix IV constituents in accordance with the state requirements in each downgradient well (Figure H). Note that confidence intervals require a minimum of 4 samples and, in many cases, the assessment wells had insufficient samples at this time. The Sanitas software was used to calculate the tolerance limits and the confidence intervals.

Due to the required transformations to fit the data to a transformed normal distribution, the lower confidence limits resulted in negative numbers for some well/constituent pairs. Therefore, non-parametric confidence intervals, which are bound by reported high and low measurements within a given well, were constructed for these particular cases and may be found at the end of Figure H. This is a more conservative approach in that the

lower confidence limit reflects the lowest reported measurement in the data set rather than a negative number.

Confidence intervals were compared to the GWPS prepared as described above. Only when the entire confidence interval is above a GWPS is the downgradient well/constituent pair considered to exceed its respective standard. If there is an exceedance of the GWPS, a statistically significant level (SSL) exceedance is identified. A summary of the confidence intervals follows this letter. Exceedances were noted for the following well/constituent pairs:

- Arsenic: DGWC-69
- Cobalt: DGWC-40
- Molybdenum: DGWC-68A

Trend Test Evaluation – Appendix IV

Data at wells with confidence interval exceedances are further evaluated using the Sen's Slope/Mann Kendall trend test at the 99% confidence level to determine whether concentrations are statistically increasing, decreasing, or stable (Figure I). Upgradient wells are included in the trend analyses for all parameters found to exceed their prediction limit in downgradient wells to identify whether similar patterns exist upgradient of the site. When trends are present in upgradient trends, it is an indication of natural variability in groundwater quality unrelated to practices at the site. A summary of the Appendix IV trend test results follows this letter. Statistically significant trends were identified for the following well/constituent pairs:

Increasing

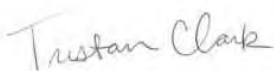
- None

Decreasing

- Cobalt: DGWA-53 (upgradient)

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for McDonough Ash Pond 1. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,



Tristan Clark
Groundwater Analyst



Andrew Collins
Project Manager

100% Non-Detects: Appendix IV Downgradient & Assessment

Analysis Run 11/18/2022 12:17 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

Antimony (mg/L)

DGWC-37, DGWC-38, DGWC-39

Arsenic (mg/L)

B-100

Beryllium (mg/L)

DGWC-39, DGWC-67, B-105D, B-112D, B-113D

Cadmium (mg/L)

DGWC-39, B-105D, B-112D, B-62

Chromium (mg/L)

DGWC-39

Cobalt (mg/L)

B-113D

Lead (mg/L)

B-62

Lithium (mg/L)

DGWC-39

Mercury (mg/L)

B-112D, B-113D, B-62

Molybdenum (mg/L)

DGWC-37, DGWC-39, DGWC-40, DGWC-67, B-100, B-62

Selenium (mg/L)

DGWC-37, DGWC-39, DGWC-69, B-105D, B-112D, B-113D, B-62

Thallium (mg/L)

DGWC-37, DGWC-67, DGWC-69, B-100, B-105D, B-112D, B-113D, B-62

Interwell Prediction Limit - Significant Results

Plant McDonough Client: Southern Company Data: McDonough AP Printed 10/17/2022, 2:06 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N %NDs	ND Adj.	Transform	Alpha	Method
Boron, total (mg/L)	DGWC-37	0.13	n/a	9/8/2022	2	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2
Boron, total (mg/L)	DGWC-38	0.13	n/a	9/12/2022	2.8	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2
Boron, total (mg/L)	DGWC-39	0.13	n/a	9/7/2022	3.3	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2
Boron, total (mg/L)	DGWC-40	0.13	n/a	9/7/2022	0.84	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2
Boron, total (mg/L)	DGWC-67	0.13	n/a	9/8/2022	4.3	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2
Boron, total (mg/L)	DGWC-68A	0.13	n/a	9/7/2022	2	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2
Boron, total (mg/L)	DGWC-69	0.13	n/a	9/7/2022	0.23	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	DGWC-37	40.3	n/a	9/8/2022	66.2	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	DGWC-38	40.3	n/a	9/12/2022	87.6	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	DGWC-39	40.3	n/a	9/7/2022	92.5	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	DGWC-40	40.3	n/a	9/7/2022	44.8	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	DGWC-67	40.3	n/a	9/8/2022	47.4	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	DGWC-68A	40.3	n/a	9/7/2022	53.5	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	DGWC-38	8.2	n/a	9/12/2022	8.5	Yes	49	0	n/a	0.0007761	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	DGWC-40	8.2	n/a	9/7/2022	15	Yes	49	0	n/a	0.0007761	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	DGWC-67	8.2	n/a	9/8/2022	8.9	Yes	49	0	n/a	0.0007761	NP Inter (normality) 1 of 2
pH, Field (SU)	DGWC-40	6.568	5.268	9/7/2022	4.54	Yes	56	0	None	ln(x)	Param Inter 1 of 2
pH, Field (SU)	DGWC-68A	6.568	5.268	9/7/2022	6.62	Yes	56	0	None	ln(x)	Param Inter 1 of 2
Sulfate as SO4 (mg/L)	DGWC-37	49	n/a	9/8/2022	96.6	Yes	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	DGWC-38	49	n/a	9/12/2022	234	Yes	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	DGWC-39	49	n/a	9/7/2022	146	Yes	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	DGWC-40	49	n/a	9/7/2022	203	Yes	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	DGWC-67	49	n/a	9/8/2022	117	Yes	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-37	254.7	n/a	9/8/2022	300	Yes	48	0	None	x^(1/3)	Param Inter 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-38	254.7	n/a	9/12/2022	468	Yes	48	0	None	x^(1/3)	Param Inter 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-39	254.7	n/a	9/7/2022	449	Yes	48	0	None	x^(1/3)	Param Inter 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-40	254.7	n/a	9/7/2022	339	Yes	48	0	None	x^(1/3)	Param Inter 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-68A	254.7	n/a	9/7/2022	256	Yes	48	0	None	x^(1/3)	Param Inter 1 of 2

Interwell Prediction Limit - All Results

Plant McDonough Client: Southern Company Data: McDonough AP Printed 10/17/2022, 2:06 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N %NDs	ND Adj.	Transform	Alpha	Method	
Boron, total (mg/L)	DGWC-37	0.13	n/a	9/8/2022	2	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2	
Boron, total (mg/L)	DGWC-38	0.13	n/a	9/12/2022	2.8	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2	
Boron, total (mg/L)	DGWC-39	0.13	n/a	9/7/2022	3.3	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2	
Boron, total (mg/L)	DGWC-40	0.13	n/a	9/7/2022	0.84	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2	
Boron, total (mg/L)	DGWC-67	0.13	n/a	9/8/2022	4.3	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2	
Boron, total (mg/L)	DGWC-68A	0.13	n/a	9/7/2022	2	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2	
Boron, total (mg/L)	DGWC-69	0.13	n/a	9/7/2022	0.23	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2	
Calcium, total (mg/L)	DGWC-37	40.3	n/a	9/8/2022	66.2	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2	
Calcium, total (mg/L)	DGWC-38	40.3	n/a	9/12/2022	87.6	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2	
Calcium, total (mg/L)	DGWC-39	40.3	n/a	9/7/2022	92.5	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2	
Calcium, total (mg/L)	DGWC-40	40.3	n/a	9/7/2022	44.8	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2	
Calcium, total (mg/L)	DGWC-67	40.3	n/a	9/8/2022	47.4	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2	
Calcium, total (mg/L)	DGWC-68A	40.3	n/a	9/7/2022	53.5	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2	
Calcium, total (mg/L)	DGWC-69	40.3	n/a	9/7/2022	13.1	No	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2	
Chloride, Total (mg/L)	DGWC-37	8.2	n/a	9/8/2022	5.4	No	49	0	n/a	0.0007761	NP Inter (normality) 1 of 2	
Chloride, Total (mg/L)	DGWC-38	8.2	n/a	9/12/2022	8.5	Yes	49	0	n/a	0.0007761	NP Inter (normality) 1 of 2	
Chloride, Total (mg/L)	DGWC-39	8.2	n/a	9/7/2022	8.2	No	49	0	n/a	0.0007761	NP Inter (normality) 1 of 2	
Chloride, Total (mg/L)	DGWC-40	8.2	n/a	9/7/2022	15	Yes	49	0	n/a	0.0007761	NP Inter (normality) 1 of 2	
Chloride, Total (mg/L)	DGWC-67	8.2	n/a	9/8/2022	8.9	Yes	49	0	n/a	0.0007761	NP Inter (normality) 1 of 2	
Chloride, Total (mg/L)	DGWC-68A	8.2	n/a	9/7/2022	4.1	No	49	0	n/a	0.0007761	NP Inter (normality) 1 of 2	
Chloride, Total (mg/L)	DGWC-69	8.2	n/a	9/7/2022	4.9	No	49	0	n/a	0.0007761	NP Inter (normality) 1 of 2	
Fluoride, total (mg/L)	DGWC-37	0.42	n/a	9/8/2022	0.082J	No	54	50	n/a	0.0006506	NP Inter (normality) 1 of 2	
Fluoride, total (mg/L)	DGWC-38	0.42	n/a	9/12/2022	0.12	No	54	50	n/a	0.0006506	NP Inter (normality) 1 of 2	
Fluoride, total (mg/L)	DGWC-39	0.42	n/a	9/7/2022	0.11	No	54	50	n/a	0.0006506	NP Inter (normality) 1 of 2	
Fluoride, total (mg/L)	DGWC-40	0.42	n/a	9/7/2022	0.14	No	54	50	n/a	0.0006506	NP Inter (normality) 1 of 2	
Fluoride, total (mg/L)	DGWC-67	0.42	n/a	9/8/2022	0.096J	No	54	50	n/a	0.0006506	NP Inter (normality) 1 of 2	
Fluoride, total (mg/L)	DGWC-68A	0.42	n/a	9/7/2022	0.11	No	54	50	n/a	0.0006506	NP Inter (normality) 1 of 2	
Fluoride, total (mg/L)	DGWC-69	0.42	n/a	9/7/2022	0.11	No	54	50	n/a	0.0006506	NP Inter (normality) 1 of 2	
pH, Field (SU)	DGWC-37	6.568	5.268	9/9/2022	6.3	No	56	0	None	In(x)	0.0005373	Param Inter 1 of 2
pH, Field (SU)	DGWC-38	6.568	5.268	9/12/2022	6.05	No	56	0	None	In(x)	0.0005373	Param Inter 1 of 2
pH, Field (SU)	DGWC-39	6.568	5.268	9/7/2022	6.43	No	56	0	None	In(x)	0.0005373	Param Inter 1 of 2
pH, Field (SU)	DGWC-40	6.568	5.268	9/7/2022	4.54	Yes	56	0	None	In(x)	0.0005373	Param Inter 1 of 2
pH, Field (SU)	DGWC-67	6.568	5.268	9/8/2022	6.21	No	56	0	None	In(x)	0.0005373	Param Inter 1 of 2
pH, Field (SU)	DGWC-68A	6.568	5.268	9/7/2022	6.62	Yes	56	0	None	In(x)	0.0005373	Param Inter 1 of 2
pH, Field (SU)	DGWC-69	6.568	5.268	9/7/2022	6.2	No	56	0	None	In(x)	0.0005373	Param Inter 1 of 2
Sulfate as SO4 (mg/L)	DGWC-37	49	n/a	9/8/2022	96.6	Yes	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2	
Sulfate as SO4 (mg/L)	DGWC-38	49	n/a	9/12/2022	234	Yes	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2	
Sulfate as SO4 (mg/L)	DGWC-39	49	n/a	9/7/2022	146	Yes	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2	
Sulfate as SO4 (mg/L)	DGWC-40	49	n/a	9/7/2022	203	Yes	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2	
Sulfate as SO4 (mg/L)	DGWC-67	49	n/a	9/8/2022	117	Yes	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2	
Sulfate as SO4 (mg/L)	DGWC-68A	49	n/a	9/7/2022	36.5	No	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2	
Sulfate as SO4 (mg/L)	DGWC-69	49	n/a	9/7/2022	11.6	No	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2	
Total Dissolved Solids [TDS] (mg/L)	DGWC-37	254.7	n/a	9/8/2022	300	Yes	48	0	None	x^(1/3)	0.001075	Param Inter 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-38	254.7	n/a	9/12/2022	468	Yes	48	0	None	x^(1/3)	0.001075	Param Inter 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-39	254.7	n/a	9/7/2022	449	Yes	48	0	None	x^(1/3)	0.001075	Param Inter 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-40	254.7	n/a	9/7/2022	339	Yes	48	0	None	x^(1/3)	0.001075	Param Inter 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-67	254.7	n/a	9/8/2022	252	No	48	0	None	x^(1/3)	0.001075	Param Inter 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-68A	254.7	n/a	9/7/2022	256	Yes	48	0	None	x^(1/3)	0.001075	Param Inter 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-69	254.7	n/a	9/7/2022	102	No	48	0	None	x^(1/3)	0.001075	Param Inter 1 of 2

Appendix III Trend Test - Significant Results

Plant McDonough Client: Southern Company Data: McDonough AP Printed 10/17/2022, 2:09 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium, total (mg/L)	DGWA-53 (bg)	-3.715	-76	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	DGWA-53 (bg)	-0.1771	-85	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	DGWC-40	-0.4831	-61	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	DGWC-67	0.5636	100	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWA-70A (bg)	-0.1765	-60	-58	Yes	16	43.75	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWA-71 (bg)	-1.051	-88	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWC-38	-10.06	-61	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWC-39	-23.39	-81	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWC-40	-9.834	-60	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	DGWA-53 (bg)	-21.09	-79	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	DGWC-39	-15.95	-60	-58	Yes	16	0	n/a	n/a	0.01	NP

Appendix III Trend Test - All Results

Plant McDonough Client: Southern Company Data: McDonough AP Printed 10/17/2022, 2:09 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron, total (mg/L)	DGWA-53 (bg)	-0.003305	-39	-58	No	16	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	DGWA-70A (bg)	0	33	58	No	16	56.25	n/a	n/a	0.01	NP
Boron, total (mg/L)	DGWA-71 (bg)	0.0007215	16	53	No	15	26.67	n/a	n/a	0.01	NP
Boron, total (mg/L)	DGWC-37	-0.0417	-33	-58	No	16	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	DGWC-38	-0.04359	-36	-58	No	16	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	DGWC-39	-0.08204	-54	-58	No	16	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	DGWC-40	-0.02553	-55	-58	No	16	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	DGWC-67	0.1184	55	58	No	16	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	DGWC-68A	-0.04241	-21	-58	No	16	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	DGWC-69	-0.03589	-58	-68	No	18	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	DGWA-53 (bg)	-3.715	-76	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	DGWA-70A (bg)	-0.03479	-12	-58	No	16	6.25	n/a	n/a	0.01	NP
Calcium, total (mg/L)	DGWA-71 (bg)	-0.4482	-35	-53	No	15	6.667	n/a	n/a	0.01	NP
Calcium, total (mg/L)	DGWC-37	1.067	39	58	No	16	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	DGWC-38	2.106	58	58	No	16	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	DGWC-39	0.6502	15	58	No	16	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	DGWC-40	0.5648	37	58	No	16	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	DGWC-67	1.043	58	58	No	16	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	DGWC-68A	1.413	56	58	No	16	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	DGWA-53 (bg)	-0.1771	-85	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	DGWA-70A (bg)	-0.06575	-45	-58	No	16	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	DGWA-71 (bg)	0.3259	40	58	No	16	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	DGWC-38	0.1424	49	58	No	16	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	DGWC-40	-0.4831	-61	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	DGWC-67	0.5636	100	58	Yes	16	0	n/a	n/a	0.01	NP
pH, Field (SU)	DGWA-53 (bg)	0.01874	12	74	No	19	0	n/a	n/a	0.01	NP
pH, Field (SU)	DGWA-70A (bg)	-0.02257	-32	-68	No	18	0	n/a	n/a	0.01	NP
pH, Field (SU)	DGWA-71 (bg)	0	1	74	No	19	0	n/a	n/a	0.01	NP
pH, Field (SU)	DGWC-40	-0.02747	-46	-68	No	18	0	n/a	n/a	0.01	NP
pH, Field (SU)	DGWC-68A	-0.008902	-26	-68	No	18	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWA-53 (bg)	-0.7643	-32	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWA-70A (bg)	-0.1765	-60	-58	Yes	16	43.75	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWA-71 (bg)	-1.051	-88	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWC-37	-2.312	-38	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWC-38	-10.06	-61	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWC-39	-23.39	-81	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWC-40	-9.834	-60	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWC-67	-0.2587	-17	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	DGWA-53 (bg)	-21.09	-79	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	DGWA-70A (bg)	-2.113	-12	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	DGWA-71 (bg)	-3.712	-40	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	DGWC-37	-2.185	-9	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	DGWC-38	-0.4188	-2	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	DGWC-39	-15.95	-60	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	DGWC-40	-4.306	-21	-53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	DGWC-68A	-5.853	-43	-58	No	16	0	n/a	n/a	0.01	NP

Upper Tolerance Limit Summary Table

Plant McDonough Client: Southern Company Data: McDonough AP Printed 11/16/2022, 1:37 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.003	n/a	n/a	n/a	50	n/a	n/a	82	n/a	n/a	0.07694	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.0054	n/a	n/a	n/a	50	n/a	n/a	74	n/a	n/a	0.07694	NP Inter(normality)
Barium (mg/L)	n/a	0.19	n/a	n/a	n/a	50	n/a	n/a	0	n/a	n/a	0.07694	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0009	n/a	n/a	n/a	51	n/a	n/a	58.82	n/a	n/a	0.0731	NP Inter(normality)
Cadmium (mg/L)	n/a	0.0005	n/a	n/a	n/a	50	n/a	n/a	94	n/a	n/a	0.07694	NP Inter(NDs)
Chromium (mg/L)	n/a	0.005	n/a	n/a	n/a	49	n/a	n/a	65.31	n/a	n/a	0.08099	NP Inter(normality)
Cobalt (mg/L)	n/a	0.0322	n/a	n/a	n/a	50	n/a	n/a	40	n/a	n/a	0.07694	NP Inter(normality)
Combined Radium 226 + 228 (pCi/L)	n/a	4.8	n/a	n/a	n/a	52	1.098	0.5322	0	None	sqrt(x)	0.05	Inter
Fluoride, total (mg/L)	n/a	0.42	n/a	n/a	n/a	54	n/a	n/a	50	n/a	n/a	0.06267	NP Inter(normality)
Lead (mg/L)	n/a	0.001	n/a	n/a	n/a	50	n/a	n/a	82	n/a	n/a	0.07694	NP Inter(NDs)
Lithium (mg/L)	n/a	0.03	n/a	n/a	n/a	50	n/a	n/a	36	n/a	n/a	0.07694	NP Inter(normality)
Mercury (mg/L)	n/a	0.0002	n/a	n/a	n/a	50	n/a	n/a	84	n/a	n/a	0.07694	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.0409	n/a	n/a	n/a	50	n/a	n/a	64	n/a	n/a	0.07694	NP Inter(normality)
Selenium (mg/L)	n/a	0.005	n/a	n/a	n/a	50	n/a	n/a	100	n/a	n/a	0.07694	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	n/a	n/a	n/a	50	n/a	n/a	96	n/a	n/a	0.07694	NP Inter(NDs)

PLANT MCDONOUGH ASH POND 1 GWPS TABLE				
Constituent Name	MCL	CCR-Rule Specified	Background Limit	GWPS
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.0054	0.01
Barium, Total (mg/L)	2		0.19	2
Beryllium, Total (mg/L)	0.004		0.0009	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.005	0.1
Cobalt, Total (mg/L)		0.006	0.032	0.032
Combined Radium, Total (pCi/L)	5		4.8	5
Fluoride, Total (mg/L)	4		0.42	4
Lead, Total (mg/L)		0.015	0.001	0.015
Lithium, Total (mg/L)		0.04	0.03	0.04
Mercury, Total (mg/L)	0.002		0.0002	0.002
Molybdenum, Total (mg/L)		0.1	0.041	0.1
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

**Highlighted cells indicated Background is higher than MCLs or CCR-Rule*

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residual*

**GWPS = Groundwater Protection Standard*

Confidence Intervals - Significant Results

Plant McDonough Client: Southern Company Data: McDonough AP Printed 11/18/2022, 1:02 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	DGWC-69	0.03677	0.01314	0.01	Yes	19	0.03285	0.03918	0	None	ln(x)	0.01	Param.
Cobalt (mg/L)	DGWC-40	0.04503	0.03796	0.032	Yes	17	0.04149	0.005638	0	None	No	0.01	Param.
Molybdenum (mg/L)	DGWC-68A	0.2224	0.1962	0.1	Yes	17	0.2096	0.02181	0	None	x^(1/3)	0.01	Param.

Confidence Intervals - All Results

Plant McDonough Client: Southern Company Data: McDonough AP Printed 11/18/2022, 1:02 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	B-100	0.003	0.0013	0.006	No	6	0.0025	0.0007849	66.67	None	No	0.0155	NP (NDs)
Antimony (mg/L)	B-105D	0.0082	0.00069	0.006	No	5	0.003578	0.002771	60	None	No	0.031	NP (NDs)
Antimony (mg/L)	B-112D	0.003	0.00041	0.006	No	4	0.002353	0.001295	75	None	No	0.0625	NP (NDs)
Antimony (mg/L)	B-113D	0.003	0.0021	0.006	No	4	0.002775	0.00045	75	None	No	0.0625	NP (NDs)
Antimony (mg/L)	B-62	0.003	0.00046	0.006	No	9	0.002718	0.0008467	88.89	None	No	0.002	NP (NDs)
Antimony (mg/L)	DGWC-40	0.003	0.00033	0.006	No	16	0.002833	0.0006675	93.75	None	No	0.01	NP (NDs)
Antimony (mg/L)	DGWC-67	0.003	0.0023	0.006	No	16	0.002656	0.0008246	81.25	None	No	0.01	NP (NDs)
Antimony (mg/L)	DGWC-68A	0.003	0.0008	0.006	No	16	0.002695	0.000838	87.5	None	No	0.01	NP (NDs)
Antimony (mg/L)	DGWC-69	0.003	0.0019	0.006	No	17	0.002729	0.0006469	82.35	None	No	0.01	NP (NDs)
Arsenic (mg/L)	B-105D	0.0051	0.0025	0.01	No	5	0.00404	0.001361	40	None	No	0.031	NP (normality)
Arsenic (mg/L)	B-112D	0.005	0.00078	0.01	No	4	0.003945	0.00211	50	None	No	0.0625	NP (normality)
Arsenic (mg/L)	B-113D	0.005	0.0018	0.01	No	4	0.0042	0.0016	75	None	No	0.0625	NP (NDs)
Arsenic (mg/L)	B-62	0.005	0.0033	0.01	No	9	0.004811	0.0005667	88.89	None	No	0.002	NP (NDs)
Arsenic (mg/L)	DGWC-37	0.005	0.0019	0.01	No	17	0.004818	0.0007519	94.12	None	No	0.01	NP (NDs)
Arsenic (mg/L)	DGWC-38	0.005	0.0005	0.01	No	17	0.004735	0.001091	94.12	None	No	0.01	NP (NDs)
Arsenic (mg/L)	DGWC-39	0.005	0.00075	0.01	No	17	0.003069	0.002132	52.94	None	No	0.01	NP (NDs)
Arsenic (mg/L)	DGWC-40	0.005	0.003	0.01	No	17	0.004138	0.001675	76.47	None	No	0.01	NP (NDs)
Arsenic (mg/L)	DGWC-67	0.005	0.0033	0.01	No	17	0.004384	0.00148	82.35	None	No	0.01	NP (NDs)
Arsenic (mg/L)	DGWC-68A	0.005	0.0016	0.01	No	17	0.0048	0.0008246	94.12	None	No	0.01	NP (NDs)
Arsenic (mg/L)	DGWC-69	0.03677	0.01314	0.01	Yes	19	0.03285	0.03918	0	None	ln(x)	0.01	Param.
Barium (mg/L)	B-100	0.02353	0.01731	2	No	6	0.02067	0.002875	0	None	x^4	0.01	Param.
Barium (mg/L)	B-105D	0.04396	0.02924	2	No	5	0.0366	0.004393	0	None	No	0.01	Param.
Barium (mg/L)	B-112D	0.026	0.0026	2	No	4	0.0088	0.01147	0	None	No	0.0625	NP (normality)
Barium (mg/L)	B-113D	0.0051	0.0032	2	No	4	0.00455	0.000911	0	None	No	0.0625	NP (selected)
Barium (mg/L)	B-62	0.02611	0.01944	2	No	9	0.02278	0.003456	0	None	No	0.01	Param.
Barium (mg/L)	DGWC-37	0.1078	0.08781	2	No	17	0.09782	0.01597	0	None	No	0.01	Param.
Barium (mg/L)	DGWC-38	0.03344	0.03161	2	No	17	0.03242	0.001701	0	None	x^5	0.01	Param.
Barium (mg/L)	DGWC-39	0.09609	0.08532	2	No	17	0.09071	0.008597	0	None	No	0.01	Param.
Barium (mg/L)	DGWC-40	0.019	0.0168	2	No	17	0.01793	0.002504	0	None	No	0.01	NP (normality)
Barium (mg/L)	DGWC-67	0.1105	0.09714	2	No	17	0.1038	0.01067	0	None	No	0.01	Param.
Barium (mg/L)	DGWC-68A	0.092	0.086	2	No	17	0.08978	0.00419	0	None	No	0.01	NP (normality)
Barium (mg/L)	DGWC-69	0.09793	0.06626	2	No	18	0.08209	0.02617	0	None	No	0.01	Param.
Beryllium (mg/L)	B-100	0.0005956	0.0003544	0.004	No	6	0.000475	0.00008781	0	None	No	0.01	Param.
Beryllium (mg/L)	B-62	0.0005	0.00009	0.004	No	10	0.0001948	0.0001623	20	None	No	0.011	NP (normality)
Beryllium (mg/L)	DGWC-37	0.0005	0.00007	0.004	No	17	0.0003246	0.0002163	58.82	None	No	0.01	NP (NDs)
Beryllium (mg/L)	DGWC-38	0.0005	0.000058	0.004	No	17	0.000474	0.0001072	94.12	None	No	0.01	NP (NDs)
Beryllium (mg/L)	DGWC-40	0.00331	0.002937	0.004	No	17	0.003124	0.0002969	5.882	None	No	0.01	Param.
Beryllium (mg/L)	DGWC-68A	0.0005	0.000084	0.004	No	17	0.0004497	0.000142	88.24	None	No	0.01	NP (NDs)
Beryllium (mg/L)	DGWC-69	0.0005	0.000061	0.004	No	18	0.0003298	0.0002196	61.11	None	No	0.01	NP (NDs)
Cadmium (mg/L)	B-100	0.00059	0.00027	0.005	No	6	0.00038	0.0001628	0	None	No	0.0155	NP (normality)
Cadmium (mg/L)	B-113D	0.0005	0.00019	0.005	No	4	0.0004225	0.000155	75	None	No	0.0625	NP (NDs)
Cadmium (mg/L)	DGWC-37	0.0005	0.0002	0.005	No	17	0.0004	0.0001639	70.59	None	No	0.01	NP (NDs)
Cadmium (mg/L)	DGWC-38	0.0005	0.00017	0.005	No	17	0.0003194	0.0002461	17.65	None	No	0.01	NP (normality)
Cadmium (mg/L)	DGWC-40	0.0008771	0.0007382	0.005	No	17	0.0008076	0.0001108	11.76	None	No	0.01	Param.
Cadmium (mg/L)	DGWC-67	0.00053	0.00021	0.005	No	17	0.0004259	0.0001426	70.59	None	No	0.01	NP (NDs)
Cadmium (mg/L)	DGWC-68A	0.0002439	0.0001408	0.005	No	17	0.0003747	0.0002229	47.06	Kaplan-Meier	sqrt(x)	0.01	Param.
Cadmium (mg/L)	DGWC-69	0.0005	0.0002	0.005	No	18	0.0004261	0.0001436	77.78	Kaplan-Meier	No	0.01	NP (NDs)
Chromium (mg/L)	B-100	0.005	0.00057	0.1	No	6	0.003585	0.002195	66.67	None	No	0.0155	NP (NDs)
Chromium (mg/L)	B-105D	0.005	0.0012	0.1	No	5	0.00424	0.001699	80	None	No	0.031	NP (NDs)
Chromium (mg/L)	B-112D	0.00182	0.0005715	0.1	No	4	0.003062	0.002248	50	Kaplan-Meier	sqrt(x)	0.01	Param.
Chromium (mg/L)	B-113D	0.005	0.0011	0.1	No	4	0.004025	0.00195	75	Kaplan-Meier	No	0.0625	NP (NDs)
Chromium (mg/L)	B-62	0.005	0.00098	0.1	No	9	0.004553	0.00134	88.89	Kaplan-Meier	No	0.002	NP (NDs)
Chromium (mg/L)	DGWC-37	0.005	0.0007	0.1	No	17	0.004487	0.001448	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	DGWC-38	0.005	0.00092	0.1	No	17	0.004227	0.001724	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	DGWC-40	0.005	0.00061	0.1	No	17	0.002589	0.002108	41.18	None	No	0.01	NP (normality)

Confidence Intervals - All Results

Plant McDonough Client: Southern Company Data: McDonough AP Printed 11/18/2022, 1:02 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chromium (mg/L)	DGWC-67	0.005	0.0014	0.1	No	17	0.004028	0.001814	76.47	None	No	0.01	NP (NDs)
Chromium (mg/L)	DGWC-68A	0.005	0.0005	0.1	No	17	0.004735	0.001091	94.12	None	No	0.01	NP (NDs)
Chromium (mg/L)	DGWC-69	0.005	0.0012	0.1	No	18	0.003888	0.001851	72.22	None	No	0.01	NP (NDs)
Cobalt (mg/L)	B-100	0.087	0.028	0.032	No	8	0.05125	0.02684	0	None	No	0.004	NP (normality)
Cobalt (mg/L)	B-105D	0.01197	0.001108	0.032	No	5	0.00654	0.003242	0	None	No	0.01	Param.
Cobalt (mg/L)	B-112D	0.005	0.00054	0.032	No	4	0.00326	0.002163	50	None	No	0.0625	NP (selected)
Cobalt (mg/L)	B-62	0.005	0.00031	0.032	No	10	0.004061	0.00198	80	None	No	0.011	NP (NDs)
Cobalt (mg/L)	DGWC-37	0.005	0.0005	0.032	No	17	0.004182	0.001821	82.35	None	No	0.01	NP (NDs)
Cobalt (mg/L)	DGWC-38	0.0017	0.0015	0.032	No	17	0.002259	0.002165	11.76	None	No	0.01	NP (normality)
Cobalt (mg/L)	DGWC-39	0.0071	0.0059	0.032	No	17	0.006594	0.001071	11.76	None	No	0.01	NP (normality)
Cobalt (mg/L)	DGWC-40	0.04503	0.03796	0.032	Yes	17	0.04149	0.005638	0	None	No	0.01	Param.
Cobalt (mg/L)	DGWC-67	0.0041	0.0012	0.032	No	17	0.002847	0.002442	11.76	None	No	0.01	NP (normality)
Cobalt (mg/L)	DGWC-68A	0.005	0.0015	0.032	No	17	0.004253	0.001679	82.35	None	No	0.01	NP (NDs)
Cobalt (mg/L)	DGWC-69	0.005	0.0022	0.032	No	18	0.003944	0.001641	66.67	None	No	0.01	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	B-100	1.3	0.2178	5	No	6	0.7588	0.3938	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	B-105D	3.252	1	5	No	5	2.126	0.6718	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	B-112D	0.945	0.241	5	No	4	0.6698	0.3008	0	None	No	0.0625	NP (selected)
Combined Radium 226 + 228 (pCi/L)	B-113D	1.383	0.1014	5	No	4	0.742	0.2822	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	B-62	1.964	1.348	5	No	8	1.656	0.2907	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	DGWC-37	1.002	0.5303	5	No	17	0.7924	0.4146	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	DGWC-38	1.004	0.339	5	No	17	0.7331	0.5821	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	DGWC-39	1.265	0.6155	5	No	17	0.9404	0.5186	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	DGWC-40	1.515	0.6792	5	No	17	1.097	0.6673	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	DGWC-67	0.9662	0.4851	5	No	17	0.7256	0.3839	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	DGWC-68A	1.238	0.4841	5	No	17	0.9218	0.6257	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	DGWC-69	1.801	1.18	5	No	18	1.49	0.5135	0	None	No	0.01	Param.
Fluoride, total (mg/L)	B-100	0.072	0.05	4	No	6	0.05367	0.008981	83.33	None	No	0.0155	NP (NDs)
Fluoride, total (mg/L)	B-105D	0.3186	0.0337	4	No	5	0.1282	0.1089	0	None	ln(x)	0.01	Param.
Fluoride, total (mg/L)	B-112D	0.3789	0.2011	4	No	4	0.29	0.03916	0	None	No	0.01	Param.
Fluoride, total (mg/L)	B-113D	1.132	0.5282	4	No	4	0.83	0.1329	0	None	No	0.01	Param.
Fluoride, total (mg/L)	B-62	0.43	0.093	4	No	8	0.1678	0.1145	0	None	No	0.004	NP (normality)
Fluoride, total (mg/L)	DGWC-37	0.084	0.054	4	No	18	0.09767	0.07404	5.556	None	No	0.01	NP (normality)
Fluoride, total (mg/L)	DGWC-38	0.13	0.058	4	No	18	0.1201	0.1064	11.11	None	No	0.01	NP (normality)
Fluoride, total (mg/L)	DGWC-39	0.17	0.085	4	No	18	0.1517	0.1134	5.556	None	No	0.01	NP (normality)
Fluoride, total (mg/L)	DGWC-40	0.2755	0.1304	4	No	18	0.2286	0.1538	5.556	None	ln(x)	0.01	Param.
Fluoride, total (mg/L)	DGWC-67	0.07	0.038	4	No	18	0.08628	0.1147	50	None	No	0.01	NP (normality)
Fluoride, total (mg/L)	DGWC-68A	0.15	0.076	4	No	18	0.1471	0.1237	5.556	None	No	0.01	NP (normality)
Fluoride, total (mg/L)	DGWC-69	0.1633	0.08908	4	No	19	0.1311	0.06853	5.263	None	sqrt(x)	0.01	Param.
Lead (mg/L)	B-100	0.001	0.000088	0.015	No	6	0.0005797	0.0004622	50	None	No	0.0155	NP (normality)
Lead (mg/L)	B-105D	0.001	0.000052	0.015	No	5	0.0008104	0.000424	80	None	No	0.031	NP (NDs)
Lead (mg/L)	B-112D	0.001	0.00014	0.015	No	4	0.000785	0.00043	75	None	No	0.0625	NP (NDs)
Lead (mg/L)	B-113D	0.001	0.00014	0.015	No	4	0.000785	0.00043	75	None	No	0.0625	NP (NDs)
Lead (mg/L)	DGWC-37	0.0014	0.000061	0.015	No	17	0.0009683	0.0002531	88.24	None	No	0.01	NP (NDs)
Lead (mg/L)	DGWC-38	0.001	0.0001	0.015	No	17	0.0007362	0.0004217	70.59	None	No	0.01	NP (NDs)
Lead (mg/L)	DGWC-39	0.001	0.00022	0.015	No	17	0.0009	0.0002834	88.24	None	No	0.01	NP (NDs)
Lead (mg/L)	DGWC-40	0.001	0.00007	0.015	No	17	0.0005838	0.0004581	52.94	None	No	0.01	NP (NDs)
Lead (mg/L)	DGWC-67	0.001	0.00025	0.015	No	17	0.0007908	0.000391	76.47	None	No	0.01	NP (NDs)
Lead (mg/L)	DGWC-68A	0.001	0.00035	0.015	No	17	0.0009069	0.0002676	88.24	None	No	0.01	NP (NDs)
Lead (mg/L)	DGWC-69	0.001	0.0001	0.015	No	18	0.0007005	0.0004363	66.67	None	No	0.01	NP (NDs)
Lithium (mg/L)	B-100	0.002815	0.001518	0.04	No	6	0.002167	0.0004719	0	None	No	0.01	Param.
Lithium (mg/L)	B-105D	0.0152	0.0124	0.04	No	5	0.0138	0.0008367	0	None	No	0.01	Param.
Lithium (mg/L)	B-112D	0.004947	0.003353	0.04	No	4	0.00415	0.0003512	0	None	No	0.01	Param.
Lithium (mg/L)	B-113D	0.01663	0.005079	0.04	No	4	0.0121	0.002511	0	None	x^2	0.01	Param.
Lithium (mg/L)	B-62	0.03	0.0078	0.04	No	9	0.01094	0.007166	11.11	None	No	0.002	NP (normality)
Lithium (mg/L)	DGWC-37	0.03	0.002	0.04	No	17	0.008794	0.01213	23.53	None	No	0.01	NP (normality)

Confidence Intervals - All Results

Plant McDonough Client: Southern Company Data: McDonough AP Printed 11/18/2022, 1:02 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lithium (mg/L)	DGWC-38	0.0035	0.0029	0.04	No	17	0.004735	0.006516	5.882	None	No	0.01	NP (normality)
Lithium (mg/L)	DGWC-40	0.0027	0.0022	0.04	No	17	0.005588	0.009191	11.76	None	No	0.01	NP (normality)
Lithium (mg/L)	DGWC-67	0.005	0.0043	0.04	No	17	0.006147	0.006156	5.882	None	No	0.01	NP (normality)
Lithium (mg/L)	DGWC-68A	0.03	0.0016	0.04	No	17	0.02661	0.009562	88.24	None	No	0.01	NP (NDs)
Lithium (mg/L)	DGWC-69	0.0032	0.0024	0.04	No	18	0.004306	0.006423	5.556	None	No	0.01	NP (normality)
Mercury (mg/L)	B-100	0.0002	0.00011	0.002	No	5	0.000182	0.00004025	80	None	No	0.031	NP (NDs)
Mercury (mg/L)	B-105D	0.0001737	0.00005334	0.002	No	4	0.0001567	0.00005443	50	Kaplan-Meier	No	0.01	Param.
Mercury (mg/L)	DGWC-37	0.0002	0.000091	0.002	No	16	0.0001747	0.00005512	81.25	None	No	0.01	NP (NDs)
Mercury (mg/L)	DGWC-38	0.0002	0.000085	0.002	No	16	0.0001747	0.00005506	81.25	None	No	0.01	NP (NDs)
Mercury (mg/L)	DGWC-39	0.0002	0.000059	0.002	No	16	0.0001912	0.00003525	93.75	None	No	0.01	NP (NDs)
Mercury (mg/L)	DGWC-40	0.0002	0.00009	0.002	No	16	0.0001737	0.00005738	81.25	None	No	0.01	NP (NDs)
Mercury (mg/L)	DGWC-67	0.0002	0.00007	0.002	No	16	0.0001919	0.0000325	93.75	None	No	0.01	NP (NDs)
Mercury (mg/L)	DGWC-68A	0.0002	0.00007	0.002	No	16	0.0001919	0.0000325	93.75	None	No	0.01	NP (NDs)
Mercury (mg/L)	DGWC-69	0.0002	0.00007	0.002	No	17	0.0001924	0.00003153	94.12	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	B-105D	0.01	0.0011	0.1	No	5	0.00822	0.00398	80	None	No	0.031	NP (NDs)
Molybdenum (mg/L)	B-112D	0.04062	0.02388	0.1	No	4	0.03225	0.003686	0	None	No	0.01	Param.
Molybdenum (mg/L)	B-113D	0.0981	0.0231	0.1	No	5	0.0606	0.02238	0	None	No	0.01	Param.
Molybdenum (mg/L)	DGWC-38	0.01	0.00099	0.1	No	17	0.004752	0.004527	41.18	None	No	0.01	NP (normality)
Molybdenum (mg/L)	DGWC-68A	0.2224	0.1962	0.1	Yes	17	0.2096	0.02181	0	None	x^(1/3)	0.01	Param.
Molybdenum (mg/L)	DGWC-69	0.0117	0.0057	0.1	No	18	0.009783	0.005661	5.556	None	No	0.01	NP (normality)
Selenium (mg/L)	B-100	0.005	0.0019	0.05	No	6	0.004483	0.001266	83.33	Kaplan-Meier	No	0.0155	NP (NDs)
Selenium (mg/L)	DGWC-38	0.005	0.0019	0.05	No	17	0.004818	0.0007519	94.12	None	No	0.01	NP (NDs)
Selenium (mg/L)	DGWC-40	0.00316	0.001836	0.05	No	17	0.003582	0.002276	23.53	Kaplan-Meier	ln(x)	0.01	Param.
Selenium (mg/L)	DGWC-67	0.005	0.0027	0.05	No	17	0.004865	0.0005578	94.12	Kaplan-Meier	No	0.01	NP (NDs)
Selenium (mg/L)	DGWC-68A	0.005	0.0017	0.05	No	17	0.004806	0.0008004	94.12	Kaplan-Meier	No	0.01	NP (NDs)
Thallium (mg/L)	DGWC-38	0.001	0.0001	0.002	No	17	0.0005888	0.0004499	52.94	None	No	0.01	NP (NDs)
Thallium (mg/L)	DGWC-39	0.001	0.00009	0.002	No	17	0.0007312	0.0004293	70.59	None	No	0.01	NP (NDs)
Thallium (mg/L)	DGWC-40	0.001	0.000068	0.002	No	17	0.0007252	0.0004389	70.59	None	No	0.01	NP (NDs)
Thallium (mg/L)	DGWC-68A	0.001	0.00015	0.002	No	17	0.00095	0.0002062	94.12	None	No	0.01	NP (NDs)

Appendix IV Trend Test - Confidence Interval Exceedances - Significant Results

Plant McDonough Client: Southern Company Data: McDonough AP Printed 11/15/2022, 4:52 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (mg/L)	DGWA-53 (bg)	-0.004341	-86	-63	Yes	17	0	n/a	n/a	0.01	NP

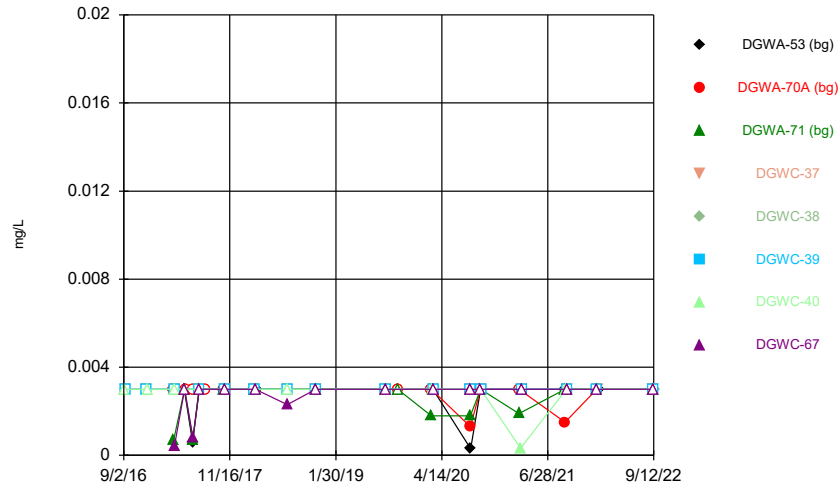
Appendix IV Trend Test - Confidence Interval Exceedances - All Results

Plant McDonough Client: Southern Company Data: McDonough AP Printed 11/15/2022, 4:52 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Arsenic (mg/L)	DGWA-53 (bg)	0	2	63	No	17	58.82	n/a	n/a	0.01	NP
Arsenic (mg/L)	DGWA-70A (bg)	0	-31	-63	No	17	82.35	n/a	n/a	0.01	NP
Arsenic (mg/L)	DGWA-71 (bg)	0	24	58	No	16	81.25	n/a	n/a	0.01	NP
Arsenic (mg/L)	DGWC-69	0.003451	60	74	No	19	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	DGWA-53 (bg)	-0.004341	-86	-63	Yes	17	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	DGWA-70A (bg)	0	29	63	No	17	52.94	n/a	n/a	0.01	NP
Cobalt (mg/L)	DGWA-71 (bg)	0	45	58	No	16	68.75	n/a	n/a	0.01	NP
Cobalt (mg/L)	DGWC-40	0.001513	45	63	No	17	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	DGWA-53 (bg)	-0.00174	-31	-63	No	17	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	DGWA-70A (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	DGWA-71 (bg)	0	15	58	No	16	93.75	n/a	n/a	0.01	NP
Molybdenum (mg/L)	DGWC-68A	-0.004125	-34	-63	No	17	0	n/a	n/a	0.01	NP

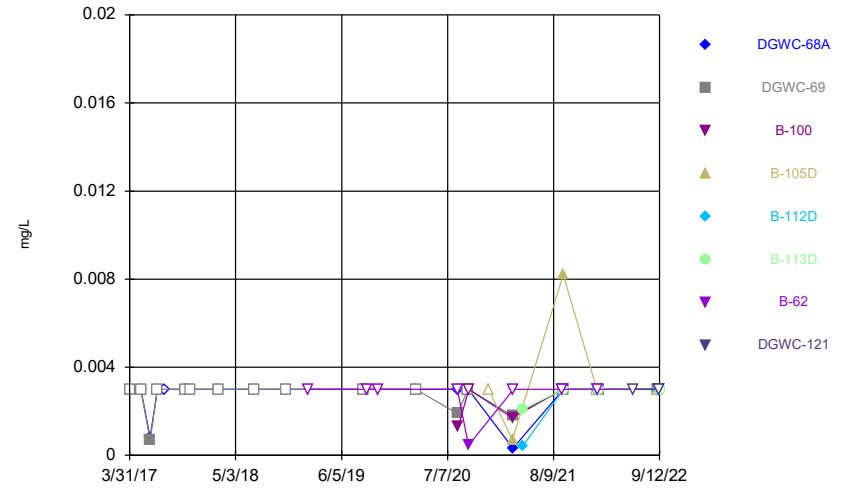
FIGURE A.

Time Series



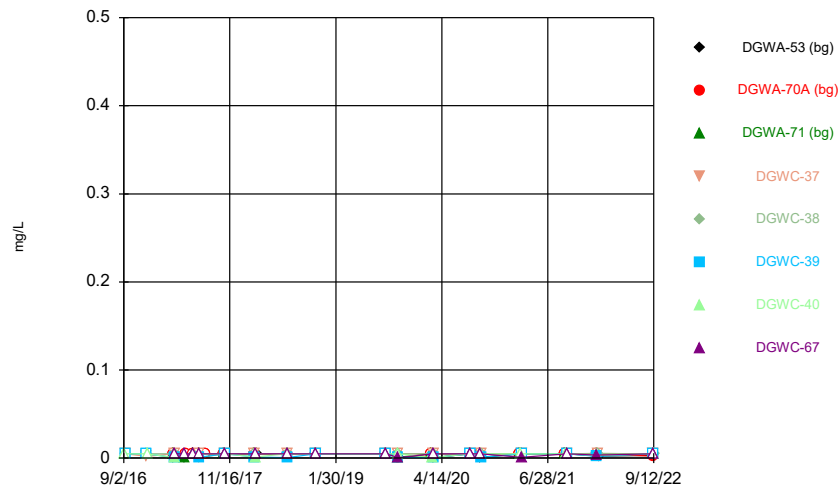
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 Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



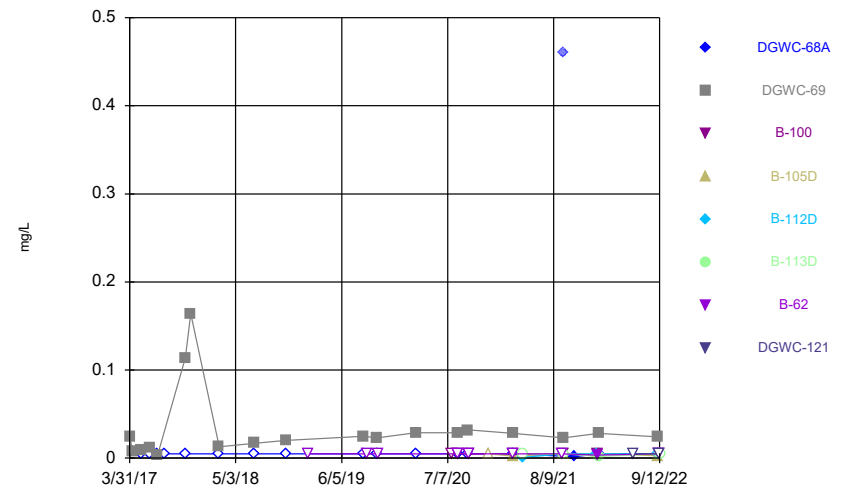
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 Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



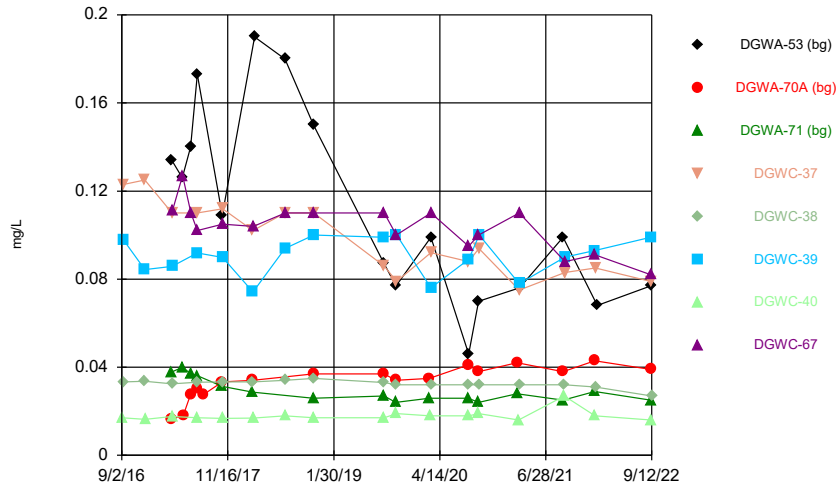
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Time Series



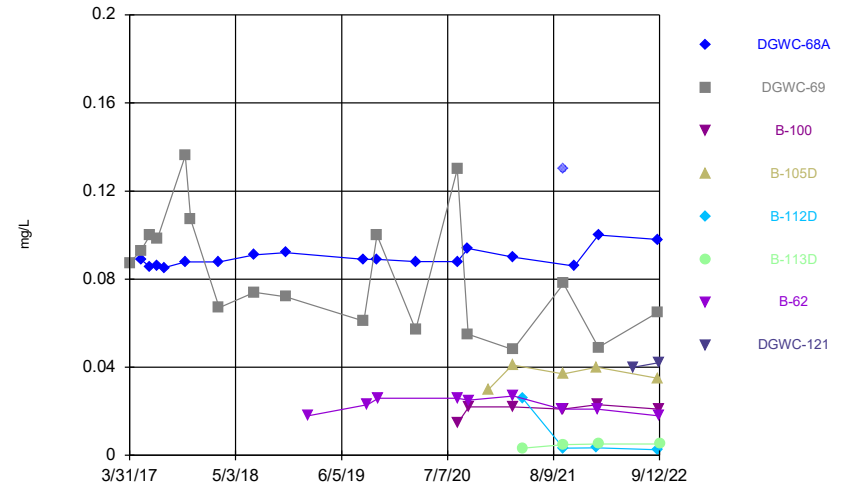
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Time Series



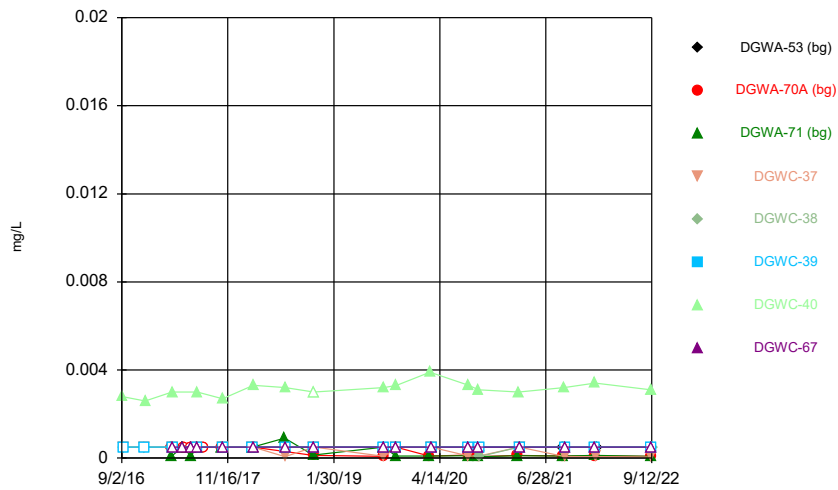
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Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



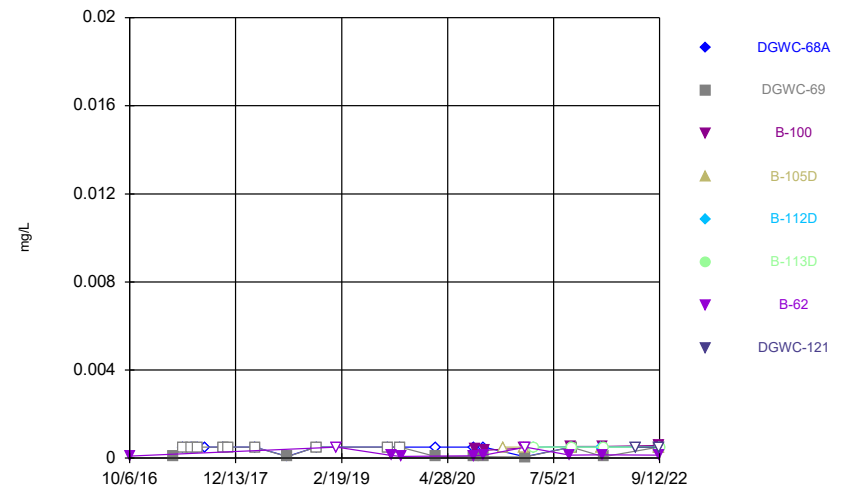
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Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



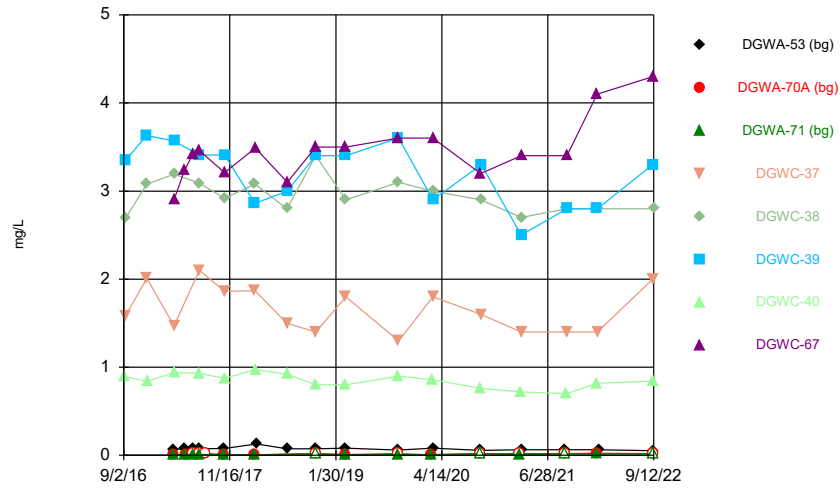
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Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



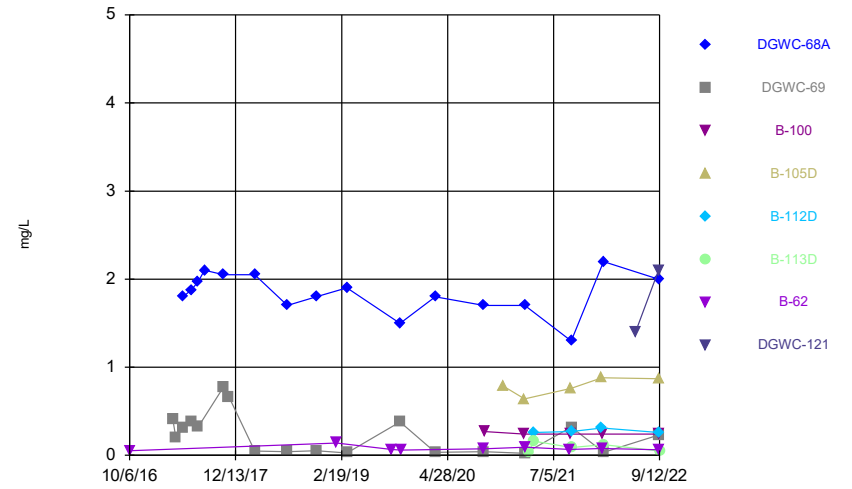
Constituent: Beryllium Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



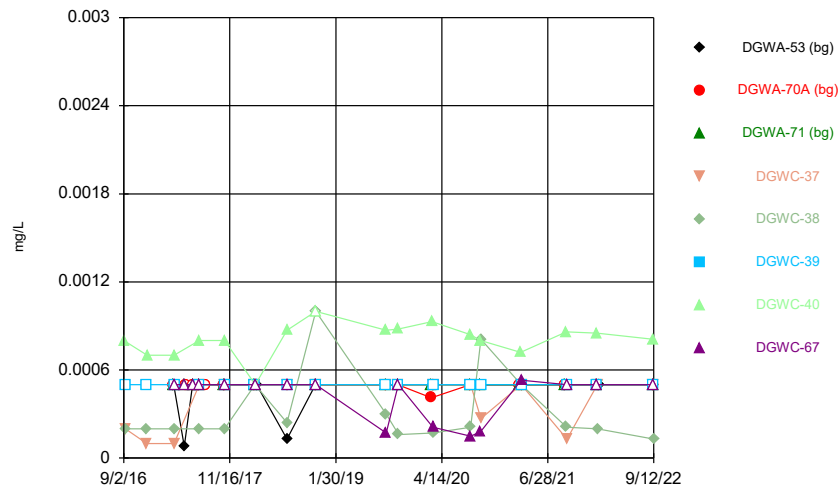
Constituent: Boron, total Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



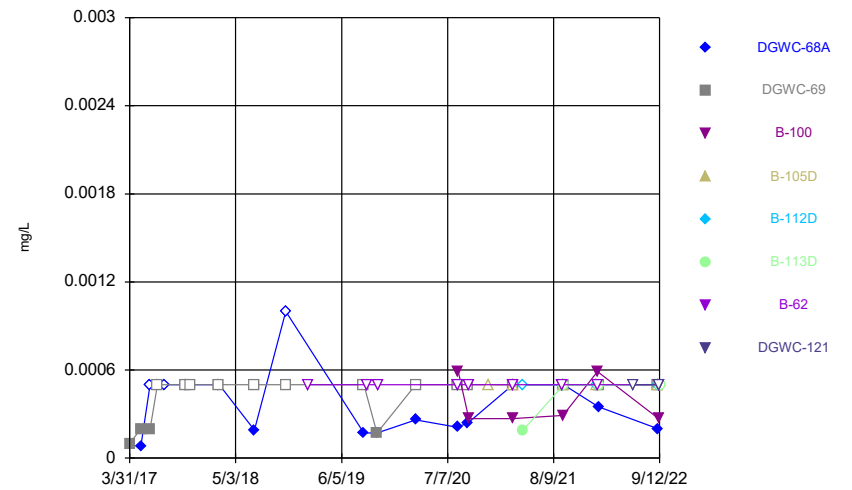
Constituent: Boron, total Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



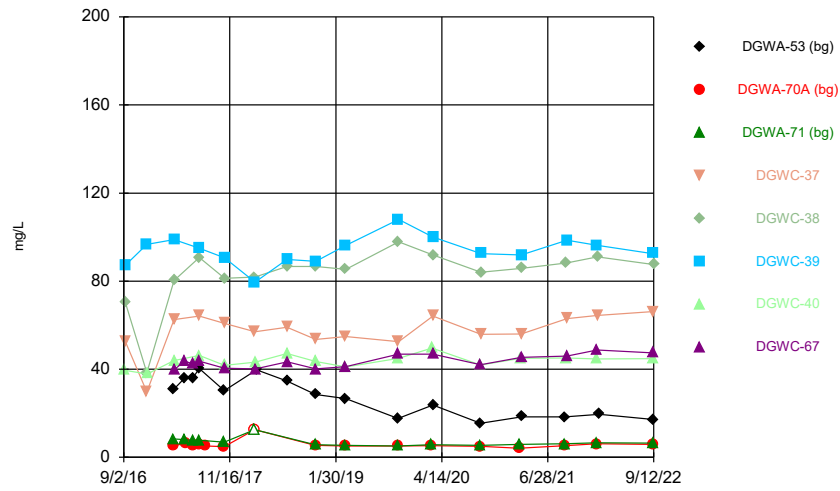
Constituent: Cadmium Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



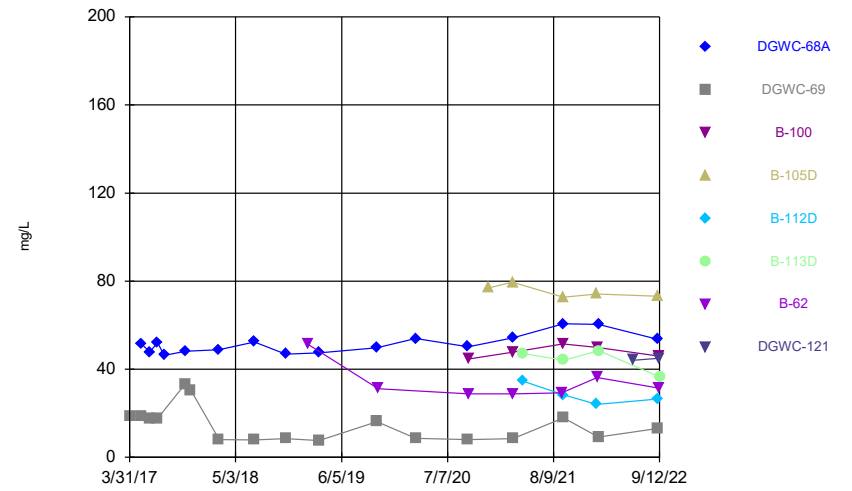
Constituent: Cadmium Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



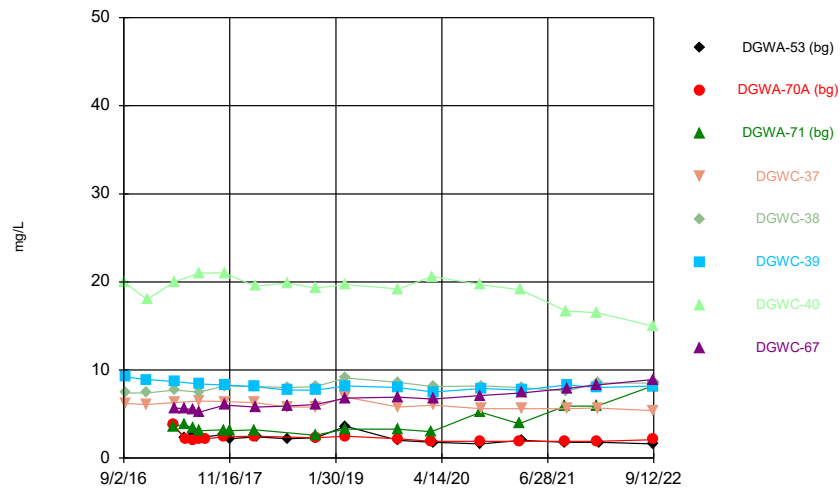
Constituent: Calcium, total Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



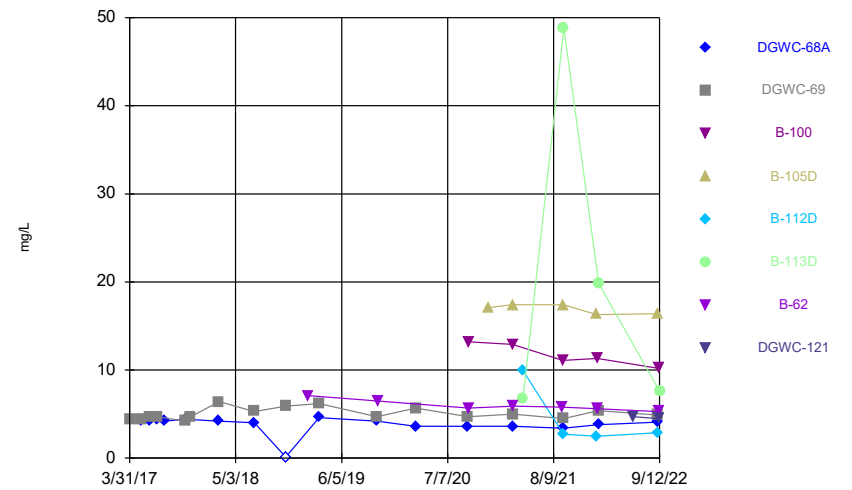
Constituent: Calcium, total Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



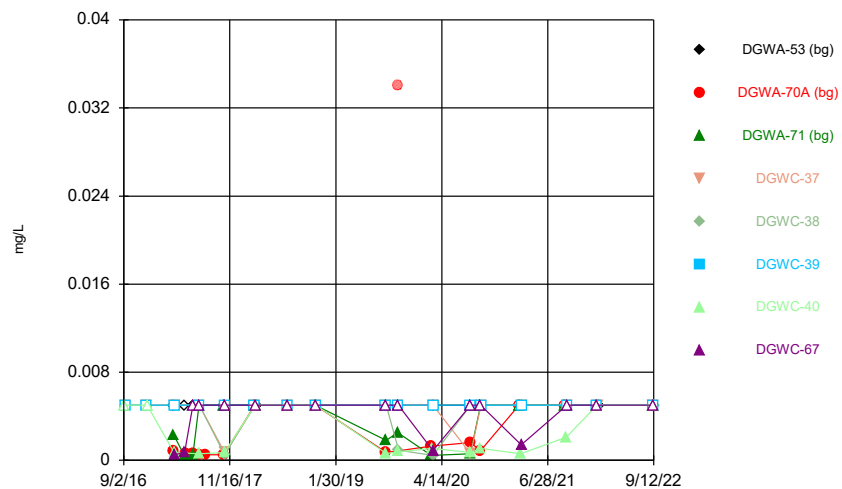
Constituent: Chloride, Total Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



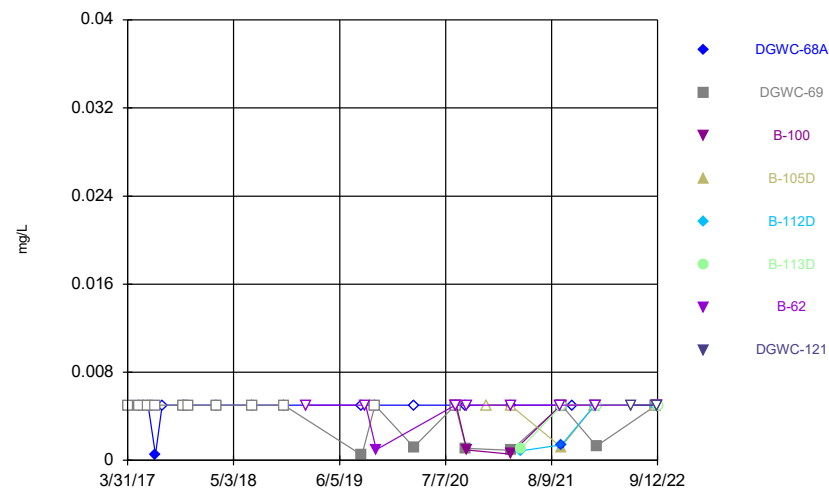
Constituent: Chloride, Total Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



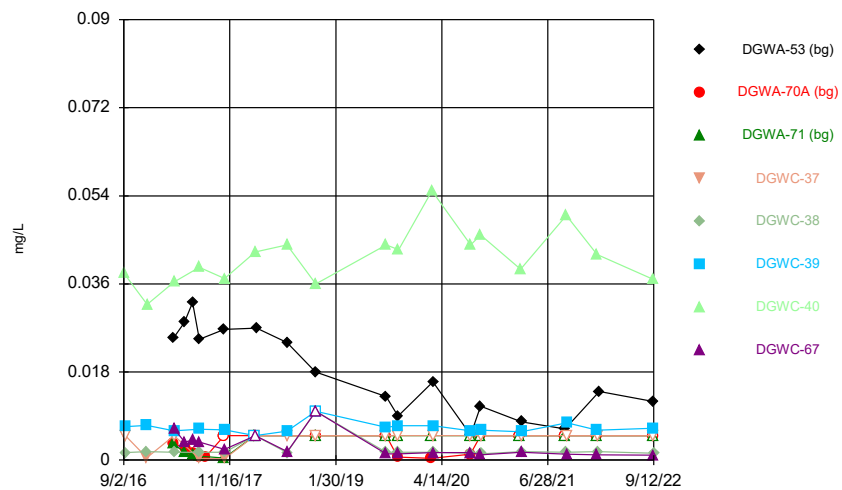
Constituent: Chromium Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



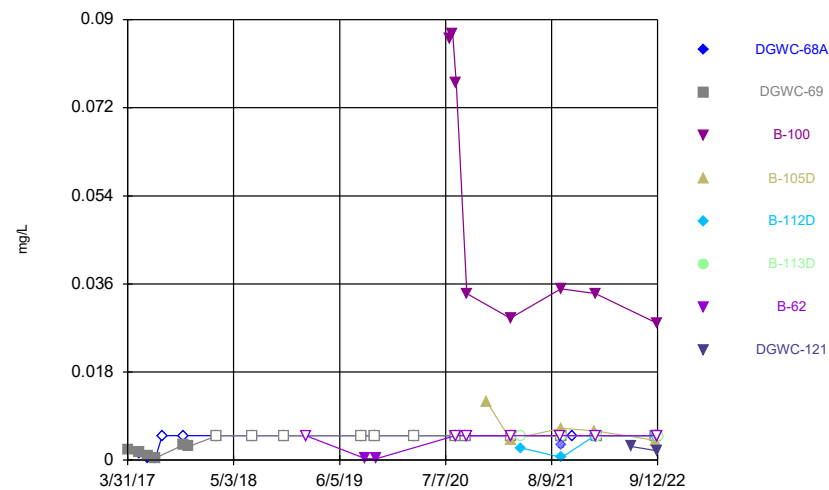
Constituent: Chromium Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



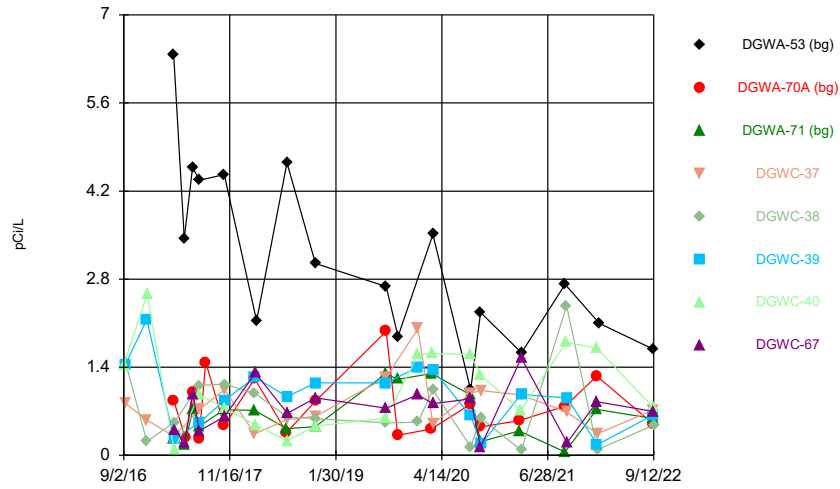
Constituent: Cobalt Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



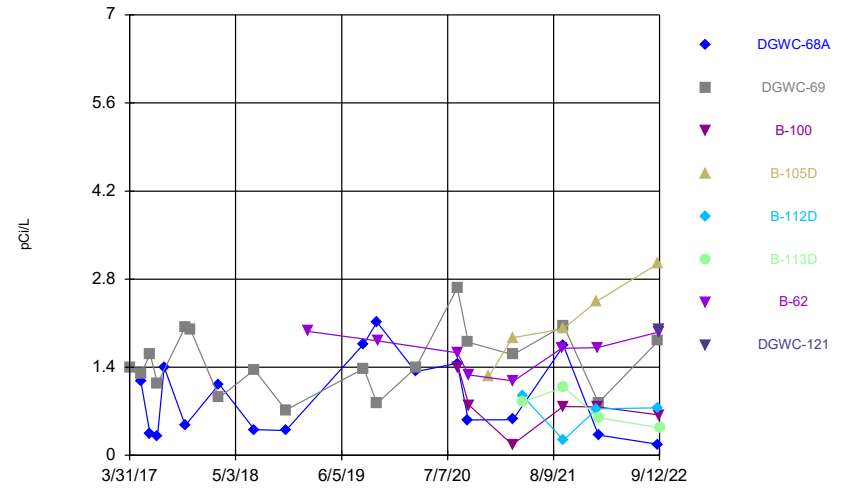
Constituent: Cobalt Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



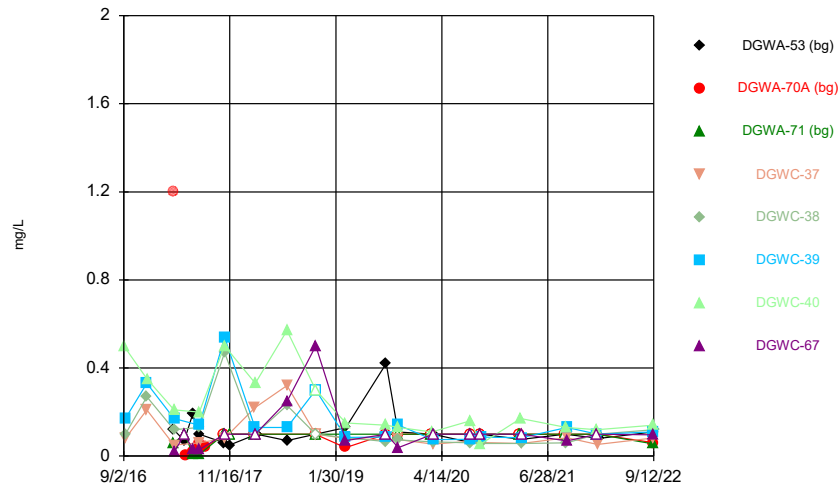
Constituent: Combined Radium 226 + 228 Analysis Run 11/18/2022 12:01 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



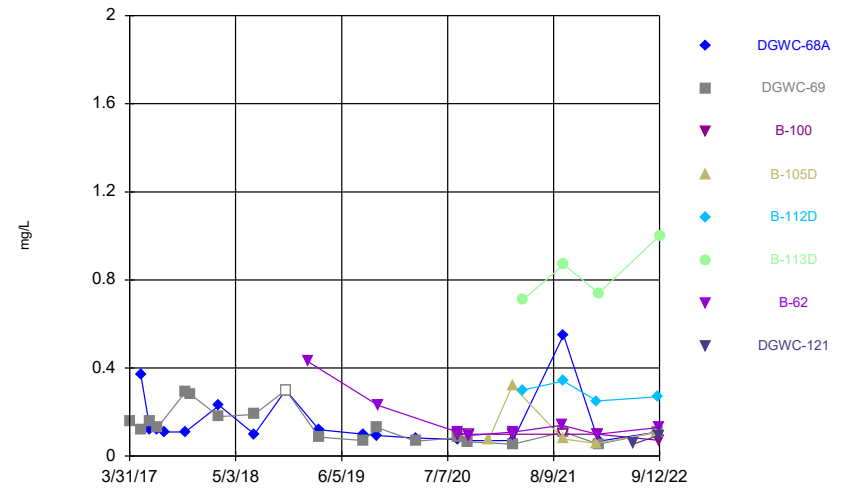
Constituent: Combined Radium 226 + 228 Analysis Run 11/18/2022 12:01 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



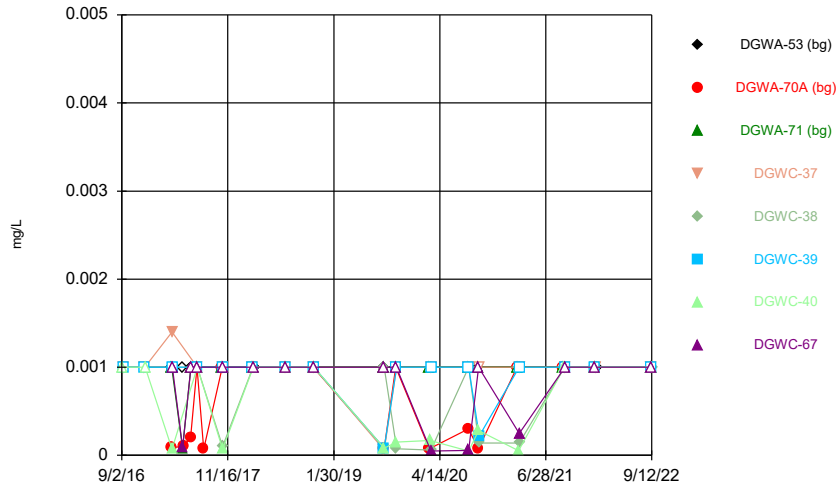
Constituent: Fluoride, total Analysis Run 11/18/2022 12:01 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



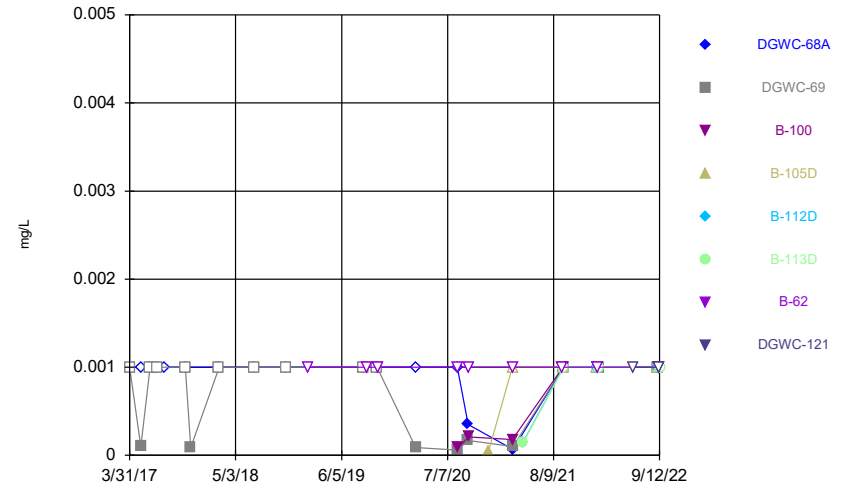
Constituent: Fluoride, total Analysis Run 11/18/2022 12:01 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



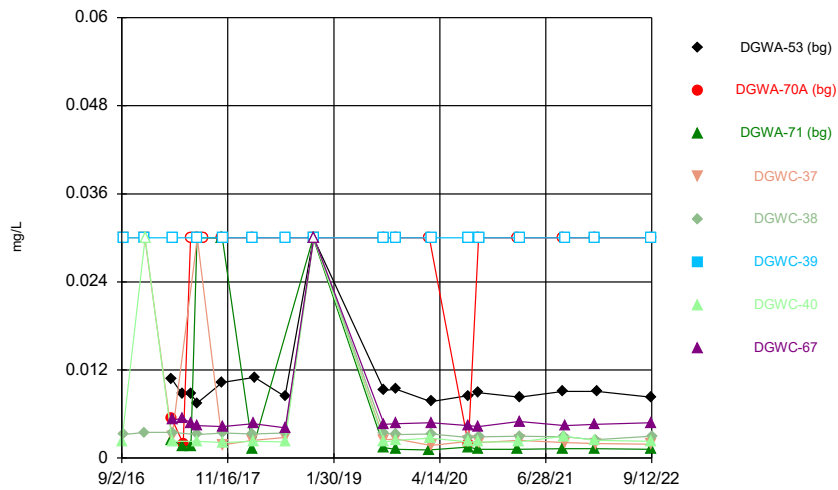
Constituent: Lead Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



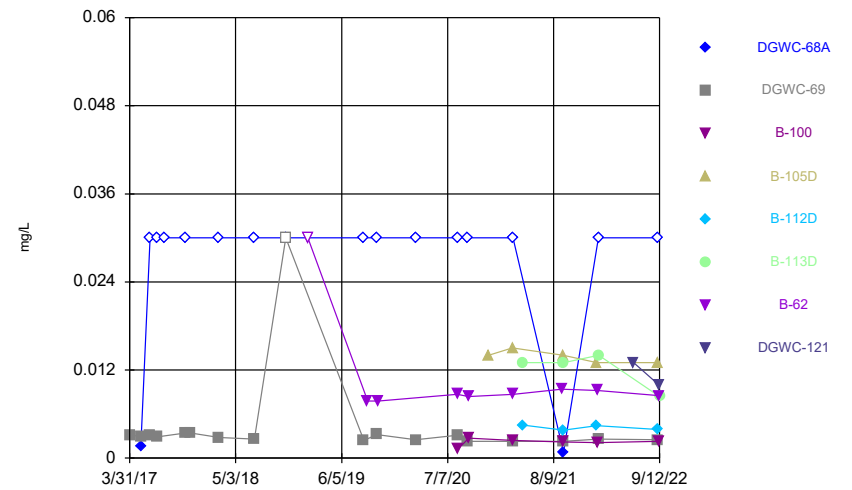
Constituent: Lead Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



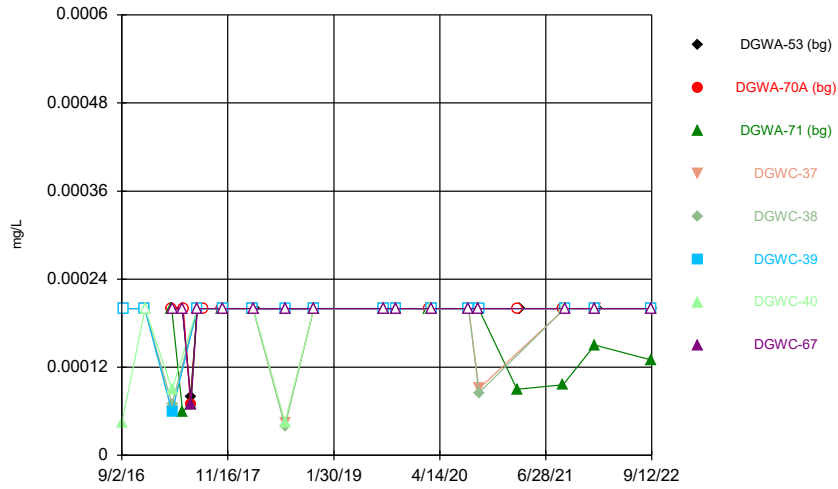
Constituent: Lithium Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



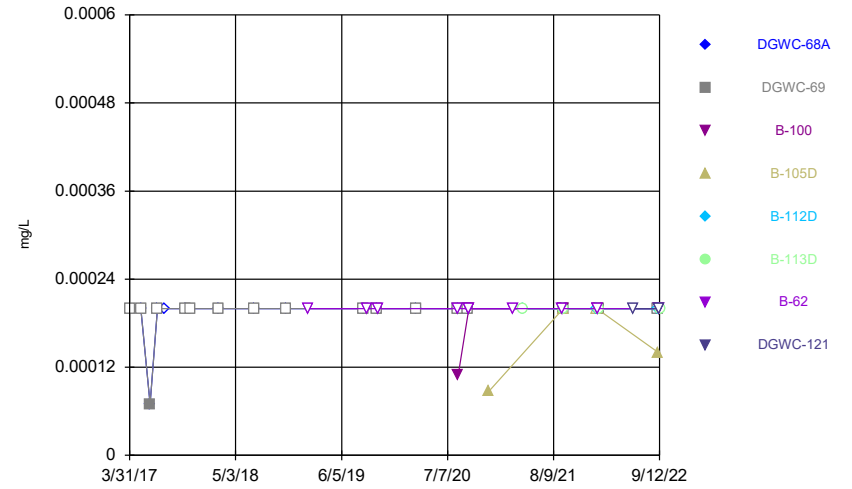
Constituent: Lithium Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



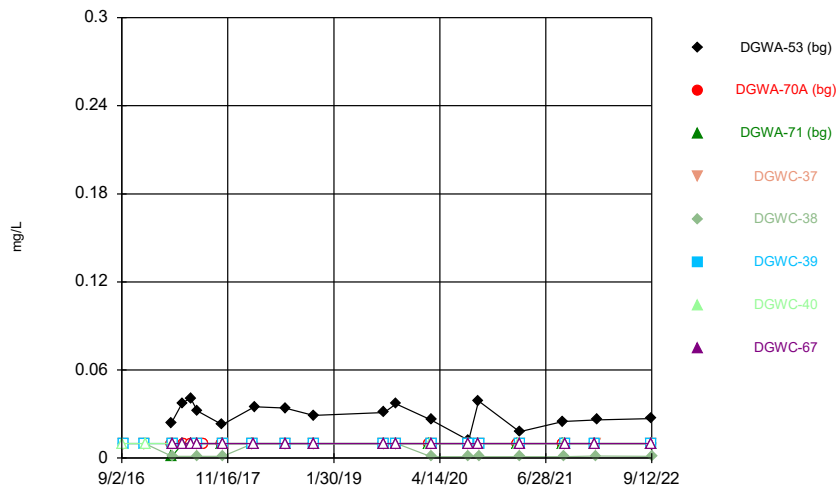
Constituent: Mercury Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



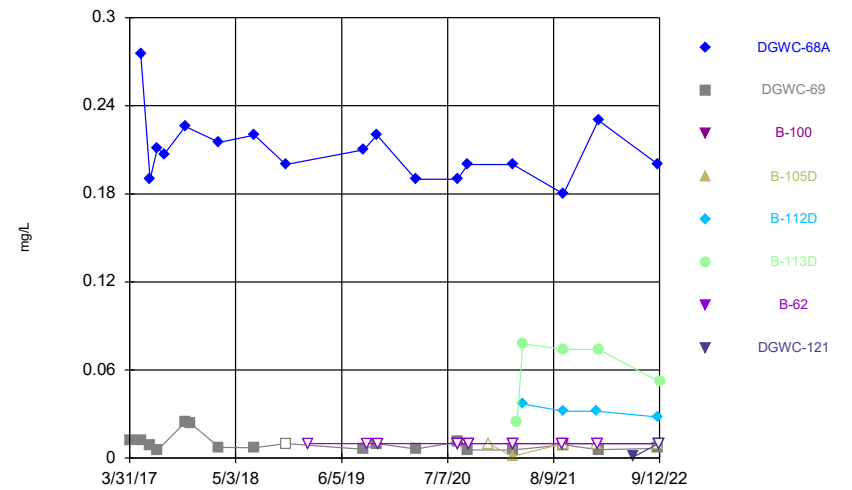
Constituent: Mercury Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



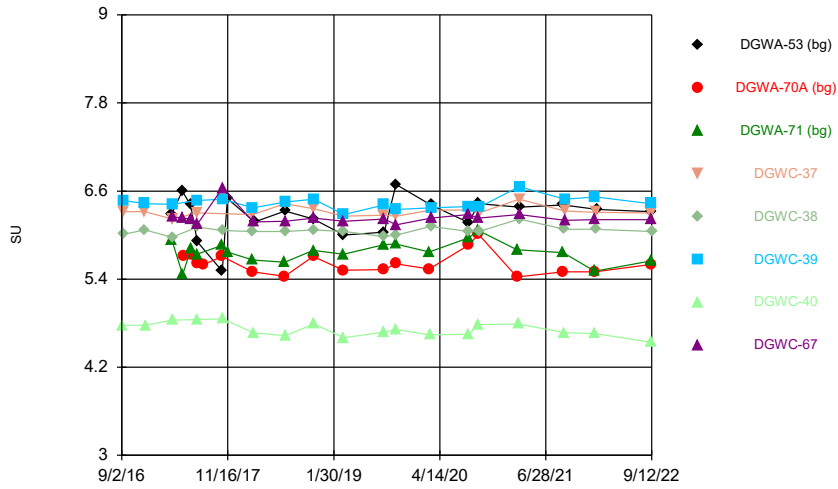
Constituent: Molybdenum Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



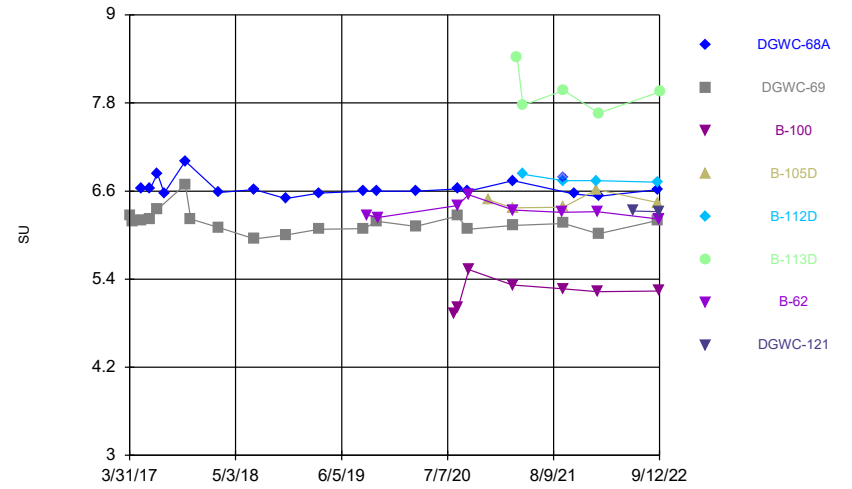
Constituent: Molybdenum Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



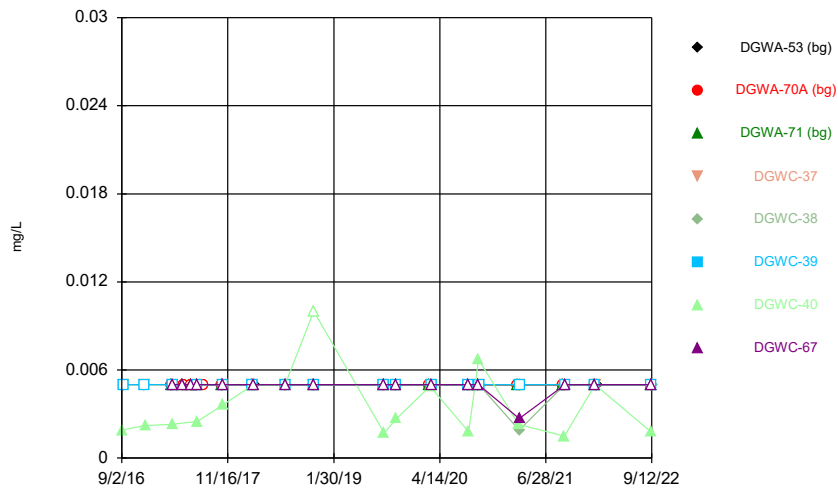
Constituent: pH, Field Analysis Run 11/18/2022 12:01 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



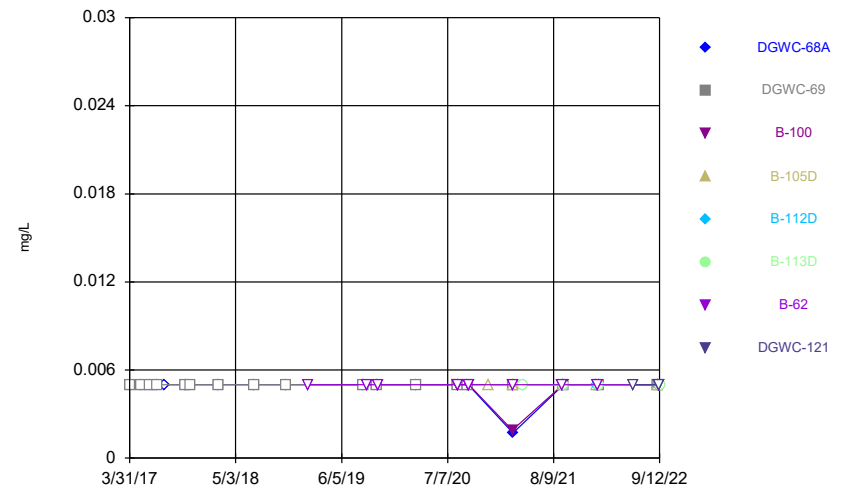
Constituent: pH, Field Analysis Run 11/18/2022 12:01 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



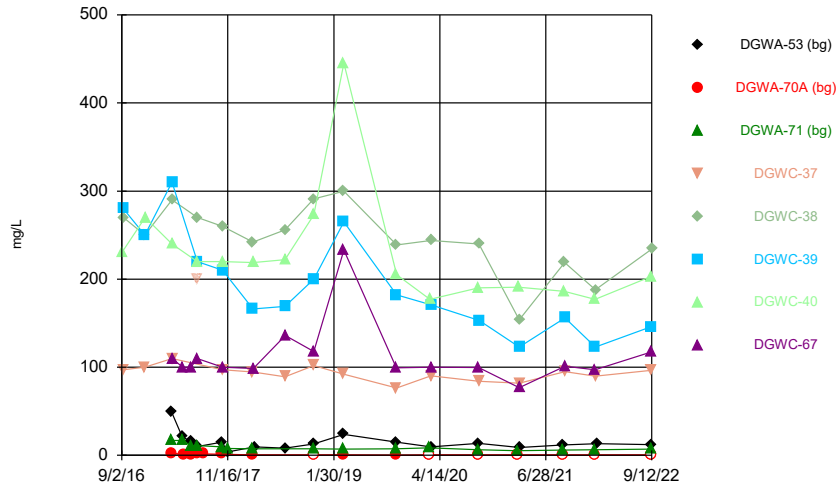
Constituent: Selenium Analysis Run 11/18/2022 12:01 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



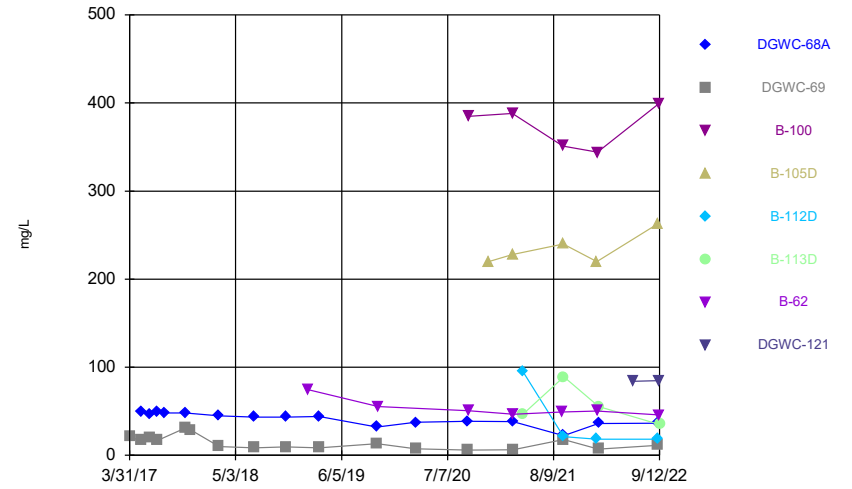
Constituent: Selenium Analysis Run 11/18/2022 12:01 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



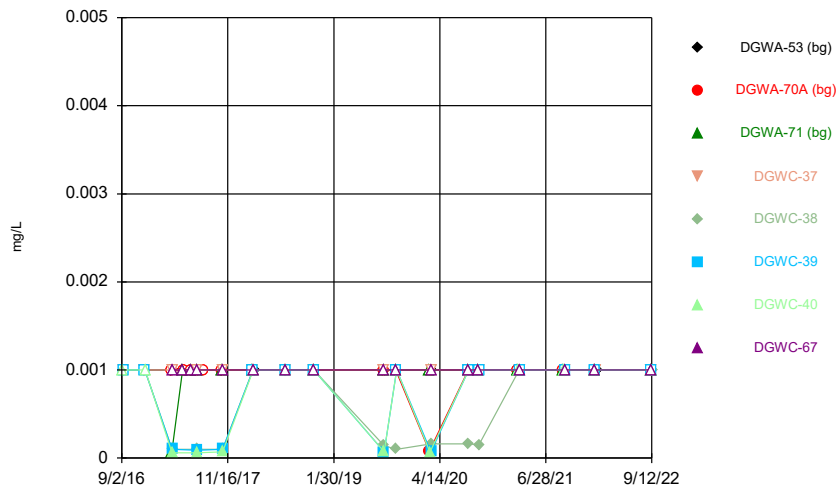
Constituent: Sulfate as SO4 Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



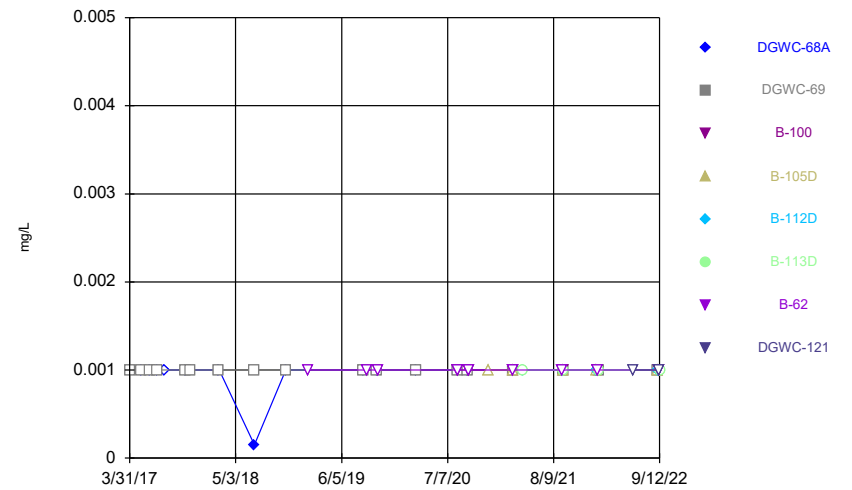
Constituent: Sulfate as SO4 Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



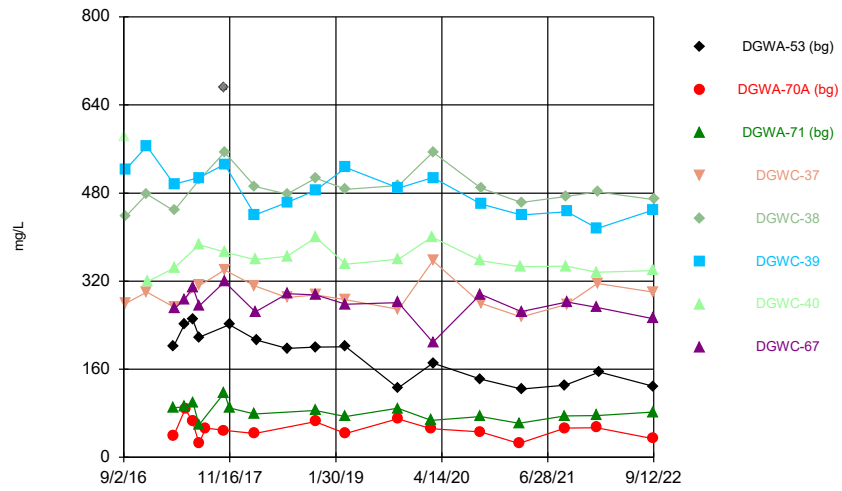
Constituent: Thallium Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



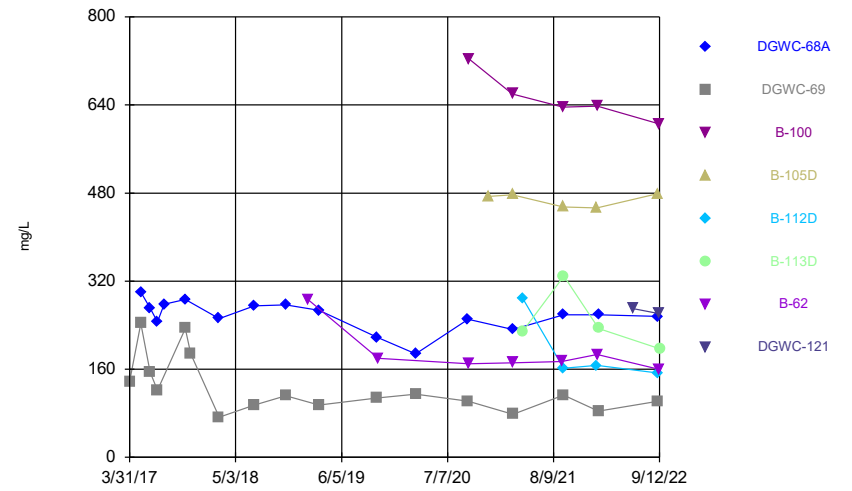
Constituent: Thallium Analysis Run 11/18/2022 12:01 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/18/2022 12:02 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Time Series



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/18/2022 12:02 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Time Series

Constituent: Antimony (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/2/2016							<0.003	
9/8/2016				<0.003	<0.003	<0.003		
12/7/2016				<0.003	<0.003	<0.003		
12/8/2016							<0.003	
3/28/2017	<0.003	<0.003	0.0007 (J)					
3/30/2017				<0.003	<0.003	<0.003	<0.003	
3/31/2017								0.0004 (J)
5/11/2017	<0.003							
5/12/2017			<0.003					<0.003
5/15/2017		<0.003						
6/15/2017	0.0006 (J)	<0.003						
6/16/2017			0.0007 (J)					0.0008 (J)
7/11/2017		<0.003	<0.003					
7/12/2017	<0.003							
7/13/2017				<0.003	<0.003	<0.003	<0.003	<0.003
8/8/2017		<0.003						
10/24/2017	<0.003	<0.003	<0.003					
10/26/2017				<0.003	<0.003	<0.003	<0.003	<0.003
2/27/2018		<0.003	<0.003					
3/1/2018				<0.003	<0.003	<0.003		
3/2/2018							<0.003	<0.003
3/8/2018	<0.003							
7/12/2018	<0.003			<0.003	<0.003	<0.003	<0.003	
7/13/2018								0.0023 (J)
11/6/2018		<0.003	<0.003					
11/7/2018	<0.003							
11/8/2018				<0.003	<0.003	<0.003	<0.003	<0.003
8/27/2019		<0.003	<0.003					
8/28/2019	<0.003			<0.003	<0.003	<0.003	<0.003	<0.003
10/15/2019		<0.003	<0.003					
10/16/2019	<0.003							
3/2/2020		<0.003	0.0018 (J)					
3/4/2020							<0.003	
3/9/2020	<0.003			<0.003	<0.003	<0.003		<0.003
8/11/2020		0.0013 (J)	0.0018 (J)					
8/13/2020	0.0003 (J)			<0.003	<0.003	<0.003	<0.003	<0.003
9/22/2020	<0.003	<0.003	<0.003					
9/23/2020							<0.003	<0.003
9/24/2020				<0.003	<0.003			
9/25/2020						<0.003		
3/1/2021		<0.003	0.0019 (J)					
3/8/2021							0.00033 (J)	
3/11/2021				<0.003	<0.003	<0.003		<0.003
3/12/2021	<0.003							
9/8/2021			<0.003					
9/9/2021	<0.003	0.0015 (J)						
9/14/2021							<0.003	
9/15/2021					<0.003			
9/16/2021				<0.003				<0.003
9/17/2021						<0.003		
1/18/2022		<0.003	<0.003					
1/19/2022							<0.003	<0.003

Time Series

Constituent: Antimony (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
1/20/2022						<0.003		
1/21/2022				<0.003	<0.003			
1/28/2022	<0.003							
9/7/2022		<0.003	<0.003			<0.003	<0.003	
9/8/2022	<0.003			<0.003				<0.003
9/12/2022					<0.003			

Time Series

Constituent: Antimony (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-68A	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62	DGWC-121
3/31/2017		<0.003						
5/12/2017	<0.003	<0.003						
6/16/2017	0.0008 (J)	0.0007 (J)						
7/13/2017	<0.003	<0.003						
8/8/2017	<0.003							
10/26/2017	<0.003	<0.003						
11/15/2017		<0.003						
3/2/2018	<0.003	<0.003						
7/13/2018	<0.003	<0.003						
11/8/2018	<0.003	<0.003						
1/30/2019							<0.003	
8/28/2019	<0.003	<0.003						
9/11/2019							<0.003	
10/21/2019							<0.003	
3/9/2020	<0.003	<0.003						
8/13/2020	<0.003	0.0019 (J)					<0.003	
8/17/2020			0.0013 (J)					
9/23/2020	<0.003	<0.003						
9/24/2020							0.00046 (J)	
9/25/2020			<0.003					
12/9/2020				<0.003				
3/8/2021			0.0017 (J)	0.00069 (J)				
3/10/2021	0.00032 (J)	0.0018 (J)						
3/12/2021							<0.003	
4/15/2021					0.00041 (J)			
4/16/2021						0.0021 (J)		
9/9/2021							<0.003	
9/13/2021			<0.003					
9/15/2021				0.0082				
9/16/2021	<0.003	<0.003			<0.003			
9/17/2021						<0.003		
1/19/2022				<0.003	<0.003			
1/20/2022							<0.003	
1/21/2022			<0.003					
1/25/2022	<0.003	<0.003						
1/26/2022						<0.003		
6/6/2022								<0.003
9/7/2022	<0.003	<0.003		<0.003	<0.003			
9/8/2022			<0.003				<0.003	<0.003
9/12/2022						<0.003		

Time Series

Constituent: Arsenic (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/2/2016							<0.005	
9/8/2016				<0.005	<0.005	<0.005		
12/7/2016				0.0019 (J)	<0.005	<0.005		
12/8/2016							<0.005	
3/28/2017	0.0005 (J)	<0.005	<0.005					
3/30/2017				<0.005	<0.005	0.0007 (J)	0.0006 (J)	
3/31/2017								<0.005
5/11/2017	0.0005 (J)							
5/12/2017			0.0004 (J)					<0.005
5/15/2017		<0.005						
6/15/2017	<0.005	<0.005						
6/16/2017			<0.005					<0.005
7/11/2017		<0.005	<0.005					
7/12/2017	<0.005							
7/13/2017				<0.005	0.0005 (J)	0.0009 (J)	<0.005	<0.005
8/8/2017		<0.005						
10/24/2017	<0.005	<0.005	<0.005					
10/26/2017				<0.005	<0.005	<0.005	<0.005	<0.005
2/27/2018		<0.005	<0.005					
3/1/2018				<0.005	<0.005	0.0011 (J)		
3/2/2018							0.0011 (J)	<0.005
3/8/2018	<0.005							
7/12/2018	<0.005			<0.005	<0.005	0.00057 (J)	<0.005	
7/13/2018								<0.005
11/6/2018		<0.005	<0.005					
11/7/2018	<0.005 (J)							
11/8/2018				<0.005	<0.005	<0.005	<0.005	<0.005
8/27/2019		<0.005	<0.005					
8/28/2019	<0.005			<0.005	<0.005	<0.005	<0.005	<0.005
10/15/2019		0.00052 (J)	0.00071 (J)					
10/16/2019	0.0018 (J)							
10/17/2019								0.00042 (J)
10/18/2019				<0.005	<0.005	0.00075 (J)	<0.005	
3/2/2020		<0.005	<0.005					
3/4/2020							0.00065 (J)	
3/9/2020	0.00068 (J)			<0.005	<0.005	0.00039 (J)		<0.005
8/11/2020		<0.005	<0.005					
8/13/2020	<0.005			<0.005	<0.005	<0.005	<0.005	<0.005
9/22/2020	0.00093 (J)	<0.005	<0.005					
9/23/2020							<0.005	<0.005
9/24/2020				<0.005	<0.005			
9/25/2020						0.00087 (J)		
3/1/2021		<0.005	<0.005					
3/8/2021							<0.005	
3/11/2021				<0.005	<0.005	<0.005		0.0008 (J)
3/12/2021	<0.005							
9/8/2021			<0.005					
9/9/2021	<0.005	<0.005						
9/14/2021							<0.005	
9/15/2021					<0.005			
9/16/2021				<0.005				<0.005
9/17/2021						<0.005		

Time Series

Constituent: Arsenic (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
1/18/2022		0.0046 (J)	0.0054					
1/19/2022							0.003 (J)	0.0033 (J)
1/20/2022						0.0019 (J)		
1/21/2022				<0.005	<0.005			
1/28/2022	0.0024 (J)							
9/7/2022		0.0024 (J)	<0.005			<0.005	<0.005	
9/8/2022	0.0029 (J)			<0.005				<0.005
9/12/2022					<0.005			

Time Series

Constituent: Arsenic (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-68A	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62	DGWC-121
3/31/2017		0.0239						
4/12/2017		0.0077						
5/12/2017	<0.005	0.0097						
6/16/2017	<0.005	0.0113						
7/13/2017	<0.005	0.0029 (J)						
8/8/2017	<0.005							
10/26/2017	<0.005	0.114						
11/15/2017		0.164						
3/2/2018	<0.005	0.0127						
7/13/2018	<0.005	0.017						
11/8/2018	<0.005 (J)	0.02						
1/30/2019							<0.005	
8/28/2019	<0.005	0.025						
9/11/2019							<0.005	
10/16/2019	<0.005	0.023						
10/21/2019							<0.005	
3/9/2020	<0.005	0.029						
7/23/2020			<0.005					
8/13/2020	<0.005	0.029					<0.005	
8/17/2020			<0.005					
9/23/2020	<0.005	0.032						
9/24/2020							<0.005	
9/25/2020			<0.005					
12/9/2020				<0.005				
3/8/2021			<0.005	0.0025 (J)				
3/10/2021	<0.005	0.028						
3/12/2021							<0.005	
4/15/2021					0.00078 (J)			
4/16/2021						<0.005		
9/9/2021							<0.005	
9/13/2021			<0.005					
9/15/2021				<0.005				
9/16/2021	0.46 (o)	0.023			<0.005			
9/17/2021						<0.005		
10/27/2021	0.0016 (J)							
1/19/2022				0.0051	0.005			
1/20/2022							0.0033 (J)	
1/21/2022			<0.005					
1/25/2022	<0.005	0.028						
1/26/2022						0.0018 (J)		
6/6/2022								<0.005
9/7/2022	<0.005	0.024		0.0026 (J)	<0.005			
9/8/2022			<0.005				<0.005	<0.005
9/12/2022						<0.005		

Time Series

Constituent: Barium (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/2/2016							0.0171	
9/8/2016				0.123	0.0333	0.0978		
12/7/2016				0.125	0.0336	0.0844		
12/8/2016							0.0163	
3/28/2017	0.134	0.0166	0.0378					
3/30/2017				0.11	0.0325	0.0858	0.0177	
3/31/2017								0.111
5/11/2017	0.126							
5/12/2017			0.04					0.127
5/15/2017		0.0181						
6/15/2017	0.14	0.0277						
6/16/2017			0.0369					0.11
7/11/2017		0.0306	0.0362					
7/12/2017	0.173							
7/13/2017				0.11	0.0332	0.0919	0.017	0.102
8/8/2017		0.0277						
10/24/2017	0.109	0.0333	0.0313					
10/26/2017				0.112	0.0333	0.0899	0.0168	0.105
2/27/2018		0.0341	0.0287					
3/1/2018				0.102	0.0333	0.0742		
3/2/2018							0.0169	0.104
3/8/2018	0.19							
7/12/2018	0.18			0.11	0.034	0.094	0.018	
7/13/2018								0.11
11/6/2018		0.037	0.026					
11/7/2018	0.15							
11/8/2018				0.11	0.035	0.1	0.017	0.11
8/27/2019		0.037	0.027					
8/28/2019	0.087			0.086	0.033	0.099	0.017	0.11
10/15/2019		0.034	0.024					
10/16/2019	0.077							
10/17/2019								0.1
10/18/2019				0.079	0.032	0.1	0.019	
3/2/2020		0.035	0.026					
3/4/2020							0.018	
3/9/2020	0.099			0.092	0.032	0.076		0.11
8/11/2020		0.041	0.026					
8/13/2020	0.046			0.088	0.032	0.089	0.018	0.095
9/22/2020	0.07	0.038	0.024					
9/23/2020							0.019	0.1
9/24/2020				0.094	0.032			
9/25/2020						0.1		
3/1/2021		0.042	0.028					
3/8/2021							0.016	
3/11/2021				0.075	0.032	0.078		0.11
3/12/2021	0.076							
9/8/2021			0.025					
9/9/2021	0.099	0.038						
9/14/2021							0.027	
9/15/2021					0.032			
9/16/2021				0.083				0.088
9/17/2021						0.09		

Time Series

Constituent: Barium (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
1/18/2022		0.043	0.029					
1/19/2022							0.018	0.091
1/20/2022						0.093		
1/21/2022				0.085	0.031			
1/28/2022	0.068							
9/7/2022		0.039	0.025			0.099	0.016	
9/8/2022	0.077			0.079				0.082
9/12/2022					0.027			

Time Series

Constituent: Barium (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-68A	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62	DGWC-121
3/31/2017		0.0872						
5/12/2017	0.089	0.0929						
6/16/2017	0.0855	0.1						
7/13/2017	0.0859	0.0985						
8/8/2017	0.0852							
10/26/2017	0.0878	0.136						
11/15/2017		0.107						
3/2/2018	0.0878	0.0671						
7/13/2018	0.091	0.074						
11/8/2018	0.092	0.072						
1/30/2019							0.018	
8/28/2019	0.089	0.061						
9/11/2019							0.023	
10/16/2019	0.089	0.1						
10/21/2019							0.026	
3/9/2020	0.088	0.057						
8/13/2020	0.088	0.13					0.026	
8/17/2020			0.015					
9/23/2020	0.094	0.055						
9/24/2020							0.025	
9/25/2020			0.022					
12/9/2020				0.03				
3/8/2021			0.022	0.041				
3/10/2021	0.09	0.048						
3/12/2021							0.027	
4/15/2021					0.026			
4/16/2021						0.0032 (J)		
9/9/2021							0.021	
9/13/2021			0.021					
9/15/2021				0.037				
9/16/2021	0.13 (o)	0.078			0.0032 (J)			
9/17/2021						0.0048 (J)		
10/27/2021	0.086							
1/19/2022				0.04	0.0034 (J)			
1/20/2022							0.021	
1/21/2022			0.023					
1/25/2022	0.1	0.049						
1/26/2022						0.0051		
6/6/2022								0.04
9/7/2022	0.098	0.065		0.035	0.0026 (J)			
9/8/2022			0.021				0.018	0.042
9/12/2022						0.0051		

Time Series

Constituent: Beryllium (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/2/2016							0.0028 (J)	
9/8/2016				<0.0005	<0.0005	<0.0005		
12/7/2016				<0.0005	<0.0005	<0.0005		
12/8/2016							0.0026 (J)	
3/28/2017	<0.0005	<0.0005	9E-05 (J)					
3/30/2017				<0.0005	<0.0005	<0.0005	0.003	
3/31/2017								<0.0005
5/11/2017	<0.0005							
5/12/2017			<0.0005					<0.0005
5/15/2017		<0.0005						
6/15/2017	<0.0005	<0.0005						
6/16/2017			0.0001 (J)					<0.0005
7/11/2017		<0.0005	<0.0005					
7/12/2017	<0.0005							
7/13/2017				<0.0005	<0.0005	<0.0005	0.003 (J)	<0.0005
8/8/2017		<0.0005						
10/24/2017	<0.0005	<0.0005	<0.0005					
10/26/2017				<0.0005	<0.0005	<0.0005	0.0027 (J)	<0.0005
2/27/2018		<0.0005	<0.0005					
3/1/2018				<0.0005	<0.0005	<0.0005		
3/2/2018							0.0033	<0.0005
3/8/2018	<0.0005							
7/10/2018			0.0009 (J)					
7/12/2018	<0.0005			7E-05 (J)	<0.0005	<0.0005	0.0032	
7/13/2018								<0.0005
11/6/2018		0.00012 (J)	0.00013 (J)					
11/7/2018	<0.0005							
11/8/2018				<0.0005	<0.0005	<0.0005	<0.003 (J)	<0.0005
8/27/2019		7.9E-05 (J)	<0.0005					
8/28/2019	<0.0005			8.6E-05 (J)	<0.0005	<0.0005	0.0032	<0.0005
10/15/2019		<0.0005	8.8E-05 (J)					
10/16/2019	<0.0005							
10/17/2019								<0.0005
10/18/2019				<0.0005	<0.0005	<0.0005	0.0033	
3/2/2020		9.6E-05 (J)	0.0001 (J)					
3/4/2020							0.0039	
3/9/2020	<0.0005			<0.0005	<0.0005	<0.0005		<0.0005
8/11/2020		0.00013 (J)	0.00011 (J)					
8/13/2020	<0.0005			0.0001 (J)	<0.0005	<0.0005	0.0033	<0.0005
9/22/2020	<0.0005	6.8E-05 (J)	6.9E-05 (J)					
9/23/2020							0.0031	<0.0005
9/24/2020				8.8E-05 (J)	5.8E-05 (J)			
9/25/2020						<0.0005		
3/1/2021		0.00012 (J)	0.00011 (J)					
3/8/2021							0.003	
3/11/2021				<0.0005	<0.0005	<0.0005		<0.0005
3/12/2021	<0.0005							
9/8/2021			9.1E-05 (J)					
9/9/2021	<0.0005	8.9E-05 (J)						
9/14/2021							0.0032	
9/15/2021					<0.0005			
9/16/2021				5.9E-05 (J)				<0.0005

Time Series

Constituent: Beryllium (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/17/2021						<0.0005		
1/18/2022		9.2E-05 (J)	0.00012 (J)					
1/19/2022							0.0034	<0.0005
1/20/2022						<0.0005		
1/21/2022				5.9E-05 (J)	<0.0005			
1/28/2022	<0.0005							
9/7/2022		8.4E-05 (J)	7.5E-05 (J)			<0.0005	0.0031	
9/8/2022	<0.0005			5.7E-05 (J)				<0.0005
9/12/2022					<0.0005			

Time Series

Constituent: Beryllium (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-68A	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62	DGWC-121
10/6/2016							9E-05 (J)	
3/31/2017		7E-05 (J)						
5/12/2017	<0.0005	<0.0005						
6/16/2017	<0.0005	<0.0005						
7/13/2017	<0.0005	<0.0005						
8/8/2017	<0.0005							
10/26/2017	<0.0005	<0.0005						
11/15/2017		<0.0005						
3/2/2018	<0.0005	<0.0005						
7/13/2018	8.4E-05 (J)	5.8E-05 (J)						
11/8/2018	<0.0005	<0.0005						
1/30/2019							<0.0005	
8/28/2019	<0.0005	<0.0005						
9/11/2019							0.00012 (J)	
10/16/2019	<0.0005	<0.0005						
10/21/2019							7.8E-05 (J)	
3/9/2020	<0.0005	7.5E-05 (J)						
8/13/2020	<0.0005	6.3E-05 (J)					0.00011 (J)	
8/17/2020			0.0004 (J)					
9/23/2020	<0.0005	6.1E-05 (J)						
9/24/2020							0.00013 (J)	
9/25/2020			0.00035 (J)					
12/9/2020				<0.0005				
3/8/2021			0.00046 (J)	<0.0005				
3/10/2021	6.1E-05 (J)	5E-05 (J)						
3/12/2021							<0.0005	
4/15/2021					<0.0005			
4/16/2021						<0.0005		
9/9/2021							0.00014 (J)	
9/13/2021			0.00053					
9/15/2021				<0.0005				
9/16/2021	<0.0005	<0.0005			<0.0005			
9/17/2021						<0.0005		
1/19/2022				<0.0005	<0.0005			
1/20/2022							0.00015 (J)	
1/21/2022			0.00053					
1/25/2022	<0.0005	5.9E-05 (J)						
1/26/2022						<0.0005		
6/6/2022								<0.0005
9/7/2022	<0.0005	<0.0005		<0.0005	<0.0005			
9/8/2022			0.00058				0.00013 (J)	<0.0005
9/12/2022						<0.0005		

Time Series

Constituent: Boron, total (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/2/2016							0.895	
9/8/2016				1.58	2.69	3.35		
12/7/2016				2.01	3.08	3.63		
12/8/2016							0.841	
3/28/2017	0.0612	0.0067 (J)	0.0097 (J)					
3/30/2017				1.47	3.19	3.57	0.937	
3/31/2017								2.91
5/11/2017	0.0805							
5/12/2017			0.0082 (J)					3.24
5/15/2017		0.0073 (J)						
6/15/2017	0.0725	<0.04						
6/16/2017			0.0085 (J)					3.42
7/11/2017		<0.04	0.0077 (J)					
7/12/2017	0.0735							
7/13/2017				2.1	3.09	3.41	0.933	3.46
8/8/2017		<0.04						
10/24/2017	0.077	0.0082 (J)	0.0083 (J)					
10/26/2017				1.86	2.92	3.41	0.873	3.21
2/27/2018		0.0062 (J)	0.0069 (J)					
3/1/2018				1.87	3.08	2.86		
3/2/2018							0.974	3.49
3/8/2018	0.13 (J)							
7/12/2018	0.076			1.5	2.8	3	0.92	
7/13/2018								3.1
11/6/2018		<0.04 (J)	<0.04 (J)					
11/7/2018	0.073							
11/8/2018				1.4	3.4	3.4	0.8	3.5
3/12/2019		0.0073 (J)	0.0068 (J)					
3/13/2019	0.08			1.8	2.9	3.4	0.8	3.5
10/15/2019		<0.04	0.0054 (J)					
10/16/2019	0.059							
10/17/2019								3.6
10/18/2019				1.3	3.1	3.6	0.9	
3/2/2020		0.0055 (J)	0.01 (J)					
3/4/2020							0.86	
3/9/2020	0.08 (J)			1.8	3	2.9		3.6
9/22/2020	0.056 (J)	<0.04	<0.04					
9/23/2020							0.76	3.2
9/24/2020				1.6	2.9			
9/25/2020						3.3		
3/1/2021		<0.04	0.0054 (J)					
3/8/2021							0.72	
3/11/2021				1.4	2.7	2.5		3.4
3/12/2021	0.064							
9/8/2021			<0.04					
9/9/2021	0.065	<0.04						
9/14/2021							0.7	
9/15/2021					2.8			
9/16/2021				1.4				3.4
9/17/2021						2.8		
1/18/2022		0.024 (J)	0.015 (J)					
1/19/2022							0.82	4.1

Time Series

Constituent: Boron, total (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
1/20/2022						2.8		
1/21/2022				1.4	2.8			
1/28/2022	0.062							
9/7/2022		<0.04	<0.04			3.3	0.84	
9/8/2022	0.054			2				4.3
9/12/2022					2.8			

Time Series

Constituent: Boron, total (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-68A	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62	DGWC-121
10/6/2016							0.053 (J)	
3/31/2017		0.407						
4/12/2017		0.207						
5/12/2017	1.8	0.311						
6/16/2017	1.88	0.381						
7/13/2017	1.97	0.323						
8/8/2017	2.1							
10/26/2017	2.05	0.779						
11/15/2017		0.667						
3/2/2018	2.05	0.0478						
7/13/2018	1.7	0.043						
11/8/2018	1.8	0.054						
1/30/2019							0.14	
3/13/2019	1.9	0.028 (J)						
9/11/2019							0.068	
10/16/2019	1.5	0.38						
10/21/2019							0.058	
3/9/2020	1.8	0.035 (J)						
9/23/2020	1.7	0.041 (J)						
9/24/2020							0.074 (J)	
9/25/2020			0.27					
12/9/2020				0.79				
3/8/2021			0.24	0.64				
3/10/2021	1.7	0.024 (J)						
3/12/2021							0.092 (J)	
3/26/2021						0.034 (J)		
4/15/2021					0.26			
4/16/2021						0.16		
9/9/2021							0.068	
9/13/2021			0.24					
9/15/2021				0.76				
9/16/2021	1.3	0.32			0.27			
9/17/2021						0.089		
1/19/2022				0.88	0.31			
1/20/2022							0.077	
1/21/2022			0.24					
1/25/2022	2.2	0.035 (J)						
1/26/2022						0.12		
6/6/2022								1.4
9/7/2022	2	0.23		0.87	0.26			
9/8/2022			0.24				0.064	2.1
9/12/2022						0.048		

Time Series

Constituent: Cadmium (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/2/2016							0.0008 (J)	
9/8/2016				0.0002 (J)	0.0002 (J)	<0.0005		
12/7/2016				0.0001 (J)	0.0002 (J)	<0.0005		
12/8/2016							0.0007 (J)	
3/28/2017	<0.0005	<0.0005	<0.0005					
3/30/2017				0.0001 (J)	0.0002 (J)	<0.0005	0.0007 (J)	
3/31/2017								<0.0005
5/11/2017	8E-05 (J)							
5/12/2017			<0.0005					<0.0005
5/15/2017		<0.0005						
6/15/2017	<0.0005	<0.0005						
6/16/2017			<0.0005					<0.0005
7/11/2017		<0.0005	<0.0005					
7/12/2017	<0.0005							
7/13/2017				<0.0005	0.0002 (J)	<0.0005	0.0008 (J)	<0.0005
8/8/2017		<0.0005						
10/24/2017	<0.0005	<0.0005	<0.0005					
10/26/2017				<0.0005	0.0002 (J)	<0.0005	0.0008 (J)	<0.0005
2/27/2018		<0.0005	<0.0005					
3/1/2018				<0.0005	<0.0005	<0.0005		
3/2/2018							<0.0005	<0.0005
3/8/2018	<0.0005							
7/12/2018	0.00013 (J)			<0.0005	0.00024 (J)	<0.0005	0.00087 (J)	
7/13/2018								<0.0005
11/6/2018		<0.0005	<0.0005					
11/7/2018	<0.0005							
11/8/2018				<0.0005	<0.001 (J)	<0.0005	<0.001 (J)	<0.0005
8/27/2019		<0.0005	<0.0005					
8/28/2019	<0.0005			<0.0005	0.0003 (J)	<0.0005	0.00087 (J)	0.00017 (J)
10/15/2019		<0.0005	<0.0005					
10/16/2019	<0.0005							
10/17/2019								<0.0005
10/18/2019				<0.0005	0.00016 (J)	<0.0005	0.00088 (J)	
3/2/2020		0.00041 (J)	<0.0005					
3/4/2020							0.00093 (J)	
3/9/2020	<0.0005			<0.0005	0.00017 (J)	<0.0005		0.00021 (J)
8/11/2020		<0.0005	<0.0005					
8/13/2020	<0.0005			<0.0005	0.00021 (J)	<0.0005	0.00084 (J)	0.00015 (J)
9/22/2020	<0.0005	<0.0005	<0.0005					
9/23/2020							0.0008 (J)	0.00018 (J)
9/24/2020				0.00027 (J)	0.00081 (J)			
9/25/2020						<0.0005		
3/1/2021		<0.0005	<0.0005					
3/8/2021							0.00072	
3/11/2021				<0.0005	<0.0005	<0.0005		0.00053
3/12/2021	<0.0005							
9/8/2021			<0.0005					
9/9/2021	<0.0005	<0.0005						
9/14/2021							0.00086	
9/15/2021					0.00021 (J)			
9/16/2021				0.00013 (J)				<0.0005
9/17/2021						<0.0005		

Time Series

Constituent: Cadmium (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
1/18/2022		<0.0005	<0.0005					
1/19/2022							0.00085	<0.0005
1/20/2022						<0.0005		
1/21/2022				<0.0005	0.0002 (J)			
1/28/2022	<0.0005							
9/7/2022		<0.0005	<0.0005			<0.0005	0.00081	
9/8/2022	<0.0005			<0.0005				<0.0005
9/12/2022					0.00013 (J)			

Time Series

Constituent: Cadmium (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-68A	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62	DGWC-121
3/31/2017		0.0001 (J)						
5/12/2017	8E-05 (J)	0.0002 (J)						
6/16/2017	<0.0005	0.0002 (J)						
7/13/2017	<0.0005	<0.0005						
8/8/2017	<0.0005							
10/26/2017	<0.0005	<0.0005						
11/15/2017		<0.0005						
3/2/2018	<0.0005	<0.0005						
7/13/2018	0.00019 (J)	<0.0005						
11/8/2018	<0.001 (J)	<0.0005						
1/30/2019							<0.0005	
8/28/2019	0.00017 (J)	<0.0005						
9/11/2019							<0.0005	
10/16/2019	0.00017 (J)	0.00017 (J)						
10/21/2019							<0.0005	
3/9/2020	0.00026 (J)	<0.0005						
8/13/2020	0.00021 (J)	<0.0005					<0.0005	
8/17/2020			0.00059 (J)					
9/23/2020	0.00024 (J)	<0.0005						
9/24/2020							<0.0005	
9/25/2020			0.00027 (J)					
12/9/2020				<0.0005				
3/8/2021			0.00027 (J)	<0.0005				
3/10/2021	<0.0005	<0.0005						
3/12/2021							<0.0005	
4/15/2021					<0.0005			
4/16/2021						0.00019 (J)		
9/9/2021							<0.0005	
9/13/2021			0.00029 (J)					
9/15/2021				<0.0005				
9/16/2021	<0.0005	<0.0005			<0.0005			
9/17/2021						<0.0005		
1/19/2022				<0.0005	<0.0005			
1/20/2022							<0.0005	
1/21/2022			0.00059					
1/25/2022	0.00035 (J)	<0.0005						
1/26/2022						<0.0005		
6/6/2022								<0.0005
9/7/2022	0.0002 (J)	<0.0005		<0.0005	<0.0005			
9/8/2022			0.00027 (J)				<0.0005	<0.0005
9/12/2022						<0.0005		

Time Series

Constituent: Calcium, total (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/2/2016							39.6	
9/8/2016				52.5	70.3	87.2		
12/7/2016				29.7	38.4	96.7		
12/8/2016							37.9	
3/28/2017	30.8	5.14	8.31					
3/30/2017				62.6	80.3	98.9	43.9	
3/31/2017								39.9
5/11/2017	35.8							
5/12/2017			8.04					43.6
5/15/2017		6.5						
6/15/2017	36	5.38						
6/16/2017			7.66					42.5
7/11/2017		5.96	7.71					
7/12/2017	40.3							
7/13/2017				64.1	90.8	95	46.2	43.7
8/8/2017		5.2						
10/24/2017	30.3	4.93	6.86					
10/26/2017				60.8	81.3	90.6	41.8	40.4
2/27/2018		<25	<25					
3/1/2018				57	81.8	79.6		
3/2/2018							43.2	40.1
3/8/2018	39.8							
7/12/2018	34.7			59.1	86.7	89.8	47.1	
7/13/2018								43.3
11/6/2018		5.5	5.7					
11/7/2018	28.6							
11/8/2018				53.6	86.6	89	43.5	40.1
3/12/2019		5.1	5.5					
3/13/2019	26.7			54.8	85.3	96.3	41	41.2
10/15/2019		5.1	5.1					
10/16/2019	17.7							
10/17/2019								46.9
10/18/2019				52.5	97.8	108	44.9	
3/2/2020		5.3	5.8					
3/4/2020							49.6	
3/9/2020	23.7			64.2	91.9	100		46.9
9/22/2020	15.5	5	5.4					
9/23/2020							41.9	42
9/24/2020				55.9	84.1			
9/25/2020						92.5		
3/1/2021		4.1	5.9					
3/8/2021							44.9	
3/11/2021				56	85.8	91.9		45.4
3/12/2021	18.4							
9/8/2021			6.1					
9/9/2021	18.3	5.3						
9/14/2021							45.1	
9/15/2021					88.3			
9/16/2021				63				46
9/17/2021						98.6		
1/18/2022		6.1	6.6					
1/19/2022							44.7	48.8

Time Series

Constituent: Calcium, total (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
1/20/2022						96.2		
1/21/2022				64.4	91			
1/28/2022	19.5							
9/7/2022		5.9	6.4			92.5	44.8	
9/8/2022	17.2			66.2				47.4
9/12/2022					87.6			

Time Series

Constituent: Calcium, total (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-68A	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62	DGWC-121
3/31/2017		18.6 (J)						
5/12/2017	51.7	18.9 (J)						
6/16/2017	47.9	17.7						
7/13/2017	52.3	17.6						
8/8/2017	46.3							
10/26/2017	48.2	33.3						
11/15/2017		30.6						
3/2/2018	48.9	8.09						
7/13/2018	52.4	7.9						
11/8/2018	46.8	8.5						
1/30/2019							51.4	
3/13/2019	47.5	7.6						
10/16/2019	49.7	16.2						
10/21/2019							31.2	
3/9/2020	54	8.6						
9/23/2020	50.2	8						
9/24/2020							28.8	
9/25/2020			44.7					
12/9/2020				76.9				
3/8/2021			47.7	79.6				
3/10/2021	54.2	8.5						
3/12/2021							28.8	
4/15/2021					34.6			
4/16/2021						47.2		
9/9/2021							29.2	
9/13/2021			51.5					
9/15/2021				72.7				
9/16/2021	60.6	18			28.4			
9/17/2021						44.1		
1/19/2022				74.2	24.1			
1/20/2022							36.3	
1/21/2022			49.9					
1/25/2022	60.4	9.2						
1/26/2022						48.4		
6/6/2022								44.1
9/7/2022	53.5	13.1		73.2	26.5			
9/8/2022			46				31.4	45
9/12/2022						36.5		

Time Series

Constituent: Chloride, Total (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/2/2016							20	
9/8/2016				6.2	7.4	9.2		
12/7/2016				6.1	7.4	8.9		
12/8/2016							18	
3/28/2017	3.7	3.8	3.6					
3/30/2017				6.3	7.7	8.7	20	
3/31/2017								5.7
5/11/2017	2.3							
5/12/2017			3.8					5.6
5/15/2017		2.2						
6/15/2017	2.6	2						
6/16/2017			3.4					5.5
7/11/2017		2.1	3.1					
7/12/2017	2.3							
7/13/2017				6.5	7.5	8.4	21	5.2
8/8/2017		2.2						
10/24/2017	2.7	2.4	3.2					
10/26/2017				6.4	8.2	8.3	21	6
11/15/2017	2.2		3.1					
2/27/2018		2.5	3.2					
3/1/2018				6.3	8.1	8.1		
3/2/2018							19.5	5.8
3/8/2018	2.4							
7/12/2018	2.2			5.8	8	7.7	19.9	
7/13/2018								5.9
11/6/2018		2.3	2.6					
11/7/2018	2.3							
11/8/2018				5.8	8.1	7.7	19.3	6.1
3/12/2019		2.5	3.3					
3/13/2019	3.6			6.9	9.1	8.2	19.7	6.8
10/15/2019		2.2	3.3					
10/16/2019	2							
10/17/2019								6.9
10/18/2019				5.8	8.6	8	19.2	
3/2/2020		1.9	3					
3/4/2020							20.6	
3/9/2020	1.8			6	8.1	7.5		6.7
9/22/2020	1.6	1.9	5.2					
9/23/2020							19.7	7.1
9/24/2020				5.6	8.2			
9/25/2020						7.9		
3/1/2021		1.9	3.9					
3/8/2021							19.1	
3/11/2021				5.6	8	7.7		7.4
3/12/2021	2							
9/8/2021			5.9					
9/9/2021	1.8	1.9						
9/14/2021							16.7	
9/15/2021					7.6			
9/16/2021				5.6				7.9
9/17/2021						8.3		
1/18/2022		1.9	5.9					

Time Series

Constituent: Chloride, Total (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
1/19/2022							16.5	8.3
1/20/2022						8		
1/21/2022				5.7	8.5			
1/28/2022	1.8							
9/7/2022		2.1	8.2			8.2	15	
9/8/2022	1.6			5.4				8.9
9/12/2022					8.5			

Time Series

Constituent: Chloride, Total (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-68A	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62	DGWC-121
3/31/2017		4.4						
5/12/2017	4.2	4.4						
6/16/2017	4.2	4.7						
7/13/2017	4.4	4.7						
8/8/2017	4.2							
10/26/2017	4.4	4.2						
11/15/2017		4.7						
3/2/2018	4.2	6.4						
7/13/2018	4	5.3						
11/8/2018	<0.25	5.9						
1/30/2019							7.1	
3/13/2019	4.6	6.2						
10/16/2019	4.2	4.7						
10/21/2019							6.5	
3/9/2020	3.6	5.7						
9/23/2020	3.6	4.7						
9/24/2020							5.7	
9/25/2020			13.2					
12/9/2020				17.1				
3/8/2021			12.9	17.4				
3/10/2021	3.6	5						
3/12/2021							5.9	
4/15/2021					10			
4/16/2021						6.7		
9/9/2021							5.8	
9/13/2021			11.1					
9/15/2021				17.4				
9/16/2021	3.4	4.5			2.7			
9/17/2021						48.8		
1/19/2022				16.3	2.5			
1/20/2022							5.6	
1/21/2022			11.3					
1/25/2022	3.8	5.4						
1/26/2022						19.8		
6/6/2022								4.7
9/7/2022	4.1	4.9		16.4	2.9			
9/8/2022			10.2				5.3	4.5
9/12/2022						7.6		

Time Series

Constituent: Chromium (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/2/2016							<0.005	
9/8/2016				<0.005	<0.005	<0.005		
12/7/2016				<0.005	<0.005	<0.005		
12/8/2016							<0.005	
3/28/2017	<0.005	0.0008 (J)	0.0023 (J)					
3/30/2017				<0.005	<0.005	<0.005	0.0007 (J)	
3/31/2017								0.0005 (J)
5/11/2017	<0.005							
5/12/2017			0.0004 (J)					0.0007 (J)
5/15/2017		0.0006 (J)						
6/15/2017	<0.005	0.0006 (J)						
6/16/2017			0.0005 (J)					<0.005
7/11/2017		0.0005 (J)	<0.005					
7/12/2017	<0.005							
7/13/2017				<0.005	<0.005	<0.005	0.0006 (J)	<0.005
8/8/2017		0.0005 (J)						
10/24/2017	<0.005	0.0005 (J)	<0.005					
10/26/2017				0.0007 (J)	0.0005 (J)	<0.005	0.0007 (J)	<0.005
2/27/2018		<0.005	<0.005					
3/1/2018				<0.005	<0.005	<0.005		
3/2/2018							<0.005	<0.005
3/8/2018	<0.005							
7/12/2018	<0.005			<0.005	<0.005	<0.005	<0.005	
7/13/2018								<0.005
11/6/2018		<0.005	<0.005					
11/7/2018	<0.005							
11/8/2018				<0.005	<0.005	<0.005	<0.005	<0.005
8/27/2019		0.00071 (J)	0.0018 (J)					
8/28/2019	<0.005			<0.005	<0.005	<0.005	0.00061 (J)	<0.005
10/15/2019		0.034 (O)	0.0025 (J)					
10/16/2019	<0.005							
10/17/2019								<0.005
10/18/2019				<0.005	0.00092 (J)	<0.005	0.00078 (J)	
3/2/2020		0.0013 (J)	0.00045 (J)					
3/4/2020							0.0011 (J)	
3/9/2020	<0.005			<0.005	0.00044 (J)	<0.005		0.00088 (J)
8/11/2020		0.0016 (J)	0.0006 (J)					
8/13/2020	<0.005			0.00058 (J)	<0.005	<0.005	0.00072 (J)	<0.005
9/22/2020	<0.005	0.00089 (J)	<0.005					
9/23/2020							0.0011 (J)	<0.005
9/24/2020				<0.005	<0.005			
9/25/2020						<0.005		
3/1/2021		<0.005	<0.005					
3/8/2021							0.0006 (J)	
3/11/2021				<0.005	<0.005	<0.005		0.0014 (J)
3/12/2021	<0.005							
9/8/2021			<0.005					
9/9/2021	<0.005	<0.005						
9/14/2021							0.0021 (J)	
9/15/2021					<0.005			
9/16/2021				<0.005				<0.005
9/17/2021						<0.005		

Time Series

Constituent: Chromium (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
1/18/2022		<0.005	<0.005					
1/19/2022							<0.005	<0.005
1/20/2022						<0.005		
1/21/2022				<0.005	<0.005			
1/28/2022	<0.005							
9/7/2022		<0.005	<0.005			<0.005	<0.005	
9/8/2022	<0.005			<0.005				<0.005
9/12/2022					<0.005			

Time Series

Constituent: Chromium (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-68A	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62	DGWC-121
3/31/2017		<0.005						
5/12/2017	<0.005	<0.005						
6/16/2017	<0.005	<0.005						
7/13/2017	0.0005 (J)	<0.005						
8/8/2017	<0.005							
10/26/2017	<0.005	<0.005						
11/15/2017		<0.005						
3/2/2018	<0.005	<0.005						
7/13/2018	<0.005	<0.005						
11/8/2018	<0.005	<0.005						
1/30/2019							<0.005	
8/28/2019	<0.005	0.00049 (J)						
9/11/2019							<0.005	
10/16/2019	<0.005	<0.005						
10/21/2019							0.00098 (J)	
3/9/2020	<0.005	0.0012 (J)						
8/13/2020	<0.005	<0.005					<0.005	
8/17/2020			<0.005					
9/23/2020	<0.005	0.0011 (J)						
9/24/2020							<0.005	
9/25/2020			0.00094 (J)					
12/9/2020				<0.005				
3/8/2021			0.00057 (J)	<0.005				
3/10/2021	<0.005	0.0009 (J)						
3/12/2021							<0.005	
4/15/2021					0.00085 (J)			
4/16/2021						0.0011 (J)		
9/9/2021							<0.005	
9/13/2021			<0.005					
9/15/2021				0.0012 (J)				
9/16/2021	0.0014 (J,o)	<0.005			0.0014 (J)			
9/17/2021						<0.005		
10/27/2021	<0.005							
1/19/2022				<0.005	<0.005			
1/20/2022							<0.005	
1/21/2022			<0.005					
1/25/2022	<0.005	0.0013 (J)						
1/26/2022						<0.005		
6/6/2022								<0.005
9/7/2022	<0.005	<0.005		<0.005	<0.005			
9/8/2022			<0.005				<0.005	<0.005
9/12/2022						<0.005		

Time Series

Constituent: Cobalt (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/2/2016							0.0382	
9/8/2016				<0.005	0.0015 (J)	0.0068 (J)		
12/7/2016				0.0005 (J)	0.0017 (J)	0.0071 (J)		
12/8/2016							0.0318	
3/28/2017	0.025	0.0034 (J)	0.0033 (J)					
3/30/2017				<0.005	0.0016 (J)	0.006 (J)	0.0364	
3/31/2017								0.0064 (J)
5/11/2017	0.0281							
5/12/2017			0.0016 (J)					0.0037 (J)
5/15/2017		0.0024 (J)						
6/15/2017	0.0322	0.0014 (J)						
6/16/2017			0.0011 (J)					0.0041 (J)
7/11/2017		0.0007 (J)	0.0008 (J)					
7/12/2017	0.0247							
7/13/2017				0.0003 (J)	0.0016 (J)	0.0063 (J)	0.0394	0.0037 (J)
8/8/2017		0.0007 (J)						
10/24/2017	0.0267	<0.005	0.0004 (J)					
10/26/2017				0.0003 (J)	0.0016 (J)	0.0062 (J)	0.0371	0.0022 (J)
2/27/2018		<0.005	<0.005					
3/1/2018				<0.005	<0.005	<0.005		
3/2/2018							0.0425	<0.005
3/8/2018	0.027							
7/12/2018	0.024			<0.005	0.0015 (J)	0.0059 (J)	0.044	
7/13/2018								0.0017 (J)
11/6/2018		<0.005	<0.005					
11/7/2018	0.018							
11/8/2018				<0.005	<0.01 (J)	<0.01 (J)	0.036	<0.01 (J)
8/27/2019		<0.005	<0.005					
8/28/2019	0.013			<0.005	0.0016 (J)	0.0067	0.044	0.0013 (J)
10/15/2019		0.00064 (J)	<0.005					
10/16/2019	0.009							
10/17/2019								0.0013 (J)
10/18/2019				<0.005	0.0016 (J)	0.007	0.043	
3/2/2020		0.00037 (J)	<0.005					
3/4/2020							0.055	
3/9/2020	0.016			<0.005	0.0016 (J)	0.007		0.0015 (J)
8/11/2020		0.0012 (J)	<0.005					
8/13/2020	0.0051			<0.005	0.0014 (J)	0.006	0.044	0.0015 (J)
9/22/2020	0.011	<0.005	<0.005					
9/23/2020							0.046	0.0011 (J)
9/24/2020				<0.005	0.0013 (J)			
9/25/2020						0.0061		
3/1/2021		<0.005	<0.005					
3/8/2021							0.039	
3/11/2021				<0.005	0.0017 (J)	0.0058		0.0016 (J)
3/12/2021	0.0078							
9/8/2021			<0.005					
9/9/2021	0.0064	<0.005						
9/14/2021							0.05	
9/15/2021					0.0016 (J)			
9/16/2021				<0.005				0.0012 (J)
9/17/2021						0.0076		

Time Series

Constituent: Cobalt (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
1/18/2022		<0.005	<0.005					
1/19/2022							0.042	0.0011 (J)
1/20/2022						0.0061		
1/21/2022				<0.005	0.0017 (J)			
1/28/2022	0.014							
9/7/2022		<0.005	<0.005			0.0065	0.037	
9/8/2022	0.012			<0.005				0.001 (J)
9/12/2022					0.0014 (J)			

Time Series

Constituent: Cobalt (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-68A	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62	DGWC-121
3/31/2017		0.0022 (J)						
5/12/2017	0.0015 (J)	0.0016 (J)						
6/16/2017	0.0003 (J)	0.0009 (J)						
7/13/2017	0.0005 (J)	0.0004 (J)						
8/8/2017	<0.005							
10/26/2017	<0.005	0.0031 (J)						
11/15/2017		0.0028 (J)						
3/2/2018	<0.005	<0.005						
7/13/2018	<0.005	<0.005						
11/8/2018	<0.005	<0.005						
1/30/2019							<0.005	
8/28/2019	<0.005	<0.005						
9/11/2019							0.0003 (J)	
10/16/2019	<0.005	<0.005						
10/21/2019							0.00031 (J)	
3/9/2020	<0.005	<0.005						
7/23/2020			0.086					
8/3/2020			0.087					
8/13/2020	<0.005	<0.005					<0.005	
8/17/2020			0.077					
9/23/2020	<0.005	<0.005						
9/24/2020							<0.005	
9/25/2020			0.034					
12/9/2020				0.012				
3/8/2021			0.029	0.0042 (J)				
3/10/2021	<0.005	<0.005						
3/12/2021							<0.005	
4/15/2021					0.0025 (J)			
4/16/2021						<0.005		
9/9/2021							<0.005	
9/13/2021			0.035					
9/15/2021				0.0065				
9/16/2021	0.0032 (J,o)	<0.005			0.00054 (J)			
9/17/2021						<0.005		
10/27/2021	<0.005							
1/19/2022				0.006	<0.005			
1/20/2022							<0.005	
1/21/2022			0.034					
1/25/2022	<0.005	<0.005						
1/26/2022						<0.005		
6/6/2022								0.0028 (J)
9/7/2022	<0.005	<0.005		0.004 (J)	<0.005			
9/8/2022			0.028				<0.005	0.0019 (J)
9/9/2022							<0.005	
9/12/2022						<0.005		

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/2/2016							1.44	
9/8/2016				0.827 (U)	1.48	1.44		
12/7/2016				0.56 (U)	0.22 (U)	2.16		
12/8/2016							2.56	
3/28/2017	6.36	0.866 (U)	0.257 (U)					
3/30/2017				0.302 (U)	0.519 (U)	0.264 (U)	0.0844 (U)	
3/31/2017								0.404 (U)
5/11/2017	3.45							
5/12/2017			0.165 (U)					0.206 (U)
5/15/2017		0.288 (U)						
6/15/2017	4.58	1.01 (U)						
6/16/2017			0.732 (U)					0.966 (U)
7/11/2017		0.254 (U)	0.461 (U)					
7/12/2017	4.37							
7/13/2017				0.731 (U)	1.11	0.517 (U)	0.963 (U)	0.387 (U)
8/8/2017		1.48						
10/24/2017	4.46	0.472 (U)	0.724 (U)					
10/26/2017				1.04 (U)	1.13 (U)	0.875 (U)	0.748 (U)	0.619 (U)
2/27/2018		1.22	0.714 (U)					
3/1/2018				0.344 (U)	0.985 (U)	1.24		
3/2/2018							0.485 (U)	1.31
3/8/2018	2.14							
7/10/2018		0.362 (U)	0.426 (U)					
7/12/2018	4.65			0.566 (U)	0.615 (U)	0.935 (U)	0.231 (U)	
7/13/2018								0.667 (U)
11/6/2018		0.859 (U)	0.455 (U)					
11/7/2018	3.05							
11/8/2018				0.623 (U)	0.58 (U)	1.15 (U)	0.465 (U)	0.911 (U)
8/27/2019		1.97	1.3 (U)					
8/28/2019	2.68			1.24 (U)	0.517 (U)	1.15 (U)	0.592 (U)	0.751 (U)
10/15/2019		0.319 (U)	1.21 (U)					
10/16/2019	1.89							
1/6/2020				2.01	0.527 (U)	1.4	1.6	0.965 (U)
3/2/2020		0.419 (U)	1.3					
3/4/2020							1.62	
3/9/2020	3.51			0.499 (U)	1.04	1.36		0.819 (U)
8/11/2020		0.812 (U)	0.965 (U)					
8/13/2020	1.04			0.99	0.132 (U)	0.626 (U)	1.6	0.897 (U)
9/22/2020	2.27	0.45 (U)	0.216 (U)					
9/23/2020							1.28 (U)	0.131 (U)
9/24/2020				1.03 (U)	0.593 (U)			
9/25/2020						0.181 (U)		
3/1/2021		0.552 (U)	0.389 (U)					
3/8/2021							0.714 (U)	
3/11/2021				0.956 (U)	0.0784 (U)	0.969 (U)		1.55
3/12/2021	1.63							
9/8/2021			0.051 (U)					
9/9/2021	2.72	0.779 (U)						
9/14/2021							1.8	
9/15/2021					2.37			
9/16/2021				0.691 (U)				0.201 (U)
9/17/2021						0.911 (U)		

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/18/2022 12:02 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
1/18/2022		1.26	0.729 (U)					
1/19/2022							1.7	0.853 (U)
1/20/2022						0.172 (U)		
1/21/2022				0.343 (U)	0.0873 (U)			
1/28/2022	2.1							
9/7/2022		0.504 (U)	0.588 (U)			0.637 (U)	0.772 (U)	
9/8/2022	1.69							0.699 (U)
9/9/2022				0.719 (U)				
9/12/2022					0.479 (U)			

Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-68A	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62	DGWC-121
3/31/2017		1.39						
5/12/2017	1.18	1.29						
6/16/2017	0.332 (U)	1.61						
7/13/2017	0.304 (U)	1.14						
8/8/2017	1.4							
10/26/2017	0.477 (U)	2.04						
11/15/2017		1.99						
3/2/2018	1.13	0.918 (U)						
7/13/2018	0.407 (U)	1.36 (U)						
11/8/2018	0.393 (U)	0.719 (U)						
1/30/2019							1.97 (U)	
8/28/2019	1.77	1.38						
10/16/2019	2.12	0.826 (U)						
10/21/2019							1.82	
3/9/2020	1.33	1.39						
8/13/2020	1.46	2.66					1.63	
8/17/2020			1.4 (U)					
9/23/2020	0.563 (U)	1.8						
9/24/2020							1.28 (U)	
9/25/2020			0.799 (U)					
12/9/2020				1.25 (U)				
3/8/2021			0.168 (U)	1.87				
3/10/2021	0.568 (U)	1.6						
3/12/2021							1.18 (U)	
4/15/2021					0.945 (U)			
4/16/2021						0.852 (U)		
9/9/2021							1.7	
9/13/2021			0.774 (U)					
9/15/2021				2.01				
9/16/2021	1.74	2.06			0.241 (U)			
9/17/2021						1.08 (U)		
1/19/2022				2.45	0.738 (U)			
1/20/2022							1.71	
1/21/2022			0.769 (U)					
1/25/2022	0.323 (U)	0.834 (U)						
1/26/2022						0.596 (U)		
9/7/2022	0.174 (U)	1.82		3.05	0.755 (U)			
9/8/2022			0.643 (U)					2
9/9/2022							1.96	
9/12/2022						0.44 (U)		

Time Series

Constituent: Fluoride, total (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/15/2021					0.06 (J)			
9/16/2021				0.084 (J)				0.069 (J)
9/17/2021						0.13		
1/18/2022		<0.1	<0.1					
1/19/2022							0.12	<0.1
1/20/2022						0.1		
1/21/2022				0.053 (J)	0.1			
1/28/2022	0.08 (J)							
9/7/2022		0.061 (J)	0.056 (J)			0.11	0.14	
9/8/2022	0.11			0.082 (J)				0.096 (J)
9/12/2022					0.12			

Time Series

Constituent: Fluoride, total (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-68A	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62	DGWC-121
3/31/2017		0.16 (J)						
5/12/2017	0.37	0.12 (J)						
6/16/2017	0.12 (J)	0.16 (J)						
7/13/2017	0.12 (J)	0.13 (J)						
8/8/2017	0.11 (J)							
10/26/2017	0.11 (J)	0.29 (J)						
11/15/2017		0.28 (J)						
3/2/2018	0.23	0.18						
7/13/2018	0.099 (J)	0.19 (J)						
11/8/2018	<0.3 (J)	<0.3 (J)						
1/30/2019							0.43	
3/13/2019	0.12 (J)	0.086 (J)						
8/28/2019	0.1	0.07 (J)						
10/16/2019	0.093 (J)	0.13 (J)						
10/21/2019							0.23 (J)	
3/9/2020	0.082 (J)	0.068 (J)						
8/13/2020	0.076 (J)	0.084 (J)					0.11	
8/17/2020			<0.1					
9/23/2020	0.07 (J)	0.064 (J)						
9/24/2020							0.093 (J)	
9/25/2020			<0.1					
12/9/2020				0.075 (J)				
3/8/2021			<0.1	0.32				
3/10/2021	0.07 (J)	0.055 (J)						
3/12/2021							0.11	
4/15/2021					0.3			
4/16/2021						0.71		
9/9/2021							0.14	
9/13/2021			<0.1					
9/15/2021				0.078 (J)				
9/16/2021	0.55	0.11			0.34			
9/17/2021						0.87		
1/19/2022				0.058 (J)	0.25			
1/20/2022							0.099 (J)	
1/21/2022			<0.1					
1/25/2022	0.067 (J)	0.054 (J)						
1/26/2022						0.74		
6/6/2022								0.056 (J)
9/7/2022	0.11	0.11		0.11	0.27			
9/8/2022			0.072 (J)				0.13	0.093 (J)
9/12/2022						1		

Time Series

Constituent: Lead (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/2/2016							<0.001	
9/8/2016				<0.001	<0.001	<0.001		
12/7/2016				<0.001	<0.001	<0.001		
12/8/2016							<0.001	
3/28/2017	<0.001	9E-05 (J)	<0.001					
3/30/2017				0.0014 (J)	<0.001	<0.001	7E-05 (J)	
3/31/2017								<0.001
5/11/2017	<0.001							
5/12/2017			8E-05 (J)					9E-05 (J)
5/15/2017		0.0001 (J)						
6/15/2017	<0.001	0.0002 (J)						
6/16/2017			<0.001					<0.001
7/11/2017		<0.001	<0.001					
7/12/2017	<0.001							
7/13/2017				<0.001	<0.001	<0.001	<0.001	<0.001
8/8/2017		7E-05 (J)						
10/24/2017	<0.001	<0.001	<0.001					
10/26/2017				<0.001	0.0001 (J)	<0.001	7E-05 (J)	<0.001
2/27/2018		<0.001	<0.001					
3/1/2018				<0.001	<0.001	<0.001		
3/2/2018							<0.001	<0.001
3/8/2018	<0.001							
7/12/2018	<0.001			<0.001	<0.001	<0.001	<0.001	
7/13/2018								<0.001
11/6/2018		<0.001	<0.001					
11/7/2018	<0.001							
11/8/2018				<0.001	<0.001	<0.001	<0.001	<0.001
8/27/2019		7.8E-05 (J)	<0.001					
8/28/2019	<0.001			6.1E-05 (J)	<0.001	8E-05 (J)	8.1E-05 (J)	<0.001
10/15/2019		<0.001	<0.001					
10/16/2019	<0.001							
10/17/2019								<0.001
10/18/2019				<0.001	7.4E-05 (J)	<0.001	0.00015 (J)	
3/2/2020		7.4E-05 (J)	<0.001					
3/4/2020							0.00017 (J)	
3/9/2020	<0.001			<0.001	6.1E-05 (J)	<0.001		4.7E-05 (J)
8/11/2020		0.0003 (J)	<0.001					
8/13/2020	<0.001			<0.001	<0.001	<0.001	4.9E-05 (J)	5.6E-05 (J)
9/22/2020	<0.001	7.8E-05 (J)	<0.001					
9/23/2020							0.00028 (J)	<0.001
9/24/2020				<0.001	0.00014 (J)			
9/25/2020						0.00022 (J)		
3/1/2021		<0.001	<0.001					
3/8/2021							5.4E-05 (J)	
3/11/2021				<0.001	0.00014 (J)	<0.001		0.00025 (J)
3/12/2021	<0.001							
9/8/2021			<0.001					
9/9/2021	<0.001	<0.001						
9/14/2021							<0.001	
9/15/2021					<0.001			
9/16/2021				<0.001				<0.001
9/17/2021						<0.001		

Time Series

Constituent: Lead (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
1/18/2022		<0.001	<0.001					
1/19/2022							<0.001	<0.001
1/20/2022						<0.001		
1/21/2022				<0.001	<0.001			
1/28/2022	<0.001							
9/7/2022		<0.001	<0.001			<0.001	<0.001	
9/8/2022	<0.001			<0.001				<0.001
9/12/2022					<0.001			

Time Series

Constituent: Lead (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-68A	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62	DGWC-121
3/31/2017		<0.001						
5/12/2017	<0.001	0.0001 (J)						
6/16/2017	<0.001	<0.001						
7/13/2017	<0.001	<0.001						
8/8/2017	<0.001							
10/26/2017	<0.001	<0.001						
11/15/2017		9E-05 (J)						
3/2/2018	<0.001	<0.001						
7/13/2018	<0.001	<0.001						
11/8/2018	<0.001	<0.001						
1/30/2019							<0.001	
8/28/2019	<0.001	<0.001						
9/11/2019							<0.001	
10/16/2019	<0.001	<0.001						
10/21/2019							<0.001	
3/9/2020	<0.001	9E-05 (J)						
8/13/2020	<0.001	5.9E-05 (J)					<0.001	
8/17/2020			8.8E-05 (J)					
9/23/2020	0.00035 (J)	0.00017 (J)						
9/24/2020							<0.001	
9/25/2020			0.00021 (J)					
12/9/2020				5.2E-05 (J)				
3/8/2021			0.00018 (J)	<0.001				
3/10/2021	6.7E-05 (J)	0.0001 (J)						
3/12/2021							<0.001	
4/15/2021					0.00014 (J)			
4/16/2021						0.00014 (J)		
9/9/2021							<0.001	
9/13/2021			<0.001					
9/15/2021				<0.001				
9/16/2021	<0.001	<0.001			<0.001			
9/17/2021						<0.001		
1/19/2022				<0.001	<0.001			
1/20/2022							<0.001	
1/21/2022			<0.001					
1/25/2022	<0.001	<0.001						
1/26/2022						<0.001		
6/6/2022								<0.001
9/7/2022	<0.001	<0.001		<0.001	<0.001			
9/8/2022			<0.001				<0.001	<0.001
9/12/2022						<0.001		

Time Series

Constituent: Lithium (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/2/2016							0.0022 (J)	
9/8/2016				<0.03	0.0032 (J)	<0.03		
12/7/2016				<0.03	0.0035 (J)	<0.03		
12/8/2016							<0.03	
3/28/2017	0.0108 (J)	0.0054 (J)	0.0025 (J)					
3/30/2017				0.0029 (J)	0.0035 (J)	<0.03	0.0023 (J)	
3/31/2017								0.0052 (J)
5/11/2017	0.0087 (J)							
5/12/2017			0.0016 (J)					0.0054 (J)
5/15/2017		0.002 (J)						
6/15/2017	0.0088 (J)	<0.03						
6/16/2017			0.0016 (J)					0.0048 (J)
7/11/2017		<0.03	<0.03					
7/12/2017	0.0075 (J)							
7/13/2017				<0.03	0.0032 (J)	<0.03	0.0023 (J)	0.0044 (J)
8/8/2017		<0.03						
10/24/2017	0.0103 (J)	<0.03	<0.03					
10/26/2017				0.0018 (J)	0.0034 (J)	<0.03	0.0021 (J)	0.0043 (J)
2/27/2018		<0.03	0.0013 (J)					
3/1/2018				0.0024 (J)	0.0033 (J)	<0.03		
3/2/2018							0.0023 (J)	0.0047 (J)
3/8/2018	0.011 (J)							
7/12/2018	0.0084 (J)			0.0028 (J)	0.0034 (J)	<0.03	0.0022 (J)	
7/13/2018								0.0041 (J)
11/6/2018		<0.03	<0.03					
11/7/2018	<0.03							
11/8/2018				<0.03	<0.03	<0.03	<0.03	<0.03
8/27/2019		<0.03	0.0014 (J)					
8/28/2019	0.0092 (J)			0.0025 (J)	0.0034 (J)	<0.03	0.0022 (J)	0.0046 (J)
10/15/2019		<0.03	0.0012 (J)					
10/16/2019	0.0094 (J)							
10/17/2019								0.0047 (J)
10/18/2019				0.0026 (J)	0.0032 (J)	<0.03	0.0024 (J)	
3/2/2020		<0.03	0.0011 (J)					
3/4/2020							0.0027 (J)	
3/9/2020	0.0077 (J)			0.0017 (J)	0.0033 (J)	<0.03		0.0048 (J)
8/11/2020		0.0019 (J)	0.0015 (J)					
8/13/2020	0.0085 (J)			0.0023 (J)	0.0028 (J)	<0.03	0.0022 (J)	0.0044 (J)
9/22/2020	0.0089 (J)	<0.03	0.0012 (J)					
9/23/2020							0.0022 (J)	0.0043 (J)
9/24/2020				0.0021 (J)	0.0029 (J)			
9/25/2020						<0.03		
3/1/2021		<0.03	0.0012 (J)					
3/8/2021							0.0022 (J)	
3/11/2021				0.0024 (J)	0.003 (J)	<0.03		0.005 (J)
3/12/2021	0.0083 (J)							
9/8/2021			0.0013 (J)					
9/9/2021	0.0091 (J)	<0.03						
9/14/2021							0.003 (J)	
9/15/2021					0.0029 (J)			
9/16/2021				0.0021 (J)				0.0044 (J)
9/17/2021						<0.03		

Time Series

Constituent: Lithium (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
1/18/2022		<0.03	0.0013 (J)					
1/19/2022							0.0024 (J)	0.0046 (J)
1/20/2022						<0.03		
1/21/2022				0.002 (J)	0.0025 (J)			
1/28/2022	0.0091 (J)							
9/7/2022		<0.03	0.0012 (J)			<0.03	0.0023 (J)	
9/8/2022	0.0083 (J)			0.0019 (J)				0.0048 (J)
9/12/2022					0.003 (J)			

Time Series

Constituent: Lithium (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-68A	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62	DGWC-121
3/31/2017		0.0031 (J)						
5/12/2017	0.0016 (J)	0.003 (J)						
6/16/2017	<0.03	0.0031 (J)						
7/13/2017	<0.03	0.0029 (J)						
8/8/2017	<0.03							
10/26/2017	<0.03	0.0034 (J)						
11/15/2017		0.0034 (J)						
3/2/2018	<0.03	0.0028 (J)						
7/13/2018	<0.03	0.0026 (J)						
11/8/2018	<0.03	<0.03						
1/30/2019							<0.03	
8/28/2019	<0.03	0.0024 (J)						
9/11/2019							0.0078 (J)	
10/16/2019	<0.03	0.0032 (J)						
10/21/2019							0.0078 (J)	
3/9/2020	<0.03	0.0025 (J)						
8/13/2020	<0.03	0.0031 (J)					0.0087 (J)	
8/17/2020			0.0013 (J)					
9/23/2020	<0.03	0.0023 (J)						
9/24/2020							0.0084 (J)	
9/25/2020			0.0027 (J)					
12/9/2020				0.014 (J)				
3/8/2021			0.0024 (J)	0.015 (J)				
3/10/2021	<0.03	0.0023 (J)						
3/12/2021							0.0087 (J)	
4/15/2021					0.0045 (J)			
4/16/2021						0.013 (J)		
9/9/2021							0.0094 (J)	
9/13/2021			0.0022 (J)					
9/15/2021				0.014 (J)				
9/16/2021	0.00082 (J)	0.0023 (J)			0.0038 (J)			
9/17/2021						0.013 (J)		
1/19/2022				0.013 (J)	0.0044 (J)			
1/20/2022							0.0092 (J)	
1/21/2022			0.0021 (J)					
1/25/2022	<0.03	0.0026 (J)						
1/26/2022						0.014 (J)		
6/6/2022								0.013 (J)
9/7/2022	<0.03	0.0025 (J)		0.013 (J)	0.0039 (J)			
9/8/2022			0.0023 (J)				0.0085 (J)	0.01 (J)
9/12/2022						0.0084 (J)		

Time Series

Constituent: Mercury (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/2/2016							4.4E-05 (J)	
9/8/2016				<0.0002	<0.0002	<0.0002		
12/7/2016				<0.0002	<0.0002	<0.0002		
12/8/2016							<0.0002	
3/28/2017	<0.0002	<0.0002	<0.0002					
3/30/2017				6E-05 (J)	7E-05 (J)	5.9E-05 (J)	9E-05 (J)	
3/31/2017								<0.0002
5/11/2017	<0.0002							
5/12/2017			6E-05 (J)					<0.0002
5/15/2017		<0.0002						
6/15/2017	8E-05 (J)	7E-05 (J)						
6/16/2017			7E-05 (J)					7E-05 (J)
7/11/2017		<0.0002	<0.0002					
7/12/2017	<0.0002							
7/13/2017				<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
8/8/2017		<0.0002						
10/24/2017	<0.0002	<0.0002	<0.0002					
10/26/2017				<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
2/27/2018		<0.0002	<0.0002					
3/1/2018				<0.0002	<0.0002	<0.0002		
3/2/2018							<0.0002	<0.0002
3/8/2018	<0.0002							
7/12/2018	<0.0002			4.4E-05 (J)	4E-05 (J)	<0.0002	4.5E-05 (J)	
7/13/2018								<0.0002
11/6/2018		<0.0002	<0.0002					
11/7/2018	<0.0002							
11/8/2018				<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
8/27/2019		<0.0002	<0.0002					
8/28/2019	<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
10/15/2019		<0.0002	<0.0002					
10/16/2019	<0.0002							
10/17/2019								<0.0002
10/18/2019				<0.0002	<0.0002	<0.0002	<0.0002	
3/2/2020		<0.0002	<0.0002					
3/4/2020							<0.0002	
3/9/2020	<0.0002			<0.0002	<0.0002	<0.0002		<0.0002
8/11/2020		<0.0002	<0.0002					
8/13/2020	<0.0002			<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
9/22/2020	<0.0002	<0.0002	<0.0002					
9/23/2020							<0.0002	<0.0002
9/24/2020				9.1E-05 (J)	8.5E-05 (J)			
9/25/2020						<0.0002		
3/1/2021		<0.0002	9E-05 (J)					
3/12/2021	<0.0002							
9/8/2021			9.6E-05 (J)					
9/9/2021	<0.0002	<0.0002						
9/14/2021							<0.0002	
9/15/2021					<0.0002			
9/16/2021				<0.0002				<0.0002
9/17/2021						<0.0002		
1/18/2022		<0.0002	0.00015 (J)					
1/19/2022							<0.0002	<0.0002

Time Series

Constituent: Mercury (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
1/20/2022						<0.0002		
1/21/2022				<0.0002	<0.0002			
1/28/2022	<0.0002							
9/7/2022		<0.0002	0.00013 (J)			<0.0002	<0.0002	
9/8/2022	<0.0002			<0.0002				<0.0002
9/12/2022					<0.0002			

Time Series

Constituent: Mercury (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-68A	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62	DGWC-121
3/31/2017		<0.0002						
5/12/2017	<0.0002	<0.0002						
6/16/2017	7E-05 (J)	7E-05 (J)						
7/13/2017	<0.0002	<0.0002						
8/8/2017	<0.0002							
10/26/2017	<0.0002	<0.0002						
11/15/2017		<0.0002						
3/2/2018	<0.0002	<0.0002						
7/13/2018	<0.0002	<0.0002						
11/8/2018	<0.0002	<0.0002						
1/30/2019							<0.0002	
8/28/2019	<0.0002	<0.0002						
9/11/2019							<0.0002	
10/16/2019	<0.0002	<0.0002						
10/21/2019							<0.0002	
3/9/2020	<0.0002	<0.0002						
8/13/2020	<0.0002	<0.0002					<0.0002	
8/17/2020			0.00011 (J)					
9/23/2020	<0.0002	<0.0002						
9/24/2020							<0.0002	
9/25/2020			<0.0002					
12/9/2020				8.7E-05 (J)				
3/12/2021							<0.0002	
4/15/2021					<0.0002			
4/16/2021						<0.0002		
9/9/2021							<0.0002	
9/13/2021			<0.0002					
9/15/2021				<0.0002				
9/16/2021	<0.0002	<0.0002			<0.0002			
9/17/2021						<0.0002		
1/19/2022				<0.0002	<0.0002			
1/20/2022							<0.0002	
1/21/2022			<0.0002					
1/25/2022	<0.0002	<0.0002						
1/26/2022						<0.0002		
6/6/2022								<0.0002
9/7/2022	<0.0002	<0.0002		0.00014 (J)	<0.0002			
9/8/2022			<0.0002				<0.0002	<0.0002
9/12/2022						<0.0002		

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/2/2016							<0.01	
9/8/2016				<0.01	<0.01	<0.01		
12/7/2016				<0.01	<0.01	<0.01		
12/8/2016							<0.01	
3/28/2017	0.0242	<0.01	0.0009 (J)					
3/30/2017				<0.01	0.0011 (J)	<0.01	<0.01	
3/31/2017								<0.01
5/11/2017	0.0375							
5/12/2017			<0.01					<0.01
5/15/2017		<0.01						
6/15/2017	0.0409	<0.01						
6/16/2017			<0.01					<0.01
7/11/2017		<0.01	<0.01					
7/12/2017	0.0321							
7/13/2017				<0.01	0.0012 (J)	<0.01	<0.01	<0.01
8/8/2017		<0.01						
10/24/2017	0.0227	<0.01	<0.01					
10/26/2017				<0.01	0.0011 (J)	<0.01	<0.01	<0.01
2/27/2018		<0.01	<0.01					
3/1/2018				<0.01	<0.01	<0.01		
3/2/2018							<0.01	<0.01
3/8/2018	0.035							
7/12/2018	0.034			<0.01	<0.01	<0.01	<0.01	
7/13/2018								<0.01
11/6/2018		<0.01	<0.01					
11/7/2018	0.029							
11/8/2018				<0.01	<0.01	<0.01	<0.01	<0.01
8/27/2019		<0.01	<0.01					
8/28/2019	0.031			<0.01	<0.01	<0.01	<0.01	<0.01
10/15/2019		<0.01	<0.01					
10/16/2019	0.037							
10/17/2019								<0.01
10/18/2019				<0.01	<0.01	<0.01	<0.01	
3/2/2020		<0.01	<0.01					
3/4/2020							<0.01	
3/9/2020	0.026			<0.01	0.001 (J)	<0.01		<0.01
8/11/2020		<0.01	<0.01					
8/13/2020	0.012			<0.01	0.00098 (J)	<0.01	<0.01	<0.01
9/22/2020	0.039	<0.01	<0.01					
9/23/2020							<0.01	<0.01
9/24/2020				<0.01	0.001 (J)			
9/25/2020						<0.01		
3/1/2021		<0.01	<0.01					
3/8/2021							<0.01	
3/11/2021				<0.01	0.00092 (J)	<0.01		<0.01
3/12/2021	0.018							
9/8/2021			<0.01					
9/9/2021	0.025	<0.01						
9/14/2021							<0.01	
9/15/2021					0.00099 (J)			
9/16/2021				<0.01				<0.01
9/17/2021						<0.01		

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
1/18/2022		<0.01	<0.01					
1/19/2022							<0.01	<0.01
1/20/2022						<0.01		
1/21/2022				<0.01	0.0013 (J)			
1/28/2022	0.026							
9/7/2022		<0.01	<0.01			<0.01	<0.01	
9/8/2022	0.027			<0.01				<0.01
9/12/2022					0.0012 (J)			

Time Series

Constituent: Molybdenum (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-68A	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62	DGWC-121
3/31/2017		0.0124						
5/12/2017	0.275	0.0117						
6/16/2017	0.19	0.0087 (J)						
7/13/2017	0.211	0.0053 (J)						
8/8/2017	0.207							
10/26/2017	0.226	0.0244						
11/15/2017		0.0237						
3/2/2018	0.215	0.0072 (J)						
7/13/2018	0.22	0.007 (J)						
11/8/2018	0.2	<0.01 (J)						
1/30/2019							<0.01	
8/28/2019	0.21	0.0059 (J)						
9/11/2019							<0.01	
10/16/2019	0.22	0.01						
10/21/2019							<0.01	
3/9/2020	0.19	0.0062 (J)						
8/13/2020	0.19	0.011					<0.01	
8/17/2020			<0.01					
9/23/2020	0.2	0.0056 (J)						
9/24/2020							<0.01	
9/25/2020			<0.01					
12/9/2020				<0.01				
3/8/2021			<0.01	0.0011 (J)				
3/10/2021	0.2	0.0056 (J)						
3/12/2021							<0.01	
3/26/2021						0.025		
4/15/2021					0.037			
4/16/2021						0.078		
9/9/2021							<0.01	
9/13/2021			<0.01					
9/15/2021				<0.01				
9/16/2021	0.18	0.009 (J)			0.032			
9/17/2021						0.074		
1/19/2022				<0.01	0.032			
1/20/2022							<0.01	
1/21/2022			<0.01					
1/25/2022	0.23	0.0057 (J)						
1/26/2022						0.074		
6/6/2022								0.00093 (J)
9/7/2022	0.2	0.0067 (J)		<0.01	0.028			
9/8/2022			<0.01				<0.01	<0.01
9/12/2022						0.052		

Time Series

Constituent: pH, Field (SU) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/2/2016							4.77	
9/8/2016				6.32	6.01	6.47		
12/7/2016				6.32	6.07	6.43		
12/8/2016							4.77	
3/28/2017	6.29		5.94					
3/30/2017				6.22	5.97	6.42	4.84	
3/31/2017								6.25
5/11/2017	6.6							
5/12/2017			5.46					6.23
5/15/2017		5.72						
6/15/2017	6.41	5.74						
6/16/2017			5.81					6.22
7/11/2017		5.62	5.74					
7/12/2017	5.91							
7/13/2017				6.3	6.11	6.47	4.85	6.15
8/8/2017		5.6						
10/24/2017	5.51	5.71	5.86					
10/26/2017					6.06	6.49	4.86	6.64
11/15/2017	6.5		5.77					
2/27/2018		5.5	5.66					
3/1/2018				6.28	6.05	6.37		
3/2/2018							4.67	6.18
3/8/2018	6.18							
7/10/2018		5.44	5.63					
7/12/2018	6.33			6.43	6.05	6.45	4.63	
7/13/2018								6.19
11/6/2018		5.71	5.79					
11/7/2018	6.22							
11/8/2018				6.36	6.07	6.49	4.79	6.23
3/12/2019		5.52	5.74					
3/13/2019	6			6.26	6.05	6.28	4.6	6.19
8/27/2019		5.53	5.87					
8/28/2019	6.04			6.27	5.98	6.41	4.68	6.22
10/15/2019		5.61	5.88					
10/16/2019	6.69							
10/17/2019								6.14
10/18/2019				6.26	6	6.35	4.71	
3/2/2020		5.54	5.77					
3/4/2020							4.64	
3/9/2020	6.41			6.34	6.12	6.37		6.23
8/11/2020		5.86	5.96					
8/13/2020	6.17			6.34	6.05	6.39	4.65	6.28
9/22/2020	6.43	6.01	6.06					
9/23/2020							4.78	6.23
9/24/2020				6.3	6.05			
9/25/2020						6.38		
3/1/2021		5.43	5.8					
3/8/2021							4.79	
3/11/2021				6.49	6.22	6.66		6.28
3/12/2021	6.38							
9/8/2021			5.76					
9/9/2021	6.41	5.5						

Time Series

Constituent: pH, Field (SU) Analysis Run 11/18/2022 12:02 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/14/2021							4.67	
9/15/2021					6.08			
9/16/2021				6.33				6.2
9/17/2021						6.49		
1/18/2022		5.5	5.51					
1/19/2022							4.66	6.21
1/20/2022						6.52		
1/21/2022				6.31	6.08			
1/28/2022	6.35							
9/7/2022		5.6	5.65			6.43	4.54	
9/8/2022	6.32			6.3				6.21
9/9/2022				6.3				
9/12/2022					6.05			

Time Series

Constituent: pH, Field (SU) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-68A	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62	DGWC-121
3/31/2017		6.26						
4/12/2017		6.19						
5/12/2017	6.63	6.2						
6/16/2017	6.63	6.22						
7/13/2017	6.84	6.35						
8/8/2017	6.57							
10/26/2017	7.01	6.69						
11/15/2017		6.22						
3/2/2018	6.58	6.1						
7/13/2018	6.62	5.95						
11/8/2018	6.5	6						
3/13/2019	6.57	6.08						
8/28/2019	6.6	6.09						
9/11/2019							6.27	
10/16/2019	6.6	6.19						
10/21/2019							6.24	
3/9/2020	6.6	6.12						
8/3/2020			4.93					
8/13/2020	6.63	6.26					6.4	
8/17/2020			5.02					
9/23/2020	6.6	6.08						
9/24/2020							6.55	
9/25/2020			5.53					
12/9/2020				6.48				
3/8/2021			5.32	6.37				
3/10/2021	6.74	6.13						
3/12/2021							6.34	
3/26/2021						8.42		
4/15/2021					6.83			
4/16/2021						7.77		
9/9/2021							6.31	
9/13/2021			5.27					
9/15/2021				6.38				
9/16/2021	6.79 (o)	6.16			6.74			
9/17/2021						7.97		
10/27/2021	6.56							
1/19/2022				6.62	6.74			
1/20/2022							6.32	
1/21/2022			5.23					
1/25/2022	6.53	6.02						
1/26/2022						7.66		
6/6/2022								6.33
9/7/2022	6.62	6.2		6.44	6.72			
9/8/2022			5.24				6.22	6.32
9/9/2022							6.22 (D)	
9/12/2022						7.95		

Time Series

Constituent: Selenium (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/2/2016							0.0019 (J)	
9/8/2016				<0.005	<0.005	<0.005		
12/7/2016				<0.005	<0.005	<0.005		
12/8/2016							0.0022 (J)	
3/28/2017	<0.005	<0.005	<0.005					
3/30/2017				<0.005	<0.005	<0.005	0.0023 (J)	
3/31/2017								<0.005
5/11/2017	<0.005							
5/12/2017			<0.005					<0.005
5/15/2017		<0.005						
6/15/2017	<0.005	<0.005						
6/16/2017			<0.005					<0.005
7/11/2017		<0.005	<0.005					
7/12/2017	<0.005							
7/13/2017				<0.005	<0.005	<0.005	0.0025 (J)	<0.005
8/8/2017		<0.005						
10/24/2017	<0.005	<0.005	<0.005					
10/26/2017				<0.005	<0.005	<0.005	0.0036 (J)	<0.005
2/27/2018		<0.005	<0.005					
3/1/2018				<0.005	<0.005	<0.005		
3/2/2018							<0.005	<0.005
3/8/2018	<0.005							
7/12/2018	<0.005			<0.005	<0.005	<0.005	<0.005	
7/13/2018								<0.005
11/6/2018		<0.005	<0.005					
11/7/2018	<0.005							
11/8/2018				<0.005	<0.005	<0.005	<0.01 (J)	<0.005
8/27/2019		<0.005	<0.005					
8/28/2019	<0.005			<0.005	<0.005	<0.005	0.0017 (J)	<0.005
10/15/2019		<0.005	<0.005					
10/16/2019	<0.005							
10/17/2019								<0.005
10/18/2019				<0.005	<0.005	<0.005	0.0027 (J)	
3/2/2020		<0.005	<0.005					
3/4/2020							0.0049 (J)	
3/9/2020	<0.005			<0.005	<0.005	<0.005		<0.005
8/11/2020		<0.005	<0.005					
8/13/2020	<0.005			<0.005	<0.005	<0.005	0.0018 (J)	<0.005
9/22/2020	<0.005	<0.005	<0.005					
9/23/2020							0.0067 (J)	<0.005
9/24/2020				<0.005	<0.005			
9/25/2020						<0.005		
3/1/2021		<0.005	<0.005					
3/8/2021							0.0023 (J)	
3/11/2021				<0.005	0.0019 (J)	<0.005		0.0027 (J)
3/12/2021	<0.005							
9/8/2021			<0.005					
9/9/2021	<0.005	<0.005						
9/14/2021							0.0015 (J)	
9/15/2021					<0.005			
9/16/2021				<0.005				<0.005
9/17/2021						<0.005		

Time Series

Constituent: Selenium (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
1/18/2022		<0.005	<0.005					
1/19/2022							<0.005	<0.005
1/20/2022						<0.005		
1/21/2022				<0.005	<0.005			
1/28/2022	<0.005							
9/7/2022		<0.005	<0.005			<0.005	0.0018 (J)	
9/8/2022	<0.005			<0.005				<0.005
9/12/2022					<0.005			

Time Series

Constituent: Selenium (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-68A	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62	DGWC-121
3/31/2017		<0.005						
5/12/2017	<0.005	<0.005						
6/16/2017	<0.005	<0.005						
7/13/2017	<0.005	<0.005						
8/8/2017	<0.005							
10/26/2017	<0.005	<0.005						
11/15/2017		<0.005						
3/2/2018	<0.005	<0.005						
7/13/2018	<0.005	<0.005						
11/8/2018	<0.005	<0.005						
1/30/2019							<0.005	
8/28/2019	<0.005	<0.005						
9/11/2019							<0.005	
10/16/2019	<0.005	<0.005						
10/21/2019							<0.005	
3/9/2020	<0.005	<0.005						
8/13/2020	<0.005	<0.005					<0.005	
8/17/2020			<0.005					
9/23/2020	<0.005	<0.005						
9/24/2020							<0.005	
9/25/2020			<0.005					
12/9/2020				<0.005				
3/8/2021			0.0019 (J)	<0.005				
3/10/2021	0.0017 (J)	<0.005						
3/12/2021							<0.005	
4/15/2021					<0.005			
4/16/2021						<0.005		
9/9/2021							<0.005	
9/13/2021			<0.005					
9/15/2021				<0.005				
9/16/2021	<0.005	<0.005			<0.005			
9/17/2021						<0.005		
1/19/2022				<0.005	<0.005			
1/20/2022							<0.005	
1/21/2022			<0.005					
1/25/2022	<0.005	<0.005						
1/26/2022						<0.005		
6/6/2022								<0.005
9/7/2022	<0.005	<0.005		<0.005	<0.005			
9/8/2022			<0.005				<0.005	<0.005
9/12/2022						<0.005		

Time Series

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/2/2016							230	
9/8/2016				97	270	280		
12/7/2016				100	250	250		
12/8/2016							270	
3/28/2017	49	2.7	17					
3/30/2017				110	290	310	240	
3/31/2017								110
5/11/2017	21							
5/12/2017			17					100
5/15/2017		1						
6/15/2017	16	0.86 (J)						
6/16/2017			11					100
7/11/2017		1.4	11					
7/12/2017	10							
7/13/2017				200 (O)	270	220	220	110
8/8/2017		1.5						
10/24/2017	15	1.4	9.6					
10/26/2017				97	260	210	220	100
11/15/2017	3.8		7.8					
2/27/2018		0.54 (J)	7.4					
3/1/2018				94.6	242	166		
3/2/2018							219	98.5
3/8/2018	9.7							
7/12/2018	8			89.2	256	169	222	
7/13/2018								136
11/6/2018		<1 (J)	7.3					
11/7/2018	12.8							
11/8/2018				102	291	200	273	118
3/12/2019		0.35 (J)	7					
3/13/2019	23.7			92.2	300	265	445	233
10/15/2019		0.16 (J)	7.4					
10/16/2019	15.1							
10/17/2019								99.4
10/18/2019				76.4	239	182	205	
3/2/2020		<1	8.5					
3/4/2020							177	
3/9/2020	9.5			90.3	244	171		100
9/22/2020	13.5	<1	6.5					
9/23/2020							190	99.8
9/24/2020				84.1	240			
9/25/2020						153		
3/1/2021		<1	5.2					
3/8/2021							191	
3/11/2021				81.9	154	123		76.7
3/12/2021	8.8							
9/8/2021			6.1					
9/9/2021	11.9	<1						
9/14/2021							186	
9/15/2021					219			
9/16/2021				95				101
9/17/2021						156		
1/18/2022		<1	6.3					

Time Series

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
1/19/2022							177	97.2
1/20/2022						123		
1/21/2022				89.8	188			
1/28/2022	13.1							
9/7/2022		<1	7			146	203	
9/8/2022	12			96.6				117
9/12/2022					234			

Time Series

Constituent: Sulfate as SO4 (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-68A	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62	DGWC-121
3/31/2017		21						
5/12/2017	50	17						
6/16/2017	47	20						
7/13/2017	49	17						
8/8/2017	48							
10/26/2017	48	31						
11/15/2017		29						
3/2/2018	44.7	10.1						
7/13/2018	43.3	8.6						
11/8/2018	43.5	9.7						
1/30/2019							74.7	
3/13/2019	44.1	8.4						
10/16/2019	32.1	13.3						
10/21/2019							55.3	
3/9/2020	37.4	7.6						
9/23/2020	38.7	5.9						
9/24/2020							50.6	
9/25/2020			385					
12/9/2020				220				
3/8/2021			388	228				
3/10/2021	38.4	6.4						
3/12/2021							46.5	
4/15/2021					95.6			
4/16/2021						46.5		
9/9/2021							49.2	
9/13/2021			351					
9/15/2021				240				
9/16/2021	22.3	17.9			21.2			
9/17/2021						89.1		
1/19/2022				220	18.4			
1/20/2022							50.3	
1/21/2022			344					
1/25/2022	36.3	7.1						
1/26/2022						55.5		
6/6/2022								83.9
9/7/2022	36.5	11.6		263	18.2			
9/8/2022			399				45.8	84.8
9/12/2022						35		

Time Series

Constituent: Thallium (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/2/2016							<0.001	
9/8/2016				<0.001	<0.001	<0.001		
12/7/2016				<0.001	<0.001	<0.001		
12/8/2016							<0.001	
3/28/2017	<0.001	<0.001	6E-05 (J)					
3/30/2017				<0.001	0.0001 (J)	0.0001 (J)	6E-05 (J)	
3/31/2017								<0.001
5/11/2017	<0.001							
5/12/2017			<0.001					<0.001
5/15/2017		<0.001						
6/15/2017	<0.001	<0.001						
6/16/2017			<0.001					<0.001
7/11/2017		<0.001	<0.001					
7/12/2017	<0.001							
7/13/2017				<0.001	0.0001 (J)	9E-05 (J)	6E-05 (J)	<0.001
8/8/2017		<0.001						
10/24/2017	<0.001	<0.001	<0.001					
10/26/2017				<0.001	0.0001 (J)	0.0001 (J)	7E-05 (J)	<0.001
2/27/2018		<0.001	<0.001					
3/1/2018				<0.001	<0.001	<0.001		
3/2/2018							<0.001	<0.001
3/8/2018	<0.001							
7/12/2018	<0.001			<0.001	<0.001	<0.001	<0.001	
7/13/2018								<0.001
11/6/2018		<0.001	<0.001					
11/7/2018	<0.001							
11/8/2018				<0.001	<0.001	<0.001	<0.001	<0.001
8/27/2019		<0.001	<0.001					
8/28/2019	<0.001			<0.001	0.00014 (J)	6.9E-05 (J)	7E-05 (J)	<0.001
10/15/2019		<0.001	<0.001					
10/16/2019	<0.001							
10/17/2019								<0.001
10/18/2019				<0.001	0.0001 (J)	<0.001	<0.001	
3/2/2020		7.8E-05 (J)	<0.001					
3/4/2020							6.8E-05 (J)	
3/9/2020	<0.001			<0.001	0.00016 (J)	7.1E-05 (J)		<0.001
8/11/2020		<0.001	<0.001					
8/13/2020	<0.001			<0.001	0.00016 (J)	<0.001	<0.001	<0.001
9/22/2020	<0.001	<0.001	<0.001					
9/23/2020							<0.001	<0.001
9/24/2020				<0.001	0.00015 (J)			
9/25/2020						<0.001		
3/1/2021		<0.001	<0.001					
3/8/2021							<0.001	
3/11/2021				<0.001	<0.001	<0.001		<0.001
3/12/2021	<0.001							
9/8/2021			<0.001					
9/9/2021	<0.001	<0.001						
9/14/2021							<0.001	
9/15/2021					<0.001			
9/16/2021				<0.001				<0.001
9/17/2021						<0.001		

Time Series

Constituent: Thallium (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
1/18/2022		<0.001	<0.001					
1/19/2022							<0.001	<0.001
1/20/2022						<0.001		
1/21/2022				<0.001	<0.001			
1/28/2022	<0.001							
9/7/2022		<0.001	<0.001			<0.001	<0.001	
9/8/2022	<0.001			<0.001				<0.001
9/12/2022					<0.001			

Time Series

Constituent: Thallium (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-68A	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62	DGWC-121
3/31/2017		<0.001						
5/12/2017	<0.001	<0.001						
6/16/2017	<0.001	<0.001						
7/13/2017	<0.001	<0.001						
8/8/2017	<0.001							
10/26/2017	<0.001	<0.001						
11/15/2017		<0.001						
3/2/2018	<0.001	<0.001						
7/13/2018	0.00015 (J)	<0.001						
11/8/2018	<0.001	<0.001						
1/30/2019							<0.001	
8/28/2019	<0.001	<0.001						
9/11/2019							<0.001	
10/16/2019	<0.001	<0.001						
10/21/2019							<0.001	
3/9/2020	<0.001	<0.001						
8/13/2020	<0.001	<0.001					<0.001	
8/17/2020			<0.001					
9/23/2020	<0.001	<0.001						
9/24/2020							<0.001	
9/25/2020			<0.001					
12/9/2020				<0.001				
3/8/2021			<0.001	<0.001				
3/10/2021	<0.001	<0.001						
3/12/2021							<0.001	
4/15/2021					<0.001			
4/16/2021						<0.001		
9/9/2021							<0.001	
9/13/2021			<0.001					
9/15/2021				<0.001				
9/16/2021	<0.001	<0.001			<0.001			
9/17/2021						<0.001		
1/19/2022				<0.001	<0.001			
1/20/2022							<0.001	
1/21/2022			<0.001					
1/25/2022	<0.001	<0.001						
1/26/2022						<0.001		
6/6/2022								<0.001
9/7/2022	<0.001	<0.001		<0.001	<0.001			
9/8/2022			<0.001				<0.001	<0.001
9/12/2022						<0.001		

Time Series

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
9/2/2016							583 (O)	
9/8/2016				279	437	522		
12/7/2016				300	478	565		
12/8/2016							319	
3/28/2017	202	39	90					
3/30/2017				273	448	496	344	
3/31/2017								270
5/11/2017	241							
5/12/2017			92					287
5/15/2017		88						
6/15/2017	251	65						
6/16/2017			100					309
7/11/2017		25	59					
7/12/2017	218							
7/13/2017				312	504	508	386	275
8/8/2017		53						
10/24/2017	671 (O)	49	117					
10/26/2017				340	554	532	373	319
11/15/2017	241		90					
2/27/2018		43	79					
3/1/2018				311	492	440		
3/2/2018							359	264
3/8/2018	213							
7/12/2018	198			290	478	463	365	
7/13/2018								297
11/6/2018		65	85					
11/7/2018	200							
11/8/2018				295	507	485	399	295
3/12/2019		43	74					
3/13/2019	201			286	487	526	351	278
10/15/2019		70	89					
10/16/2019	126							
10/17/2019								281
10/18/2019				269	494	489	360	
3/2/2020		52	67					
3/4/2020							400	
3/9/2020	171			357	554	508		209
9/22/2020	142	46	74					
9/23/2020							357	296
9/24/2020				280	489			
9/25/2020						460		
3/1/2021		25	62					
3/8/2021							346	
3/11/2021				255	463	440		265
3/12/2021	124							
9/8/2021			75					
9/9/2021	131	53						
9/14/2021							347	
9/15/2021					474			
9/16/2021				278				282
9/17/2021						446		
1/18/2022		54	76					

Time Series

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWA-53 (bg)	DGWA-70A (bg)	DGWA-71 (bg)	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67
1/19/2022							336	272
1/20/2022						416		
1/21/2022				316	482			
1/28/2022	155							
9/7/2022		34	82			449	339	
9/8/2022	129			300				252
9/12/2022					468			

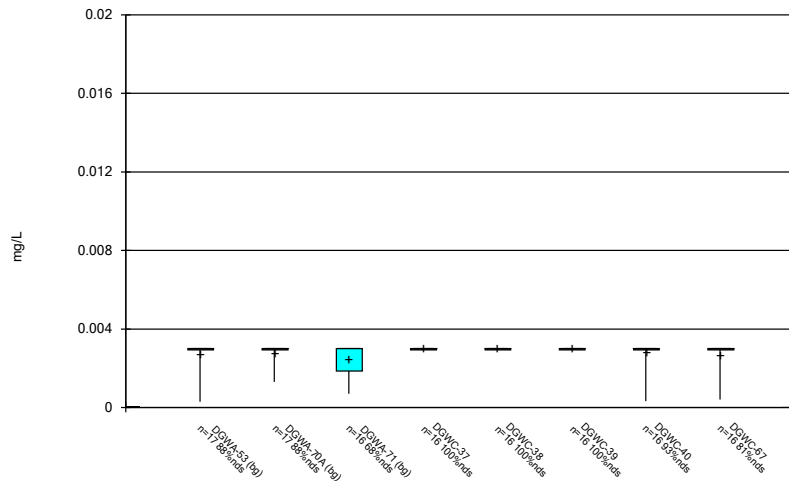
Time Series

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 11/18/2022 12:02 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-68A	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62	DGWC-121
3/31/2017		138						
5/12/2017	300	243						
6/16/2017	271	155						
7/13/2017	246	122						
8/8/2017	278							
10/26/2017	287	234						
11/15/2017		188						
3/2/2018	252	73						
7/13/2018	275	95						
11/8/2018	277	112						
1/30/2019							287	
3/13/2019	267	95						
10/16/2019	218	108						
10/21/2019							180	
3/9/2020	188	115						
9/23/2020	251	102						
9/24/2020							170	
9/25/2020			724					
12/9/2020				474				
3/8/2021			660	477				
3/10/2021	232	78						
3/12/2021							172	
4/15/2021					289			
4/16/2021						229		
9/9/2021							174	
9/13/2021			636					
9/15/2021				455				
9/16/2021	259	113			162			
9/17/2021						329		
1/19/2022				453	167			
1/20/2022							187	
1/21/2022			638					
1/25/2022	259	84						
1/26/2022						234		
6/6/2022								270
9/7/2022	256	102		479	153			
9/8/2022			606				160	261
9/12/2022						197		

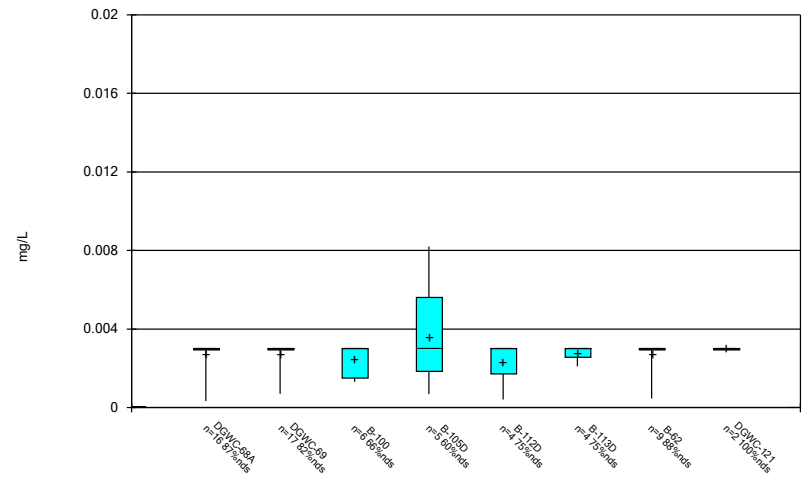
FIGURE B.

Box & Whiskers Plot



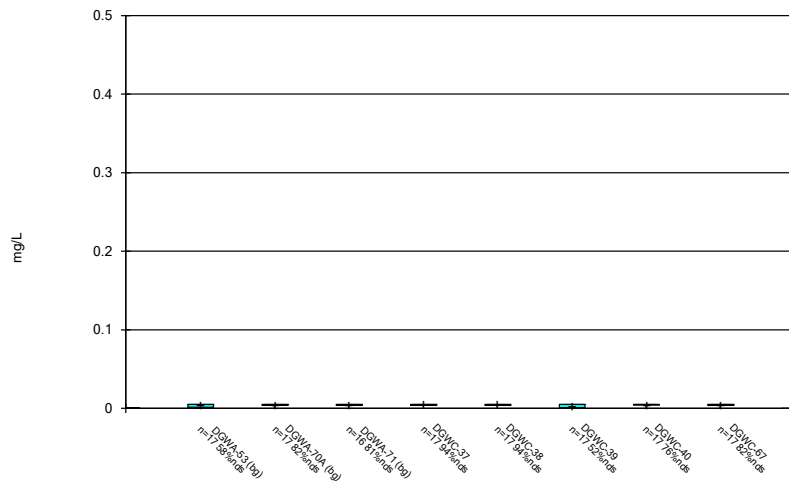
Constituent: Antimony Analysis Run 11/18/2022 12:02 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



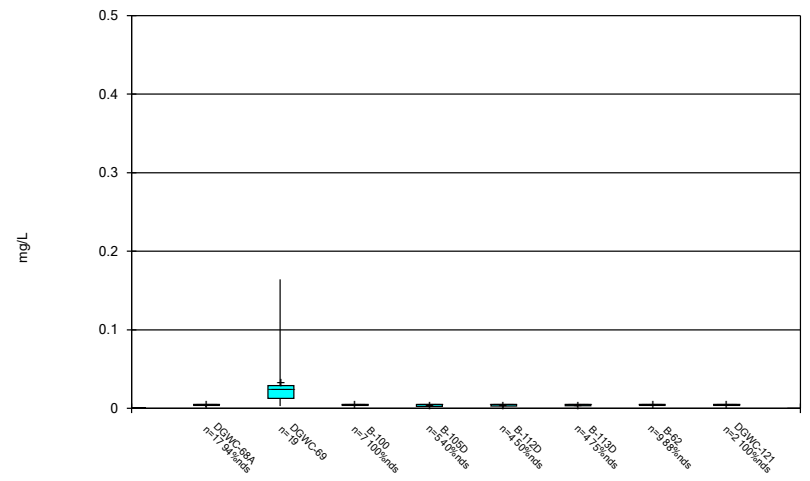
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 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



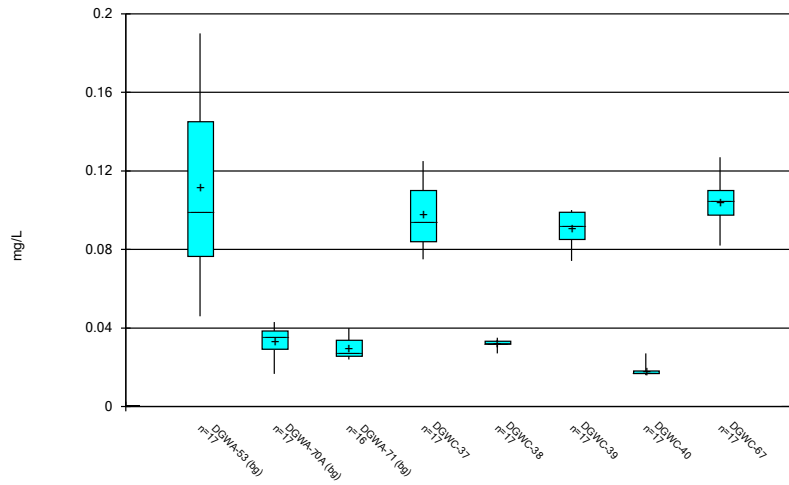
Constituent: Arsenic Analysis Run 11/18/2022 12:02 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



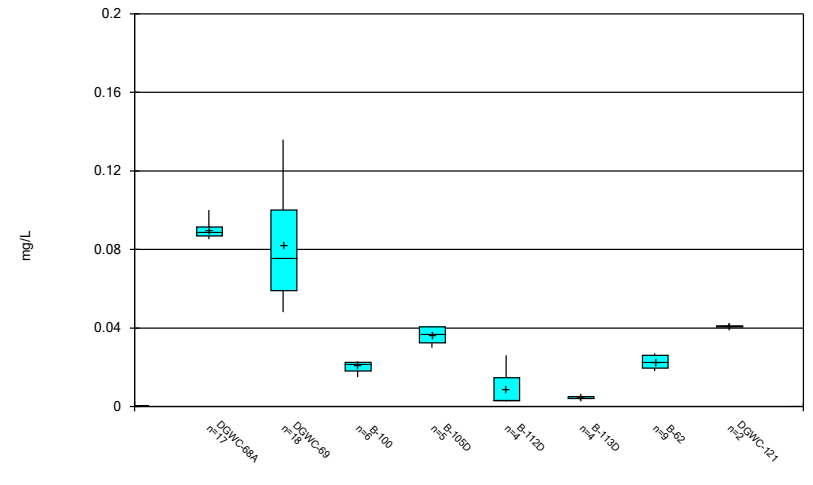
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 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



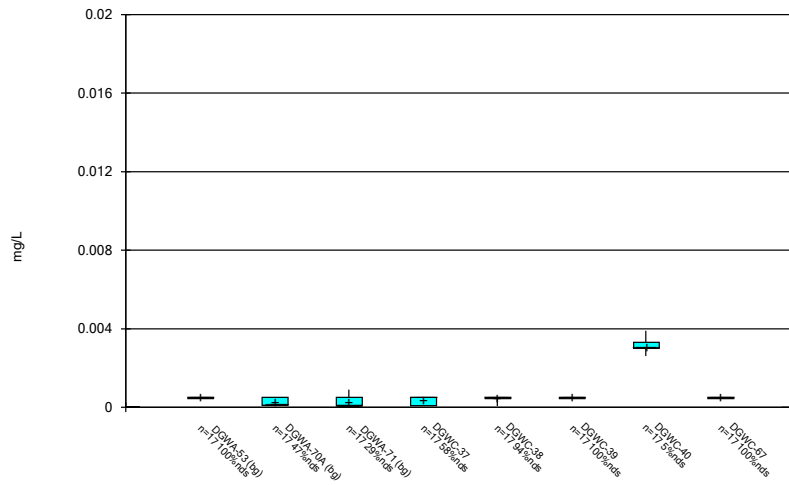
Constituent: Barium Analysis Run 11/18/2022 12:02 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



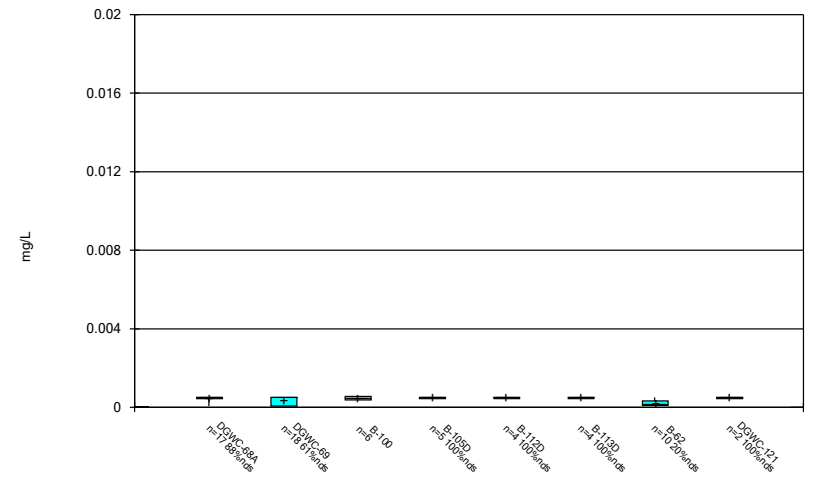
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 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



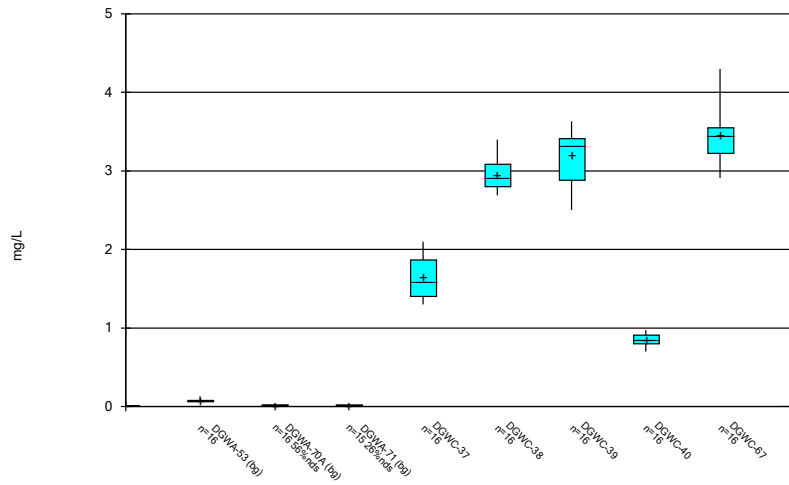
Constituent: Beryllium Analysis Run 11/18/2022 12:02 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



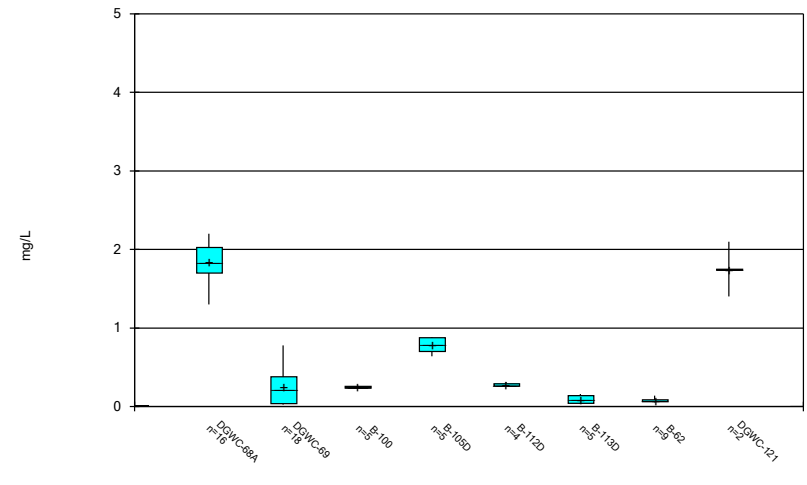
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 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



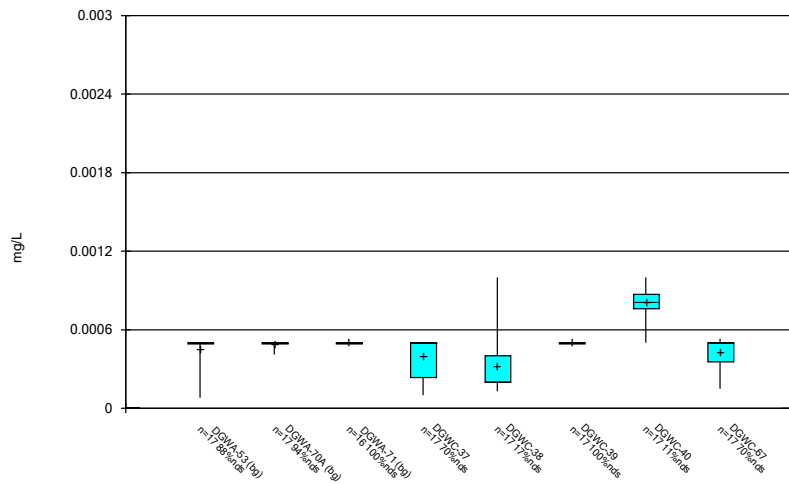
Constituent: Boron, total Analysis Run 11/18/2022 12:02 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



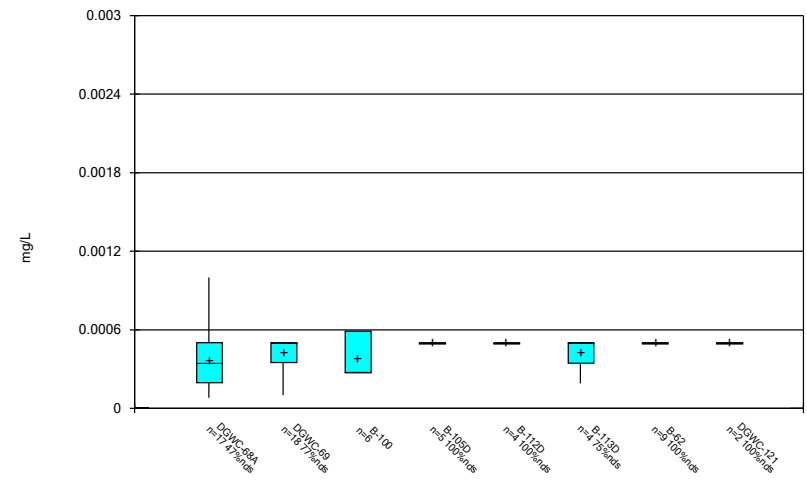
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 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



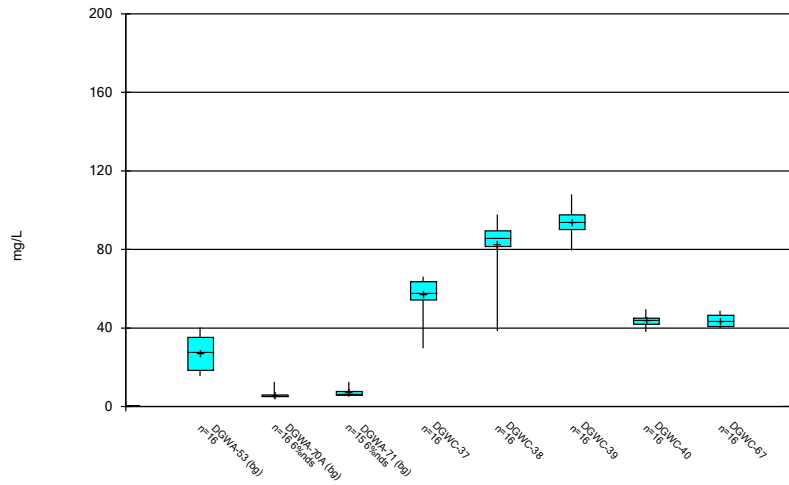
Constituent: Cadmium Analysis Run 11/18/2022 12:02 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



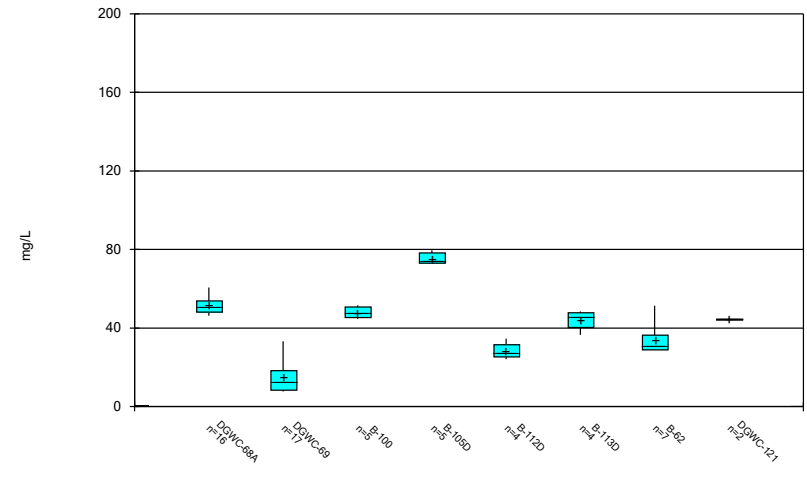
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 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



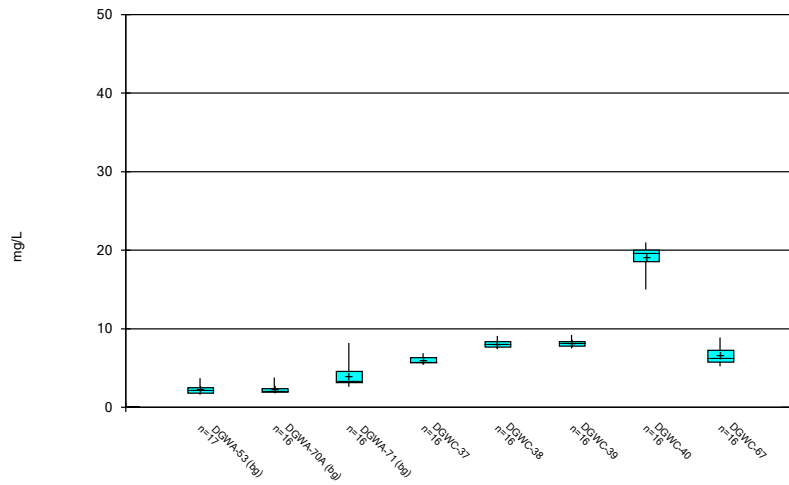
Constituent: Calcium, total Analysis Run 11/18/2022 12:02 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



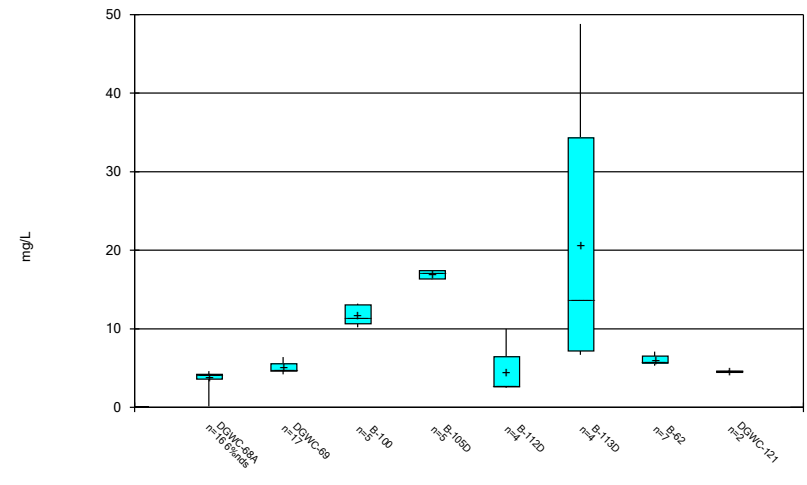
Constituent: Calcium, total Analysis Run 11/18/2022 12:02 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



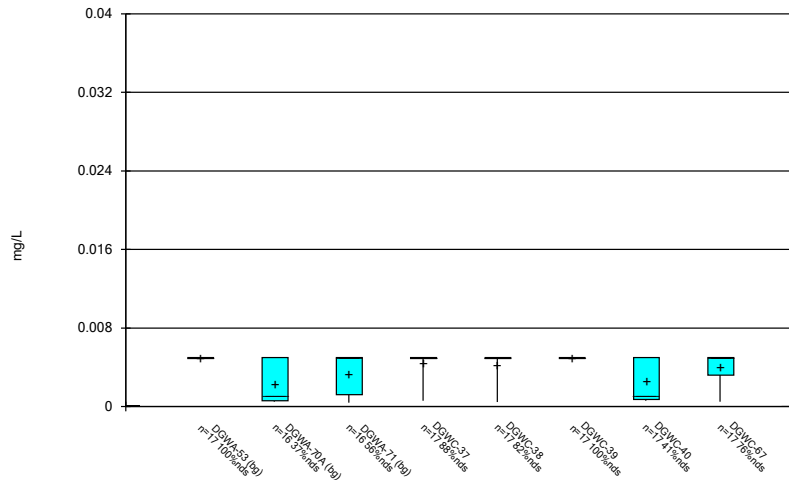
Constituent: Chloride, Total Analysis Run 11/18/2022 12:02 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



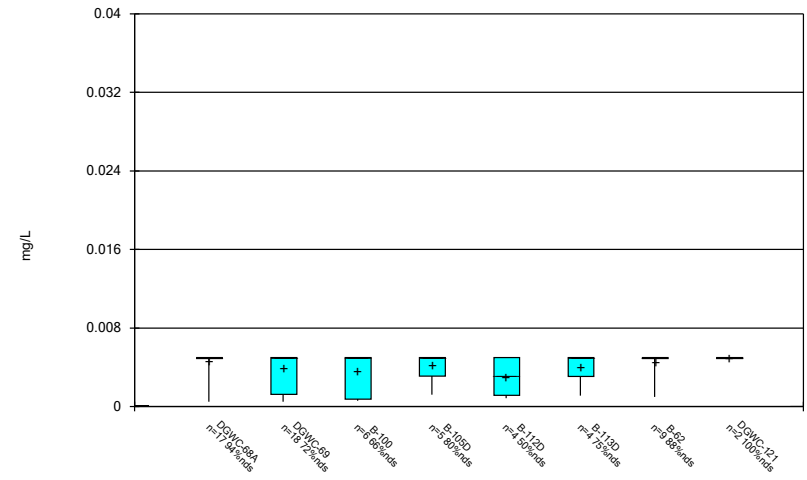
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 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



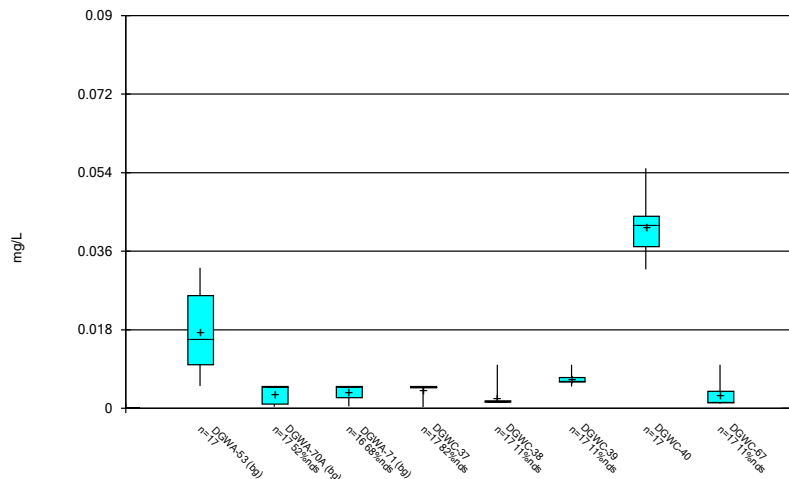
Constituent: Chromium Analysis Run 11/18/2022 12:02 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



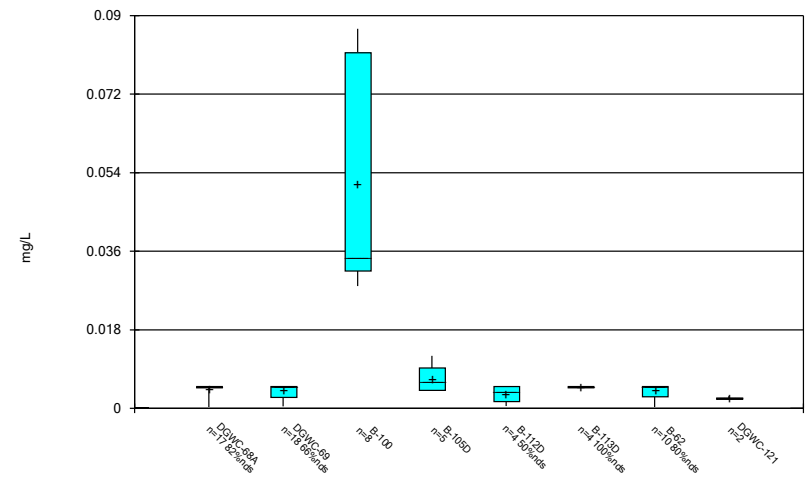
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 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



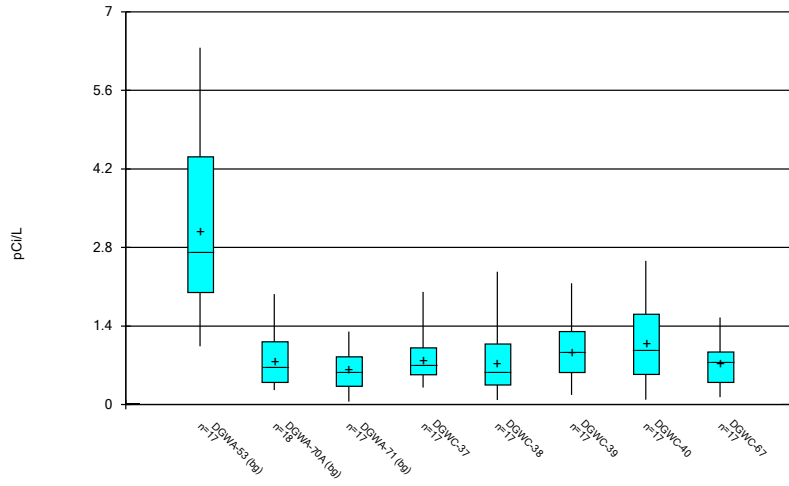
Constituent: Cobalt Analysis Run 11/18/2022 12:03 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



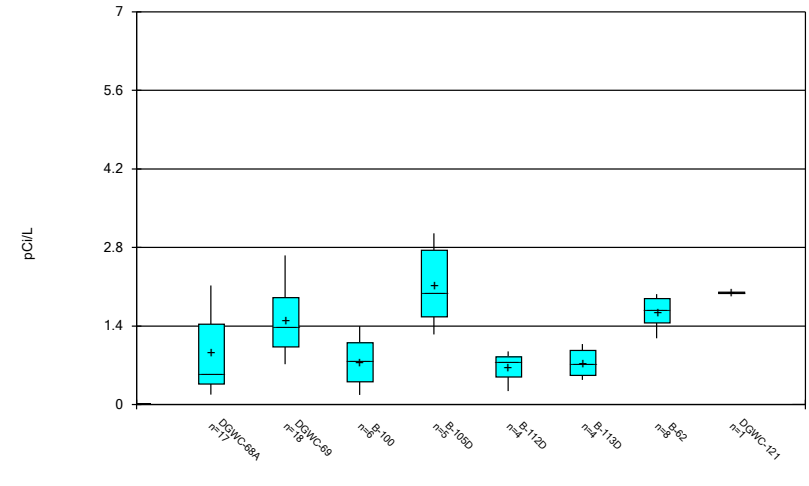
Constituent: Cobalt Analysis Run 11/18/2022 12:03 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



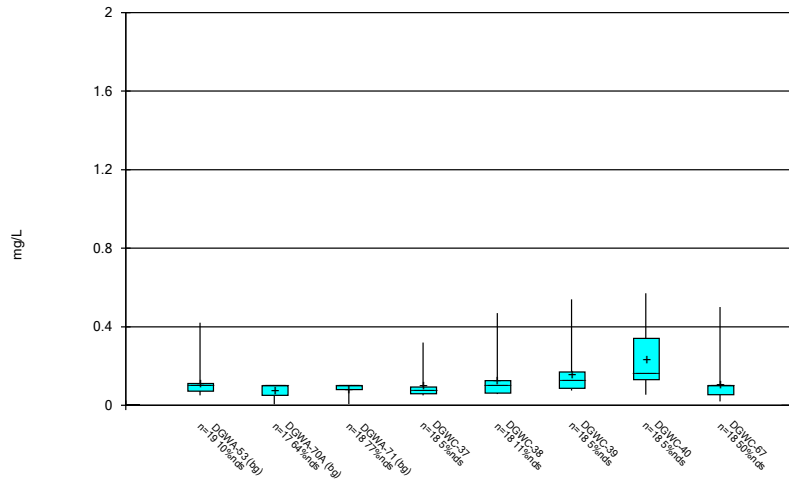
Constituent: Combined Radium 226 + 228 Analysis Run 11/18/2022 12:03 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



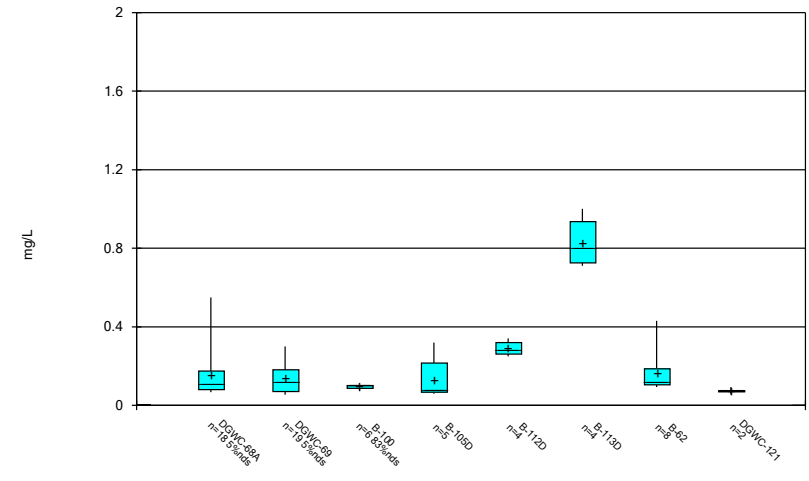
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Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



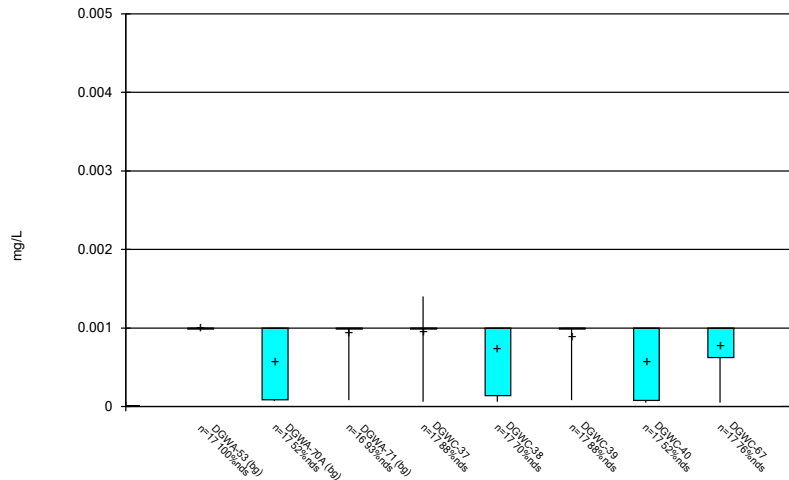
Constituent: Fluoride, total Analysis Run 11/18/2022 12:03 PM View: AP 1
Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



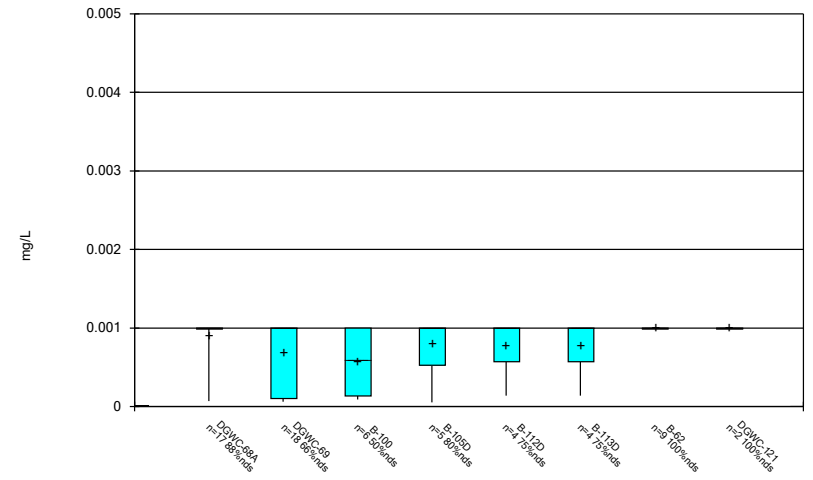
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Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



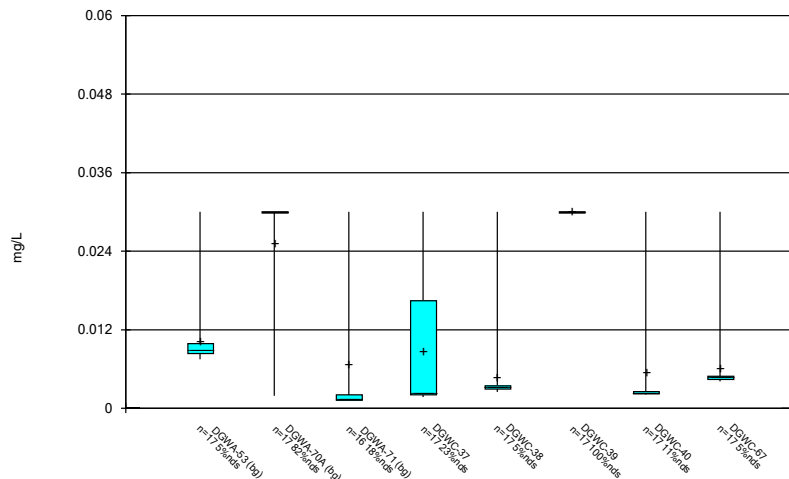
Constituent: Lead Analysis Run 11/18/2022 12:03 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



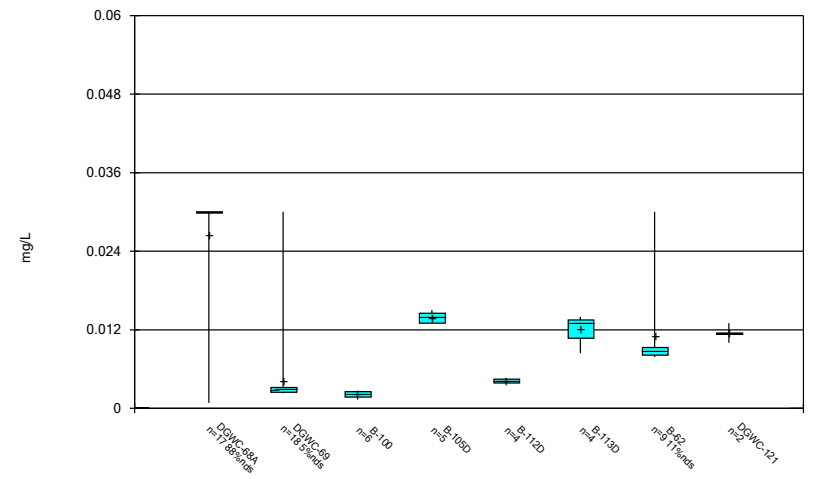
Constituent: Lead Analysis Run 11/18/2022 12:03 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



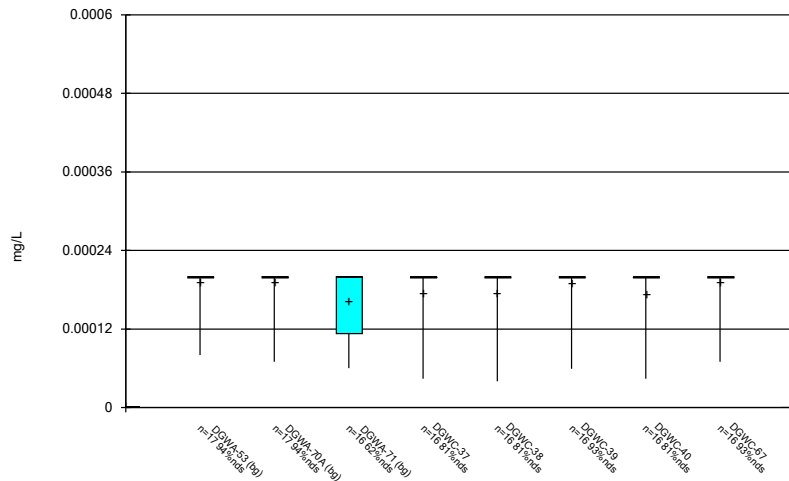
Constituent: Lithium Analysis Run 11/18/2022 12:03 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



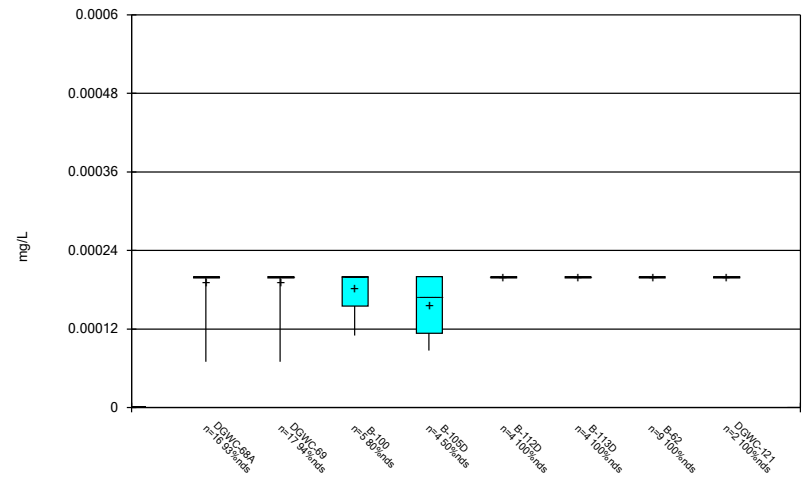
Constituent: Lithium Analysis Run 11/18/2022 12:03 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



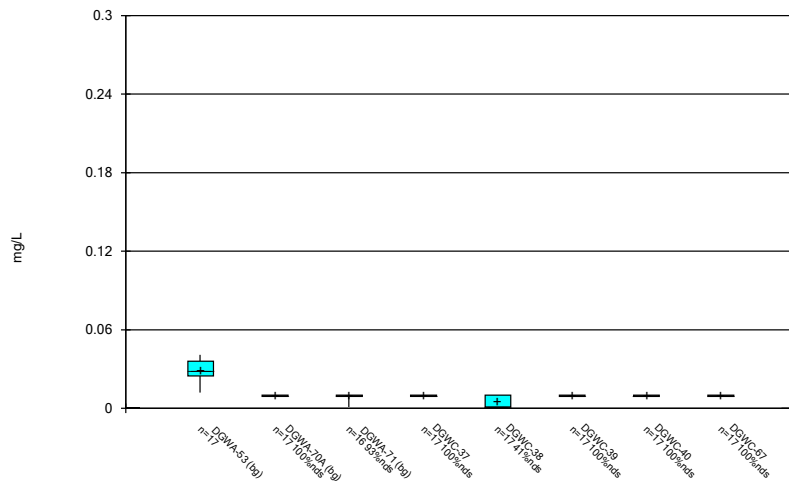
Constituent: Mercury Analysis Run 11/18/2022 12:03 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



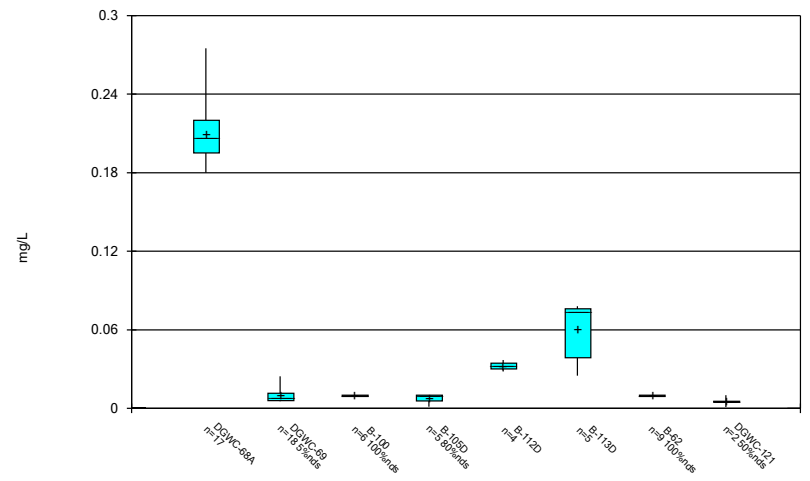
Constituent: Mercury Analysis Run 11/18/2022 12:03 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



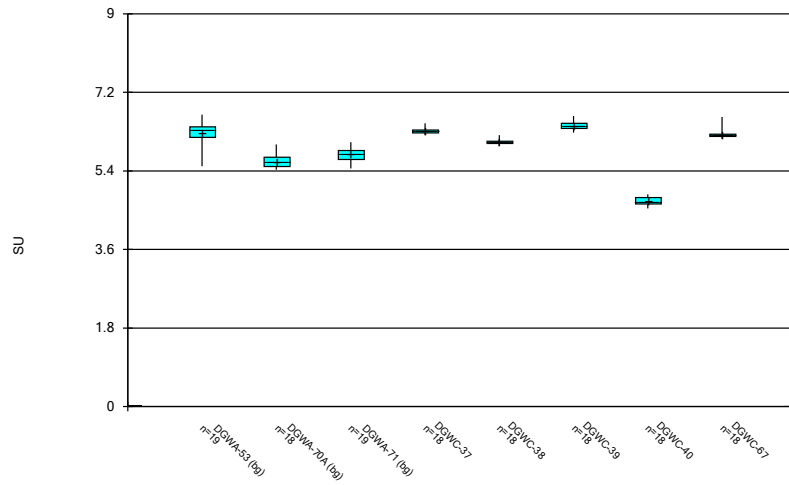
Constituent: Molybdenum Analysis Run 11/18/2022 12:03 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



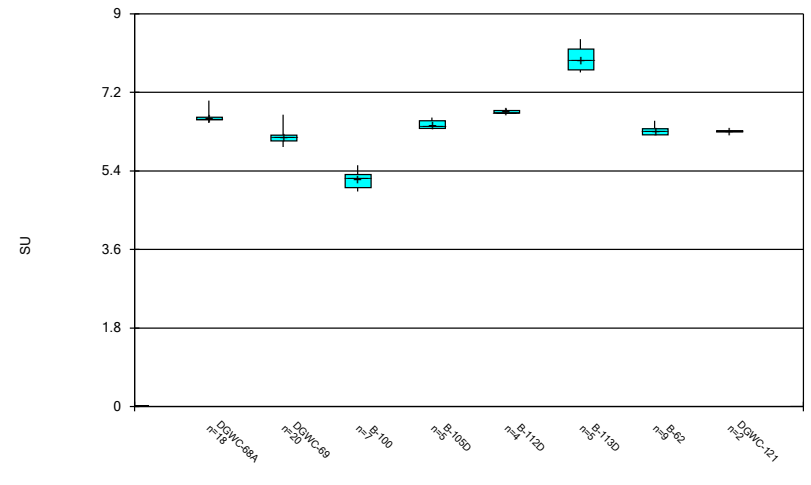
Constituent: Molybdenum Analysis Run 11/18/2022 12:03 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



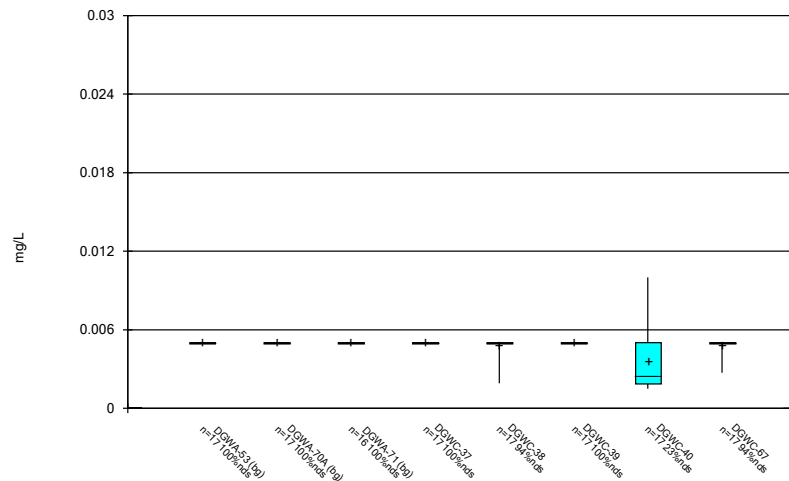
Constituent: pH, Field Analysis Run 11/18/2022 12:03 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



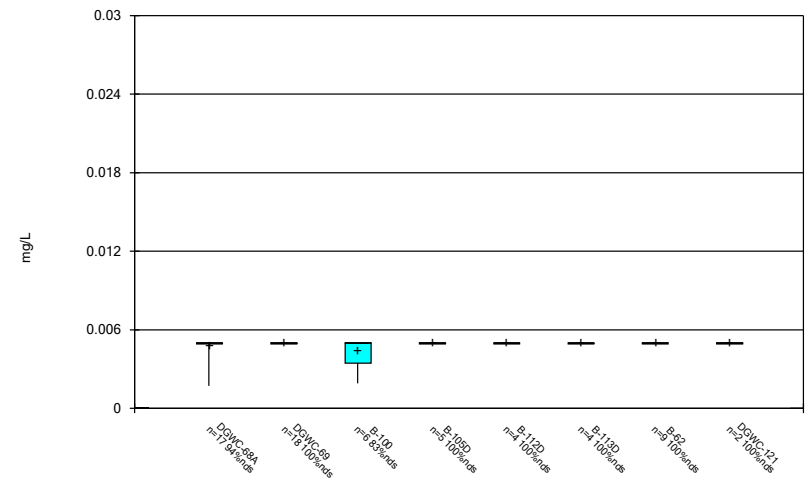
Constituent: pH, Field Analysis Run 11/18/2022 12:03 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



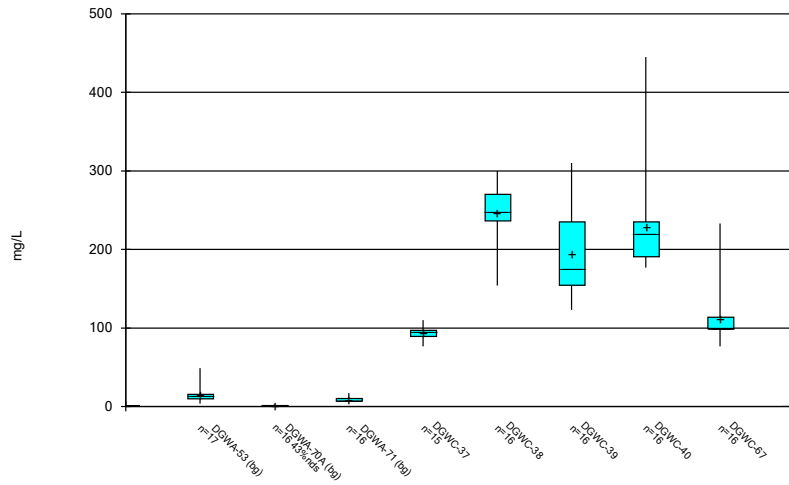
Constituent: Selenium Analysis Run 11/18/2022 12:03 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



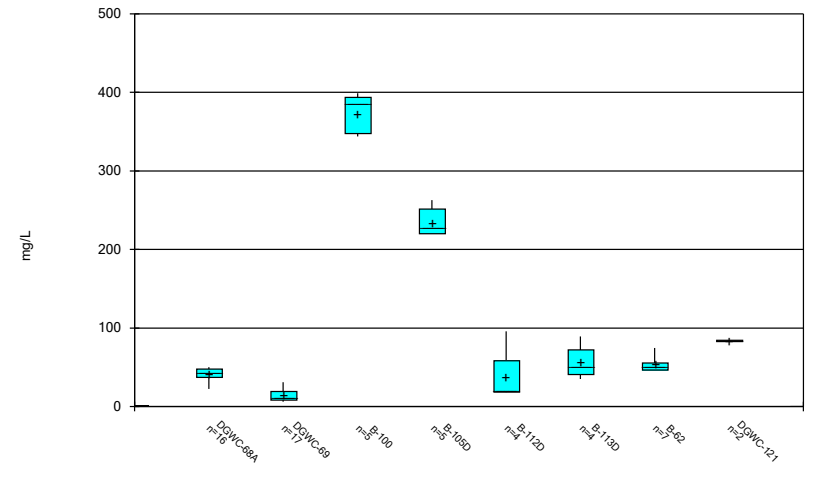
Constituent: Selenium Analysis Run 11/18/2022 12:03 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



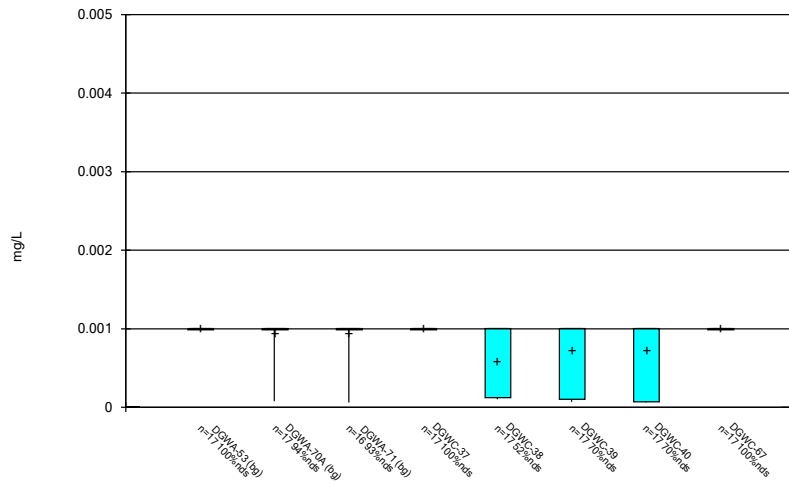
Constituent: Sulfate as SO4 Analysis Run 11/18/2022 12:03 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



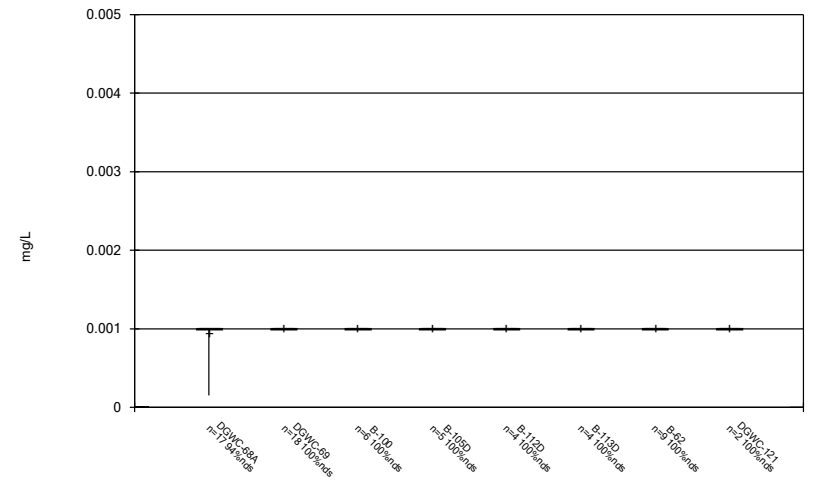
Constituent: Sulfate as SO4 Analysis Run 11/18/2022 12:03 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



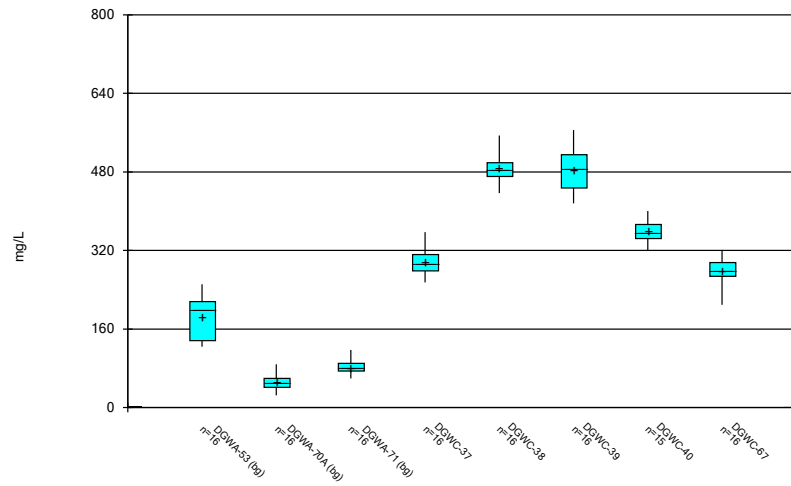
Constituent: Thallium Analysis Run 11/18/2022 12:03 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



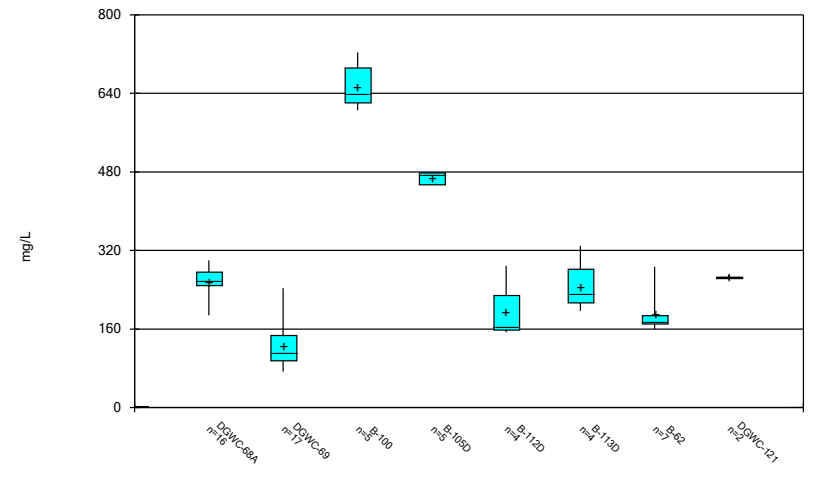
Constituent: Thallium Analysis Run 11/18/2022 12:03 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/18/2022 12:03 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

Box & Whiskers Plot



Constituent: Total Dissolved Solids [TDS] Analysis Run 11/18/2022 12:03 PM View: AP 1
 Plant McDonough Client: Southern Company Data: McDonough AP

FIGURE C.

Outlier Summary

Plant McDonough Client: Southern Company Data: McDonough AP Printed 11/14/2022, 2:32 PM

Date	DGWC-68A Arsenic (mg/L)	DGWC-68A Barium (mg/L)	DGWA-70A Chromium (mg/L)	DGWC-68A Chromium (mg/L)	DGWC-68A Cobalt (mg/L)	DGWA-70A Fluoride, total (mg/L)	DGWC-68A pH, Field (SU)	DGWC-37 Sulfate as SO4 (mg/L)	DGWA-53 Total Dissolved Solids [TDS] (mg/L)	DGWC-40 Total Dissolved Solids [TDS] (mg/L)
9/2/2016									583 (O)	
3/28/2017					1.2 (O)					
7/13/2017							200 (O)			
10/24/2017								671 (O)		
10/15/2019			0.034 (O)							
9/16/2021	0.46 (O)	0.13 (O)		0.0014 (J,O)	0.0032 (J,O)	6.79 (O)				

FIGURE D.

Interwell Prediction Limit - Significant Results

Plant McDonough Client: Southern Company Data: McDonough AP Printed 10/17/2022, 2:06 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N %NDs	ND Adj.	Transform	Alpha	Method
Boron, total (mg/L)	DGWC-37	0.13	n/a	9/8/2022	2	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2
Boron, total (mg/L)	DGWC-38	0.13	n/a	9/12/2022	2.8	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2
Boron, total (mg/L)	DGWC-39	0.13	n/a	9/7/2022	3.3	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2
Boron, total (mg/L)	DGWC-40	0.13	n/a	9/7/2022	0.84	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2
Boron, total (mg/L)	DGWC-67	0.13	n/a	9/8/2022	4.3	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2
Boron, total (mg/L)	DGWC-68A	0.13	n/a	9/7/2022	2	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2
Boron, total (mg/L)	DGWC-69	0.13	n/a	9/7/2022	0.23	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	DGWC-37	40.3	n/a	9/8/2022	66.2	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	DGWC-38	40.3	n/a	9/12/2022	87.6	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	DGWC-39	40.3	n/a	9/7/2022	92.5	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	DGWC-40	40.3	n/a	9/7/2022	44.8	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	DGWC-67	40.3	n/a	9/8/2022	47.4	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2
Calcium, total (mg/L)	DGWC-68A	40.3	n/a	9/7/2022	53.5	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	DGWC-38	8.2	n/a	9/12/2022	8.5	Yes	49	0	n/a	0.0007761	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	DGWC-40	8.2	n/a	9/7/2022	15	Yes	49	0	n/a	0.0007761	NP Inter (normality) 1 of 2
Chloride, Total (mg/L)	DGWC-67	8.2	n/a	9/8/2022	8.9	Yes	49	0	n/a	0.0007761	NP Inter (normality) 1 of 2
pH, Field (SU)	DGWC-40	6.568	5.268	9/7/2022	4.54	Yes	56	0	None	ln(x)	Param Inter 1 of 2
pH, Field (SU)	DGWC-68A	6.568	5.268	9/7/2022	6.62	Yes	56	0	None	ln(x)	Param Inter 1 of 2
Sulfate as SO4 (mg/L)	DGWC-37	49	n/a	9/8/2022	96.6	Yes	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	DGWC-38	49	n/a	9/12/2022	234	Yes	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	DGWC-39	49	n/a	9/7/2022	146	Yes	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	DGWC-40	49	n/a	9/7/2022	203	Yes	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2
Sulfate as SO4 (mg/L)	DGWC-67	49	n/a	9/8/2022	117	Yes	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-37	254.7	n/a	9/8/2022	300	Yes	48	0	None	x^(1/3)	Param Inter 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-38	254.7	n/a	9/12/2022	468	Yes	48	0	None	x^(1/3)	Param Inter 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-39	254.7	n/a	9/7/2022	449	Yes	48	0	None	x^(1/3)	Param Inter 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-40	254.7	n/a	9/7/2022	339	Yes	48	0	None	x^(1/3)	Param Inter 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-68A	254.7	n/a	9/7/2022	256	Yes	48	0	None	x^(1/3)	Param Inter 1 of 2

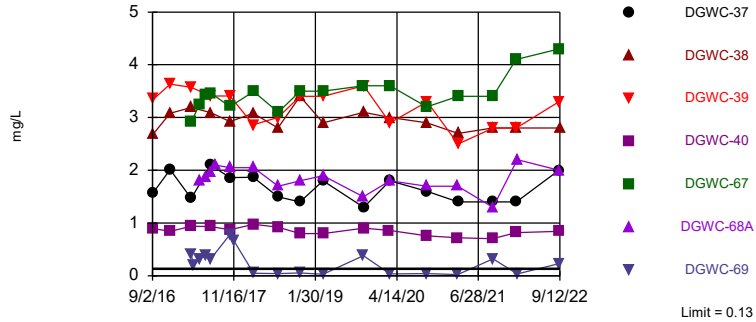
Interwell Prediction Limit - All Results

Plant McDonough Client: Southern Company Data: McDonough AP Printed 10/17/2022, 2:06 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N %NDs	ND Adj.	Transform	Alpha	Method	
Boron, total (mg/L)	DGWC-37	0.13	n/a	9/8/2022	2	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2	
Boron, total (mg/L)	DGWC-38	0.13	n/a	9/12/2022	2.8	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2	
Boron, total (mg/L)	DGWC-39	0.13	n/a	9/7/2022	3.3	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2	
Boron, total (mg/L)	DGWC-40	0.13	n/a	9/7/2022	0.84	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2	
Boron, total (mg/L)	DGWC-67	0.13	n/a	9/8/2022	4.3	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2	
Boron, total (mg/L)	DGWC-68A	0.13	n/a	9/7/2022	2	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2	
Boron, total (mg/L)	DGWC-69	0.13	n/a	9/7/2022	0.23	Yes	47	27.66	n/a	0.0008532	NP Inter (normality) 1 of 2	
Calcium, total (mg/L)	DGWC-37	40.3	n/a	9/8/2022	66.2	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2	
Calcium, total (mg/L)	DGWC-38	40.3	n/a	9/12/2022	87.6	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2	
Calcium, total (mg/L)	DGWC-39	40.3	n/a	9/7/2022	92.5	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2	
Calcium, total (mg/L)	DGWC-40	40.3	n/a	9/7/2022	44.8	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2	
Calcium, total (mg/L)	DGWC-67	40.3	n/a	9/8/2022	47.4	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2	
Calcium, total (mg/L)	DGWC-68A	40.3	n/a	9/7/2022	53.5	Yes	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2	
Calcium, total (mg/L)	DGWC-69	40.3	n/a	9/7/2022	13.1	No	47	4.255	n/a	0.0008532	NP Inter (normality) 1 of 2	
Chloride, Total (mg/L)	DGWC-37	8.2	n/a	9/8/2022	5.4	No	49	0	n/a	0.0007761	NP Inter (normality) 1 of 2	
Chloride, Total (mg/L)	DGWC-38	8.2	n/a	9/12/2022	8.5	Yes	49	0	n/a	0.0007761	NP Inter (normality) 1 of 2	
Chloride, Total (mg/L)	DGWC-39	8.2	n/a	9/7/2022	8.2	No	49	0	n/a	0.0007761	NP Inter (normality) 1 of 2	
Chloride, Total (mg/L)	DGWC-40	8.2	n/a	9/7/2022	15	Yes	49	0	n/a	0.0007761	NP Inter (normality) 1 of 2	
Chloride, Total (mg/L)	DGWC-67	8.2	n/a	9/8/2022	8.9	Yes	49	0	n/a	0.0007761	NP Inter (normality) 1 of 2	
Chloride, Total (mg/L)	DGWC-68A	8.2	n/a	9/7/2022	4.1	No	49	0	n/a	0.0007761	NP Inter (normality) 1 of 2	
Chloride, Total (mg/L)	DGWC-69	8.2	n/a	9/7/2022	4.9	No	49	0	n/a	0.0007761	NP Inter (normality) 1 of 2	
Fluoride, total (mg/L)	DGWC-37	0.42	n/a	9/8/2022	0.082J	No	54	50	n/a	0.0006506	NP Inter (normality) 1 of 2	
Fluoride, total (mg/L)	DGWC-38	0.42	n/a	9/12/2022	0.12	No	54	50	n/a	0.0006506	NP Inter (normality) 1 of 2	
Fluoride, total (mg/L)	DGWC-39	0.42	n/a	9/7/2022	0.11	No	54	50	n/a	0.0006506	NP Inter (normality) 1 of 2	
Fluoride, total (mg/L)	DGWC-40	0.42	n/a	9/7/2022	0.14	No	54	50	n/a	0.0006506	NP Inter (normality) 1 of 2	
Fluoride, total (mg/L)	DGWC-67	0.42	n/a	9/8/2022	0.096J	No	54	50	n/a	0.0006506	NP Inter (normality) 1 of 2	
Fluoride, total (mg/L)	DGWC-68A	0.42	n/a	9/7/2022	0.11	No	54	50	n/a	0.0006506	NP Inter (normality) 1 of 2	
Fluoride, total (mg/L)	DGWC-69	0.42	n/a	9/7/2022	0.11	No	54	50	n/a	0.0006506	NP Inter (normality) 1 of 2	
pH, Field (SU)	DGWC-37	6.568	5.268	9/9/2022	6.3	No	56	0	None	In(x)	0.0005373	Param Inter 1 of 2
pH, Field (SU)	DGWC-38	6.568	5.268	9/12/2022	6.05	No	56	0	None	In(x)	0.0005373	Param Inter 1 of 2
pH, Field (SU)	DGWC-39	6.568	5.268	9/7/2022	6.43	No	56	0	None	In(x)	0.0005373	Param Inter 1 of 2
pH, Field (SU)	DGWC-40	6.568	5.268	9/7/2022	4.54	Yes	56	0	None	In(x)	0.0005373	Param Inter 1 of 2
pH, Field (SU)	DGWC-67	6.568	5.268	9/8/2022	6.21	No	56	0	None	In(x)	0.0005373	Param Inter 1 of 2
pH, Field (SU)	DGWC-68A	6.568	5.268	9/7/2022	6.62	Yes	56	0	None	In(x)	0.0005373	Param Inter 1 of 2
pH, Field (SU)	DGWC-69	6.568	5.268	9/7/2022	6.2	No	56	0	None	In(x)	0.0005373	Param Inter 1 of 2
Sulfate as SO4 (mg/L)	DGWC-37	49	n/a	9/8/2022	96.6	Yes	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2	
Sulfate as SO4 (mg/L)	DGWC-38	49	n/a	9/12/2022	234	Yes	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2	
Sulfate as SO4 (mg/L)	DGWC-39	49	n/a	9/7/2022	146	Yes	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2	
Sulfate as SO4 (mg/L)	DGWC-40	49	n/a	9/7/2022	203	Yes	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2	
Sulfate as SO4 (mg/L)	DGWC-67	49	n/a	9/8/2022	117	Yes	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2	
Sulfate as SO4 (mg/L)	DGWC-68A	49	n/a	9/7/2022	36.5	No	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2	
Sulfate as SO4 (mg/L)	DGWC-69	49	n/a	9/7/2022	11.6	No	49	14.29	n/a	0.0007761	NP Inter (normality) 1 of 2	
Total Dissolved Solids [TDS] (mg/L)	DGWC-37	254.7	n/a	9/8/2022	300	Yes	48	0	None	x^(1/3)	0.001075	Param Inter 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-38	254.7	n/a	9/12/2022	468	Yes	48	0	None	x^(1/3)	0.001075	Param Inter 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-39	254.7	n/a	9/7/2022	449	Yes	48	0	None	x^(1/3)	0.001075	Param Inter 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-40	254.7	n/a	9/7/2022	339	Yes	48	0	None	x^(1/3)	0.001075	Param Inter 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-67	254.7	n/a	9/8/2022	252	No	48	0	None	x^(1/3)	0.001075	Param Inter 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-68A	254.7	n/a	9/7/2022	256	Yes	48	0	None	x^(1/3)	0.001075	Param Inter 1 of 2
Total Dissolved Solids [TDS] (mg/L)	DGWC-69	254.7	n/a	9/7/2022	102	No	48	0	None	x^(1/3)	0.001075	Param Inter 1 of 2

Exceeds Limit: DGWC-37, DGWC-38, DGWC-39, DGWC-40, DGWC-67, DGWC-68A, DGWC-69

Prediction Limit
Interwell Non-parametric

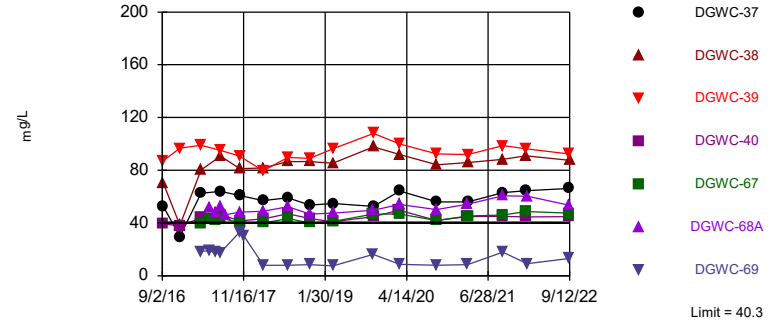


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 47 background values. 27.66% NDs. Annual per-constituent alpha = 0.01188. Individual comparison alpha = 0.0008532 (1 of 2). Comparing 7 points to limit.

Constituent: Boron, total Analysis Run 10/17/2022 2:03 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

Exceeds Limit: DGWC-37, DGWC-38, DGWC-39, DGWC-40, DGWC-67, DGWC-68A

Prediction Limit
Interwell Non-parametric

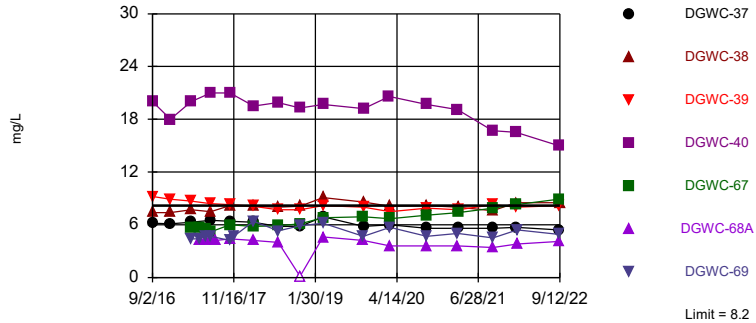


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 47 background values. 4.255% NDs. Annual per-constituent alpha = 0.01188. Individual comparison alpha = 0.0008532 (1 of 2). Comparing 7 points to limit.

Constituent: Calcium, total Analysis Run 10/17/2022 2:03 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

Exceeds Limit: DGWC-38, DGWC-40, DGWC-67

Prediction Limit
Interwell Non-parametric

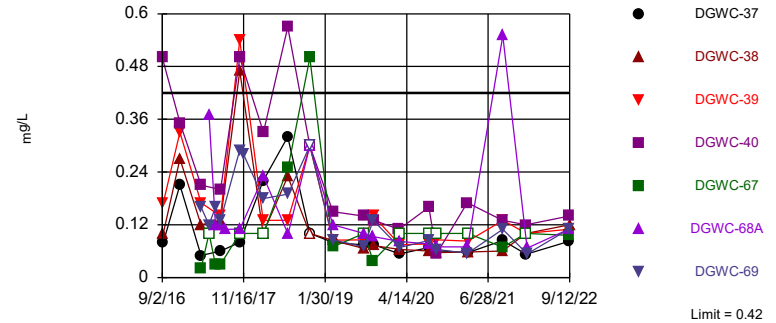


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 49 background values. 50% NDs. Annual per-constituent alpha = 0.01081. Individual comparison alpha = 0.0007761 (1 of 2). Comparing 7 points to limit.

Constituent: Chloride, Total Analysis Run 10/17/2022 2:03 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

Within Limit

Prediction Limit
Interwell Non-parametric

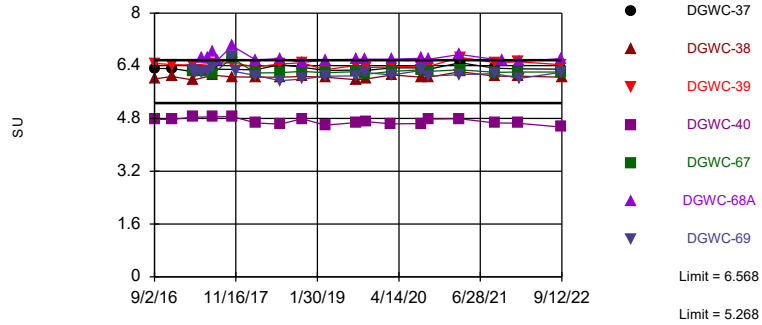


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Francia normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 54 background values. 50% NDs. Annual per-constituent alpha = 0.009071. Individual comparison alpha = 0.0006506 (1 of 2). Comparing 7 points to limit.

Constituent: Fluoride, total Analysis Run 10/17/2022 2:03 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

Exceeds Limits: DGWC-40, DGWC-68A

Prediction Limit
Interwell Parametric

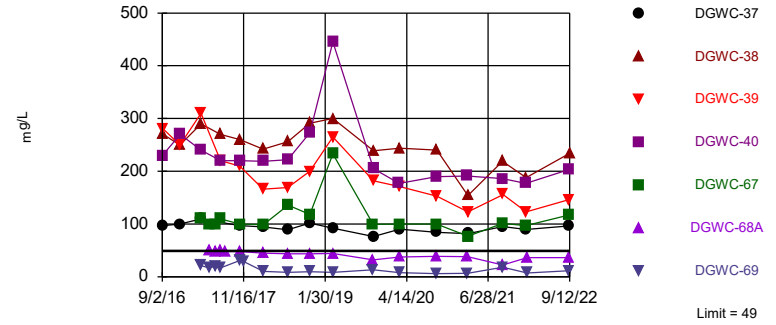


Background Data Summary (based on natural log transformation): Mean=1.772, Std. Dev.=0.05718, n=56. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9444, critical = 0.942. Kappa = 1.928 (c=7, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0005373. Comparing 7 points to limit.

Constituent: pH, Field Analysis Run 10/17/2022 2:03 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

Exceeds Limit: DGWC-37, DGWC-38, DGWC-39, DGWC-40, DGWC-67

Prediction Limit
Interwell Non-parametric

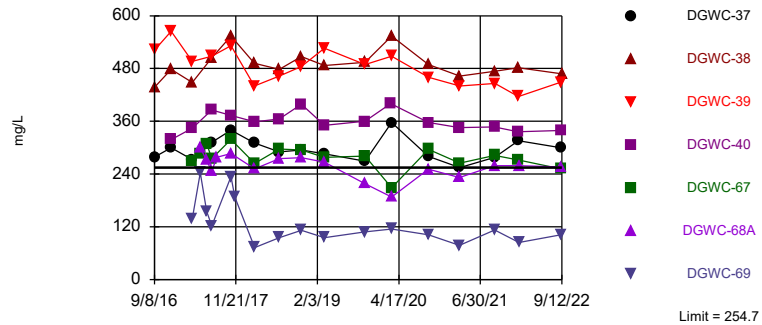


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limit is highest of 49 background values. 14.29% NDs. Annual per-constituent alpha = 0.01081. Individual comparison alpha = 0.0007761 (1 of 2). Comparing 7 points to limit.

Constituent: Sulfate as SO4 Analysis Run 10/17/2022 2:03 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

Exceeds Limit: DGWC-37, DGWC-38, DGWC-39, DGWC-40, DGWC-68A

Prediction Limit
Interwell Parametric



Background Data Summary (based on cube root transformation): Mean=4.543, Std. Dev.=0.9224, n=48. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9399, critical = 0.929. Kappa = 1.948 (c=7, w=7, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.001075. Comparing 7 points to limit.

Constituent: Total Dissolved Solids [TDS] Analysis Run 10/17/2022 2:03 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-40	DGWC-39	DGWC-38	DGWC-37	DGWA-71 (bg)	DGWA-70A (bg)	DGWA-53 (bg)	DGWC-69	DGWC-67
9/2/2016	0.895								
9/8/2016		3.35	2.69	1.58					
12/7/2016		3.63	3.08	2.01					
12/8/2016	0.841								
3/28/2017					0.0097 (J)	0.0067 (J)	0.0612		
3/30/2017	0.937	3.57	3.19	1.47					
3/31/2017								0.407	2.91
4/12/2017								0.207	
5/11/2017							0.0805		
5/12/2017					0.0082 (J)			0.311	3.24
5/15/2017						0.0073 (J)			
6/15/2017						<0.04	0.0725		
6/16/2017					0.0085 (J)			0.381	3.42
7/11/2017					0.0077 (J)	<0.04			
7/12/2017							0.0735		
7/13/2017	0.933	3.41	3.09	2.1				0.323	3.46
8/8/2017						<0.04			
10/24/2017					0.0083 (J)	0.0082 (J)	0.077		
10/26/2017	0.873	3.41	2.92	1.86				0.779	3.21
11/15/2017								0.667	
2/27/2018					0.0069 (J)	0.0062 (J)			
3/1/2018		2.86	3.08	1.87					
3/2/2018	0.974							0.0478	3.49
3/8/2018							0.13 (J)		
7/12/2018	0.92	3	2.8	1.5			0.076		
7/13/2018								0.043	3.1
11/6/2018					<0.04 (J)	<0.04 (J)			
11/7/2018							0.073		
11/8/2018	0.8	3.4	3.4	1.4				0.054	3.5
3/12/2019					0.0068 (J)	0.0073 (J)			
3/13/2019	0.8	3.4	2.9	1.8			0.08	0.028 (J)	3.5
10/15/2019					0.0054 (J)	<0.04			
10/16/2019							0.059	0.38	
10/17/2019									3.6
10/18/2019	0.9	3.6	3.1	1.3					
3/2/2020					0.01 (J)	0.0055 (J)			
3/4/2020	0.86								
3/9/2020		2.9	3	1.8			0.08 (J)	0.035 (J)	3.6
9/22/2020					<0.04	<0.04	0.056 (J)		
9/23/2020	0.76							0.041 (J)	3.2
9/24/2020			2.9	1.6					
9/25/2020		3.3							
3/1/2021					0.0054 (J)	<0.04			
3/8/2021	0.72								
3/10/2021								0.024 (J)	
3/11/2021		2.5	2.7	1.4					3.4
3/12/2021							0.064		
9/8/2021					<0.04				
9/9/2021						<0.04	0.065		
9/14/2021	0.7								
9/15/2021			2.8						
9/16/2021				1.4				0.32	3.4

Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-40	DGWC-39	DGWC-38	DGWC-37	DGWA-71 (bg)	DGWA-70A (bg)	DGWA-53 (bg)	DGWC-69	DGWC-67
9/17/2021		2.8							
1/18/2022					0.015 (J)	0.024 (J)			
1/19/2022	0.82								4.1
1/20/2022		2.8							
1/21/2022			2.8	1.4					
1/25/2022								0.035 (J)	
1/28/2022							0.062		
9/7/2022	0.84	3.3			<0.04	<0.04		0.23	
9/8/2022				2			0.054		4.3
9/12/2022			2.8						

Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

DGWC-68A

9/2/2016	
9/8/2016	
12/7/2016	
12/8/2016	
3/28/2017	
3/30/2017	
3/31/2017	
4/12/2017	
5/11/2017	
5/12/2017	1.8
5/15/2017	
6/15/2017	
6/16/2017	1.88
7/11/2017	
7/12/2017	
7/13/2017	1.97
8/8/2017	2.1
10/24/2017	
10/26/2017	2.05
11/15/2017	
2/27/2018	
3/1/2018	
3/2/2018	2.05
3/8/2018	
7/12/2018	
7/13/2018	1.7
11/6/2018	
11/7/2018	
11/8/2018	1.8
3/12/2019	
3/13/2019	1.9
10/15/2019	
10/16/2019	1.5
10/17/2019	
10/18/2019	
3/2/2020	
3/4/2020	
3/9/2020	1.8
9/22/2020	
9/23/2020	1.7
9/24/2020	
9/25/2020	
3/1/2021	
3/8/2021	
3/10/2021	1.7
3/11/2021	
3/12/2021	
9/8/2021	
9/9/2021	
9/14/2021	
9/15/2021	
9/16/2021	1.3

Prediction Limit

Constituent: Boron, total (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

DGWC-68A

9/17/2021	
1/18/2022	
1/19/2022	
1/20/2022	
1/21/2022	
1/25/2022	2.2
1/28/2022	
9/7/2022	2
9/8/2022	
9/12/2022	

Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-40	DGWC-39	DGWC-38	DGWC-37	DGWA-71 (bg)	DGWA-70A (bg)	DGWA-53 (bg)	DGWC-69	DGWC-67
9/2/2016	39.6								
9/8/2016		87.2	70.3	52.5					
12/7/2016		96.7	38.4	29.7					
12/8/2016	37.9								
3/28/2017					8.31	5.14	30.8		
3/30/2017	43.9	98.9	80.3	62.6					
3/31/2017								18.6 (J)	39.9
5/11/2017							35.8		
5/12/2017					8.04			18.9 (J)	43.6
5/15/2017						6.5			
6/15/2017						5.38	36		
6/16/2017					7.66			17.7	42.5
7/11/2017					7.71	5.96			
7/12/2017							40.3		
7/13/2017	46.2	95	90.8	64.1				17.6	43.7
8/8/2017						5.2			
10/24/2017					6.86	4.93	30.3		
10/26/2017	41.8	90.6	81.3	60.8				33.3	40.4
11/15/2017								30.6	
2/27/2018					<25	<25			
3/1/2018		79.6	81.8	57					
3/2/2018	43.2							8.09	40.1
3/8/2018							39.8		
7/12/2018	47.1	89.8	86.7	59.1			34.7		
7/13/2018								7.9	43.3
11/6/2018					5.7	5.5			
11/7/2018							28.6		
11/8/2018	43.5	89	86.6	53.6				8.5	40.1
3/12/2019					5.5	5.1			
3/13/2019	41	96.3	85.3	54.8			26.7	7.6	41.2
10/15/2019					5.1	5.1			
10/16/2019							17.7	16.2	
10/17/2019									46.9
10/18/2019	44.9	108	97.8	52.5					
3/2/2020					5.8	5.3			
3/4/2020	49.6								
3/9/2020		100	91.9	64.2			23.7	8.6	46.9
9/22/2020					5.4	5	15.5		
9/23/2020	41.9							8	42
9/24/2020			84.1	55.9					
9/25/2020		92.5							
3/1/2021					5.9	4.1			
3/8/2021	44.9								
3/10/2021								8.5	
3/11/2021		91.9	85.8	56					45.4
3/12/2021							18.4		
9/8/2021					6.1				
9/9/2021						5.3	18.3		
9/14/2021	45.1								
9/15/2021			88.3						
9/16/2021				63				18	46
9/17/2021		98.6							

Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-40	DGWC-39	DGWC-38	DGWC-37	DGWA-71 (bg)	DGWA-70A (bg)	DGWA-53 (bg)	DGWC-69	DGWC-67
1/18/2022					6.6	6.1			
1/19/2022	44.7								48.8
1/20/2022		96.2							
1/21/2022			91	64.4					
1/25/2022								9.2	
1/28/2022							19.5		
9/7/2022	44.8	92.5			6.4	5.9		13.1	
9/8/2022				66.2			17.2		47.4
9/12/2022			87.6						

Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

DGWC-68A

9/2/2016	
9/8/2016	
12/7/2016	
12/8/2016	
3/28/2017	
3/30/2017	
3/31/2017	
5/11/2017	
5/12/2017	51.7
5/15/2017	
6/15/2017	
6/16/2017	47.9
7/11/2017	
7/12/2017	
7/13/2017	52.3
8/8/2017	46.3
10/24/2017	
10/26/2017	48.2
11/15/2017	
2/27/2018	
3/1/2018	
3/2/2018	48.9
3/8/2018	
7/12/2018	
7/13/2018	52.4
11/6/2018	
11/7/2018	
11/8/2018	46.8
3/12/2019	
3/13/2019	47.5
10/15/2019	
10/16/2019	49.7
10/17/2019	
10/18/2019	
3/2/2020	
3/4/2020	
3/9/2020	54
9/22/2020	
9/23/2020	50.2
9/24/2020	
9/25/2020	
3/1/2021	
3/8/2021	
3/10/2021	54.2
3/11/2021	
3/12/2021	
9/8/2021	
9/9/2021	
9/14/2021	
9/15/2021	
9/16/2021	60.6
9/17/2021	

Prediction Limit

Constituent: Calcium, total (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

DGWC-68A

1/18/2022	
1/19/2022	
1/20/2022	
1/21/2022	
1/25/2022	60.4
1/28/2022	
9/7/2022	53.5
9/8/2022	
9/12/2022	

Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-40	DGWC-38	DGWC-37	DGWC-39	DGWA-71 (bg)	DGWA-70A (bg)	DGWA-53 (bg)	DGWC-67	DGWC-69
9/2/2016	20								
9/8/2016		7.4	6.2	9.2					
12/7/2016		7.4	6.1	8.9					
12/8/2016	18								
3/28/2017					3.6	3.8	3.7		
3/30/2017	20	7.7	6.3	8.7					
3/31/2017								5.7	4.4
5/11/2017							2.3		
5/12/2017					3.8			5.6	4.4
5/15/2017						2.2			
6/15/2017						2	2.6		
6/16/2017					3.4			5.5	4.7
7/11/2017					3.1	2.1			
7/12/2017							2.3		
7/13/2017	21	7.5	6.5	8.4				5.2	4.7
8/8/2017						2.2			
10/24/2017					3.2	2.4	2.7		
10/26/2017	21	8.2	6.4	8.3				6	4.2
11/15/2017					3.1		2.2		4.7
2/27/2018					3.2	2.5			
3/1/2018		8.1	6.3	8.1					
3/2/2018	19.5							5.8	6.4
3/8/2018							2.4		
7/12/2018	19.9	8	5.8	7.7			2.2		
7/13/2018								5.9	5.3
11/6/2018					2.6	2.3			
11/7/2018							2.3		
11/8/2018	19.3	8.1	5.8	7.7				6.1	5.9
3/12/2019					3.3	2.5			
3/13/2019	19.7	9.1	6.9	8.2			3.6	6.8	6.2
10/15/2019					3.3	2.2			
10/16/2019							2		4.7
10/17/2019								6.9	
10/18/2019	19.2	8.6	5.8	8					
3/2/2020					3	1.9			
3/4/2020	20.6								
3/9/2020		8.1	6	7.5			1.8	6.7	5.7
9/22/2020					5.2	1.9	1.6		
9/23/2020	19.7							7.1	4.7
9/24/2020		8.2	5.6						
9/25/2020				7.9					
3/1/2021					3.9	1.9			
3/8/2021	19.1								
3/10/2021									5
3/11/2021		8	5.6	7.7				7.4	
3/12/2021							2		
9/8/2021					5.9				
9/9/2021						1.9	1.8		
9/14/2021	16.7								
9/15/2021		7.6							
9/16/2021			5.6					7.9	4.5
9/17/2021				8.3					

Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-40	DGWC-38	DGWC-37	DGWC-39	DGWA-71 (bg)	DGWA-70A (bg)	DGWA-53 (bg)	DGWC-67	DGWC-69
1/18/2022					5.9	1.9			
1/19/2022	16.5							8.3	
1/20/2022				8					
1/21/2022		8.5	5.7						
1/25/2022									5.4
1/28/2022							1.8		
9/7/2022	15			8.2	8.2	2.1			4.9
9/8/2022			5.4				1.6	8.9	
9/12/2022		8.5							

Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

DGWC-68A

9/2/2016	
9/8/2016	
12/7/2016	
12/8/2016	
3/28/2017	
3/30/2017	
3/31/2017	
5/11/2017	
5/12/2017	4.2
5/15/2017	
6/15/2017	
6/16/2017	4.2
7/11/2017	
7/12/2017	
7/13/2017	4.4
8/8/2017	4.2
10/24/2017	
10/26/2017	4.4
11/15/2017	
2/27/2018	
3/1/2018	
3/2/2018	4.2
3/8/2018	
7/12/2018	
7/13/2018	4
11/6/2018	
11/7/2018	
11/8/2018	<0.25
3/12/2019	
3/13/2019	4.6
10/15/2019	
10/16/2019	4.2
10/17/2019	
10/18/2019	
3/2/2020	
3/4/2020	
3/9/2020	3.6
9/22/2020	
9/23/2020	3.6
9/24/2020	
9/25/2020	
3/1/2021	
3/8/2021	
3/10/2021	3.6
3/11/2021	
3/12/2021	
9/8/2021	
9/9/2021	
9/14/2021	
9/15/2021	
9/16/2021	3.4
9/17/2021	

Prediction Limit

Constituent: Chloride, Total (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

DGWC-68A

1/18/2022	
1/19/2022	
1/20/2022	
1/21/2022	
1/25/2022	3.8
1/28/2022	
9/7/2022	4.1
9/8/2022	
9/12/2022	

Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-40	DGWC-39	DGWC-38	DGWC-37	DGWA-71 (bg)	DGWA-53 (bg)	DGWC-69	DGWC-67	DGWC-68A
9/2/2016	0.5								
9/8/2016		0.17 (J)	0.1 (J)	0.08 (J)					
12/7/2016		0.33	0.27 (J)	0.21 (J)					
12/8/2016	0.35								
3/28/2017					0.06 (J)	0.12 (J)			
3/30/2017	0.21 (J)	0.17 (J)	0.12 (J)	0.05 (J)					
3/31/2017							0.16 (J)	0.02 (J)	
5/11/2017						0.07 (J)			
5/12/2017					<0.1		0.12 (J)	<0.1	0.37
5/15/2017									
6/15/2017						0.19 (J)			
6/16/2017					0.008 (J)		0.16 (J)	0.03 (J)	0.12 (J)
7/11/2017					0.007 (J)				
7/12/2017						0.1 (J)			
7/13/2017	0.2 (J)	0.14 (J)	0.13 (J)	0.06 (J)			0.13 (J)	0.03 (J)	0.12 (J)
8/8/2017									0.11 (J)
10/24/2017					<0.1	0.06 (J)			
10/26/2017	0.5	0.54	0.47	0.08 (J)			0.29 (J)	<0.1	0.11 (J)
11/15/2017					<0.1	0.05 (J)	0.28 (J)		
2/27/2018					<0.1				
3/1/2018		0.13	<0.1	0.22					
3/2/2018	0.33						0.18	<0.1	0.23
3/8/2018						<0.1			
7/12/2018	0.57	0.13 (J)	0.23 (J)	0.32		0.071 (J)			
7/13/2018							0.19 (J)	0.25 (J)	0.099 (J)
11/6/2018					<0.1				
11/7/2018						<0.1			
11/8/2018	<0.3 (J)	<0.3 (J)	<0.1	<0.1			<0.3 (J)	0.5	<0.3 (J)
3/12/2019					<0.1				
3/13/2019	0.15 (J)	0.085 (J)	0.084 (J)	0.08 (J)		0.13 (J)	0.086 (J)	0.07 (J)	0.12 (J)
8/27/2019					<0.1				
8/28/2019	0.14	0.086 (J)	0.066 (J)	0.074 (J)		0.42	0.07 (J)	<0.1	0.1
10/15/2019					<0.1				
10/16/2019						0.11 (J)	0.13 (J)		0.093 (J)
10/17/2019								0.038 (J)	
10/18/2019	0.13 (J)	0.14 (J)	0.073 (J)	0.075 (J)					
3/2/2020					<0.1				
3/4/2020	0.11 (J)								
3/9/2020		0.075 (J)	0.064 (J)	0.054 (J)		0.1 (J)	0.068 (J)	<0.1	0.082 (J)
8/11/2020					<0.1				
8/13/2020	0.16	0.076 (J)	0.06 (J)	0.068 (J)		0.062 (J)	0.084 (J)	<0.1	0.076 (J)
9/22/2020					<0.1	0.099 (J)			
9/23/2020	0.054 (J)						0.064 (J)	<0.1	0.07 (J)
9/24/2020			0.057 (J)	0.061 (J)					
9/25/2020		0.086 (J)							
3/1/2021					<0.1				
3/8/2021	0.17								
3/10/2021							0.055 (J)		0.07 (J)
3/11/2021		0.083 (J)	0.058 (J)	0.057 (J)				<0.1	
3/12/2021						0.076 (J)			
9/8/2021					<0.1				
9/9/2021						0.099 (J)			

Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-40	DGWC-39	DGWC-38	DGWC-37	DGWA-71 (bg)	DGWA-53 (bg)	DGWC-69	DGWC-67	DGWC-68A
9/14/2021	0.13								
9/15/2021			0.06 (J)						
9/16/2021				0.084 (J)			0.11	0.069 (J)	0.55
9/17/2021		0.13							
1/18/2022					<0.1				
1/19/2022	0.12							<0.1	
1/20/2022		0.1							
1/21/2022			0.1	0.053 (J)					
1/25/2022							0.054 (J)		0.067 (J)
1/28/2022						0.08 (J)			
9/7/2022	0.14	0.11			0.056 (J)		0.11		0.11
9/8/2022				0.082 (J)		0.11		0.096 (J)	
9/12/2022			0.12						

Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

DGWA-70A (bg)

9/2/2016	
9/8/2016	
12/7/2016	
12/8/2016	
3/28/2017	1.2 (O)
3/30/2017	
3/31/2017	
5/11/2017	
5/12/2017	
5/15/2017	0.005 (J)
6/15/2017	0.02 (J)
6/16/2017	
7/11/2017	0.06 (J)
7/12/2017	
7/13/2017	
8/8/2017	0.04 (J)
10/24/2017	<0.1
10/26/2017	
11/15/2017	
2/27/2018	<0.1
3/1/2018	
3/2/2018	
3/8/2018	
7/12/2018	
7/13/2018	
11/6/2018	<0.1
11/7/2018	
11/8/2018	
3/12/2019	0.039 (J)
3/13/2019	
8/27/2019	<0.1
8/28/2019	
10/15/2019	<0.1
10/16/2019	
10/17/2019	
10/18/2019	
3/2/2020	<0.1
3/4/2020	
3/9/2020	
8/11/2020	<0.1
8/13/2020	
9/22/2020	<0.1
9/23/2020	
9/24/2020	
9/25/2020	
3/1/2021	<0.1
3/8/2021	
3/10/2021	
3/11/2021	
3/12/2021	
9/8/2021	
9/9/2021	<0.1

Prediction Limit

Constituent: Fluoride, total (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

DGWA-70A (bg)

9/14/2021	
9/15/2021	
9/16/2021	
9/17/2021	
1/18/2022	<0.1
1/19/2022	
1/20/2022	
1/21/2022	
1/25/2022	
1/28/2022	
9/7/2022	0.061 (J)
9/8/2022	
9/12/2022	

Prediction Limit

Constituent: pH, Field (SU) Analysis Run 10/17/2022 2:06 PM View: Interwell PL

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-40	DGWC-38	DGWC-39	DGWC-37	DGWA-71 (bg)	DGWA-53 (bg)	DGWC-67	DGWC-69	DGWC-68A
9/2/2016	4.77								
9/8/2016		6.01	6.47	6.32					
12/7/2016		6.07	6.43	6.32					
12/8/2016	4.77								
3/28/2017					5.94	6.29			
3/30/2017	4.84	5.97	6.42	6.22					
3/31/2017							6.25	6.26	
4/12/2017								6.19	
5/11/2017						6.6			
5/12/2017					5.46		6.23	6.2	6.63
5/15/2017									
6/15/2017						6.41			
6/16/2017					5.81		6.22	6.22	6.63
7/11/2017					5.74				
7/12/2017						5.91			
7/13/2017	4.85	6.11	6.47	6.3			6.15	6.35	6.84
8/8/2017									6.57
10/24/2017					5.86	5.51			
10/26/2017	4.86	6.06	6.49				6.64	6.69	7.01
11/15/2017					5.77	6.5		6.22	
2/27/2018					5.66				
3/1/2018		6.05	6.37	6.28					
3/2/2018	4.67						6.18	6.1	6.58
3/8/2018						6.18			
7/10/2018					5.63				
7/12/2018	4.63	6.05	6.45	6.43		6.33			
7/13/2018							6.19	5.95	6.62
11/6/2018					5.79				
11/7/2018						6.22			
11/8/2018	4.79	6.07	6.49	6.36			6.23	6	6.5
3/12/2019					5.74				
3/13/2019	4.6	6.05	6.28	6.26		6	6.19	6.08	6.57
8/27/2019					5.87				
8/28/2019	4.68	5.98	6.41	6.27		6.04	6.22	6.09	6.6
10/15/2019					5.88				
10/16/2019						6.69		6.19	6.6
10/17/2019							6.14		
10/18/2019	4.71	6	6.35	6.26					
3/2/2020					5.77				
3/4/2020	4.64								
3/9/2020		6.12	6.37	6.34		6.41	6.23	6.12	6.6
8/11/2020					5.96				
8/13/2020	4.65	6.05	6.39	6.34		6.17	6.28	6.26	6.63
9/22/2020					6.06	6.43			
9/23/2020	4.78						6.23	6.08	6.6
9/24/2020		6.05		6.3					
9/25/2020			6.38						
3/1/2021					5.8				
3/8/2021	4.79								
3/10/2021								6.13	6.74
3/11/2021		6.22	6.66	6.49			6.28		
3/12/2021						6.38			

Prediction Limit

Constituent: pH, Field (SU) Analysis Run 10/17/2022 2:06 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-40	DGWC-38	DGWC-39	DGWC-37	DGWA-71 (bg)	DGWA-53 (bg)	DGWC-67	DGWC-69	DGWC-68A
9/8/2021					5.76				
9/9/2021						6.41			
9/14/2021	4.67								
9/15/2021		6.08							
9/16/2021				6.33			6.2	6.16	6.79 (o)
9/17/2021			6.49						
10/27/2021									6.56
1/18/2022					5.51				
1/19/2022	4.66						6.21		
1/20/2022			6.52						
1/21/2022		6.08		6.31					
1/25/2022								6.02	6.53
1/28/2022						6.35			
9/7/2022	4.54		6.43		5.65			6.2	6.62
9/8/2022				6.3		6.32	6.21		
9/9/2022				6.3					
9/12/2022		6.05							

Prediction Limit

Constituent: pH, Field (SU) Analysis Run 10/17/2022 2:06 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

DGWA-70A (bg)

9/2/2016	
9/8/2016	
12/7/2016	
12/8/2016	
3/28/2017	
3/30/2017	
3/31/2017	
4/12/2017	
5/11/2017	
5/12/2017	
5/15/2017	5.72
6/15/2017	5.74
6/16/2017	
7/11/2017	5.62
7/12/2017	
7/13/2017	
8/8/2017	5.6
10/24/2017	5.71
10/26/2017	
11/15/2017	
2/27/2018	5.5
3/1/2018	
3/2/2018	
3/8/2018	
7/10/2018	5.44
7/12/2018	
7/13/2018	
11/6/2018	5.71
11/7/2018	
11/8/2018	
3/12/2019	5.52
3/13/2019	
8/27/2019	5.53
8/28/2019	
10/15/2019	5.61
10/16/2019	
10/17/2019	
10/18/2019	
3/2/2020	5.54
3/4/2020	
3/9/2020	
8/11/2020	5.86
8/13/2020	
9/22/2020	6.01
9/23/2020	
9/24/2020	
9/25/2020	
3/1/2021	5.43
3/8/2021	
3/10/2021	
3/11/2021	
3/12/2021	

Prediction Limit

Constituent: pH, Field (SU) Analysis Run 10/17/2022 2:06 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

DGWA-70A (bg)

9/8/2021	
9/9/2021	5.5
9/14/2021	
9/15/2021	
9/16/2021	
9/17/2021	
10/27/2021	
1/18/2022	5.5
1/19/2022	
1/20/2022	
1/21/2022	
1/25/2022	
1/28/2022	
9/7/2022	5.6
9/8/2022	
9/9/2022	
9/12/2022	

Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-40	DGWC-39	DGWC-38	DGWC-37	DGWA-71 (bg)	DGWA-70A (bg)	DGWA-53 (bg)	DGWC-69	DGWC-67
9/2/2016	230								
9/8/2016		280	270	97					
12/7/2016		250	250	100					
12/8/2016	270								
3/28/2017					17	2.7	49		
3/30/2017	240	310	290	110					
3/31/2017								21	110
5/11/2017							21		
5/12/2017					17			17	100
5/15/2017						1			
6/15/2017						0.86 (J)	16		
6/16/2017					11			20	100
7/11/2017					11	1.4			
7/12/2017							10		
7/13/2017	220	220	270	200 (O)				17	110
8/8/2017						1.5			
10/24/2017					9.6	1.4	15		
10/26/2017	220	210	260	97				31	100
11/15/2017					7.8		3.8	29	
2/27/2018					7.4	0.54 (J)			
3/1/2018		166	242	94.6					
3/2/2018	219							10.1	98.5
3/8/2018							9.7		
7/12/2018	222	169	256	89.2			8		
7/13/2018								8.6	136
11/6/2018					7.3	<1 (J)			
11/7/2018							12.8		
11/8/2018	273	200	291	102				9.7	118
3/12/2019					7	0.35 (J)			
3/13/2019	445	265	300	92.2			23.7	8.4	233
10/15/2019					7.4	0.16 (J)			
10/16/2019							15.1	13.3	
10/17/2019									99.4
10/18/2019	205	182	239	76.4					
3/2/2020					8.5	<1			
3/4/2020	177								
3/9/2020		171	244	90.3			9.5	7.6	100
9/22/2020					6.5	<1	13.5		
9/23/2020	190							5.9	99.8
9/24/2020			240	84.1					
9/25/2020		153							
3/1/2021					5.2	<1			
3/8/2021	191								
3/10/2021								6.4	
3/11/2021		123	154	81.9					76.7
3/12/2021							8.8		
9/8/2021					6.1				
9/9/2021						<1	11.9		
9/14/2021	186								
9/15/2021			219						
9/16/2021				95				17.9	101
9/17/2021		156							

Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-40	DGWC-39	DGWC-38	DGWC-37	DGWA-71 (bg)	DGWA-70A (bg)	DGWA-53 (bg)	DGWC-69	DGWC-67
1/18/2022					6.3	<1			
1/19/2022	177								97.2
1/20/2022		123							
1/21/2022			188	89.8					
1/25/2022								7.1	
1/28/2022							13.1		
9/7/2022	203	146			7	<1		11.6	
9/8/2022				96.6			12		117
9/12/2022			234						

Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

DGWC-68A

9/2/2016	
9/8/2016	
12/7/2016	
12/8/2016	
3/28/2017	
3/30/2017	
3/31/2017	
5/11/2017	
5/12/2017	50
5/15/2017	
6/15/2017	
6/16/2017	47
7/11/2017	
7/12/2017	
7/13/2017	49
8/8/2017	48
10/24/2017	
10/26/2017	48
11/15/2017	
2/27/2018	
3/1/2018	
3/2/2018	44.7
3/8/2018	
7/12/2018	
7/13/2018	43.3
11/6/2018	
11/7/2018	
11/8/2018	43.5
3/12/2019	
3/13/2019	44.1
10/15/2019	
10/16/2019	32.1
10/17/2019	
10/18/2019	
3/2/2020	
3/4/2020	
3/9/2020	37.4
9/22/2020	
9/23/2020	38.7
9/24/2020	
9/25/2020	
3/1/2021	
3/8/2021	
3/10/2021	38.4
3/11/2021	
3/12/2021	
9/8/2021	
9/9/2021	
9/14/2021	
9/15/2021	
9/16/2021	22.3
9/17/2021	

Prediction Limit

Constituent: Sulfate as SO4 (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

DGWC-68A

1/18/2022	
1/19/2022	
1/20/2022	
1/21/2022	
1/25/2022	36.3
1/28/2022	
9/7/2022	36.5
9/8/2022	
9/12/2022	

Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-38	DGWC-37	DGWC-39	DGWC-40	DGWA-71 (bg)	DGWA-70A (bg)	DGWA-53 (bg)	DGWC-69	DGWC-67
9/2/2016				583 (O)					
9/8/2016	437	279	522						
12/7/2016	478	300	565						
12/8/2016				319					
3/28/2017					90	39	202		
3/30/2017	448	273	496	344					
3/31/2017								138	270
5/11/2017							241		
5/12/2017					92			243	287
5/15/2017						88			
6/15/2017						65	251		
6/16/2017					100			155	309
7/11/2017					59	25			
7/12/2017							218		
7/13/2017	504	312	508	386				122	275
8/8/2017						53			
10/24/2017					117	49	671 (O)		
10/26/2017	554	340	532	373				234	319
11/15/2017					90		241	188	
2/27/2018					79	43			
3/1/2018	492	311	440						
3/2/2018				359				73	264
3/8/2018							213		
7/12/2018	478	290	463	365			198		
7/13/2018								95	297
11/6/2018					85	65			
11/7/2018							200		
11/8/2018	507	295	485	399				112	295
3/12/2019					74	43			
3/13/2019	487	286	526	351			201	95	278
10/15/2019					89	70			
10/16/2019							126	108	
10/17/2019									281
10/18/2019	494	269	489	360					
3/2/2020					67	52			
3/4/2020				400					
3/9/2020	554	357	508				171	115	209
9/22/2020					74	46	142		
9/23/2020				357				102	296
9/24/2020	489	280							
9/25/2020			460						
3/1/2021					62	25			
3/8/2021				346					
3/10/2021								78	
3/11/2021	463	255	440						265
3/12/2021							124		
9/8/2021					75				
9/9/2021						53	131		
9/14/2021				347					
9/15/2021	474								
9/16/2021		278						113	282
9/17/2021			446						

Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

DGWC-68A

9/2/2016	
9/8/2016	
12/7/2016	
12/8/2016	
3/28/2017	
3/30/2017	
3/31/2017	
5/11/2017	
5/12/2017	300
5/15/2017	
6/15/2017	
6/16/2017	271
7/11/2017	
7/12/2017	
7/13/2017	246
8/8/2017	278
10/24/2017	
10/26/2017	287
11/15/2017	
2/27/2018	
3/1/2018	
3/2/2018	252
3/8/2018	
7/12/2018	
7/13/2018	275
11/6/2018	
11/7/2018	
11/8/2018	277
3/12/2019	
3/13/2019	267
10/15/2019	
10/16/2019	218
10/17/2019	
10/18/2019	
3/2/2020	
3/4/2020	
3/9/2020	188
9/22/2020	
9/23/2020	251
9/24/2020	
9/25/2020	
3/1/2021	
3/8/2021	
3/10/2021	232
3/11/2021	
3/12/2021	
9/8/2021	
9/9/2021	
9/14/2021	
9/15/2021	
9/16/2021	259
9/17/2021	

Prediction Limit

Constituent: Total Dissolved Solids [TDS] (mg/L) Analysis Run 10/17/2022 2:06 PM View: Interwell PL
Plant McDonough Client: Southern Company Data: McDonough AP

DGWC-68A

1/18/2022	
1/19/2022	
1/20/2022	
1/21/2022	
1/25/2022	259
1/28/2022	
9/7/2022	256
9/8/2022	
9/12/2022	

FIGURE E.

Appendix III Trend Test - Significant Results

Plant McDonough Client: Southern Company Data: McDonough AP Printed 10/17/2022, 2:09 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Calcium, total (mg/L)	DGWA-53 (bg)	-3.715	-76	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	DGWA-53 (bg)	-0.1771	-85	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	DGWC-40	-0.4831	-61	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	DGWC-67	0.5636	100	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWA-70A (bg)	-0.1765	-60	-58	Yes	16	43.75	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWA-71 (bg)	-1.051	-88	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWC-38	-10.06	-61	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWC-39	-23.39	-81	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWC-40	-9.834	-60	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	DGWA-53 (bg)	-21.09	-79	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	DGWC-39	-15.95	-60	-58	Yes	16	0	n/a	n/a	0.01	NP

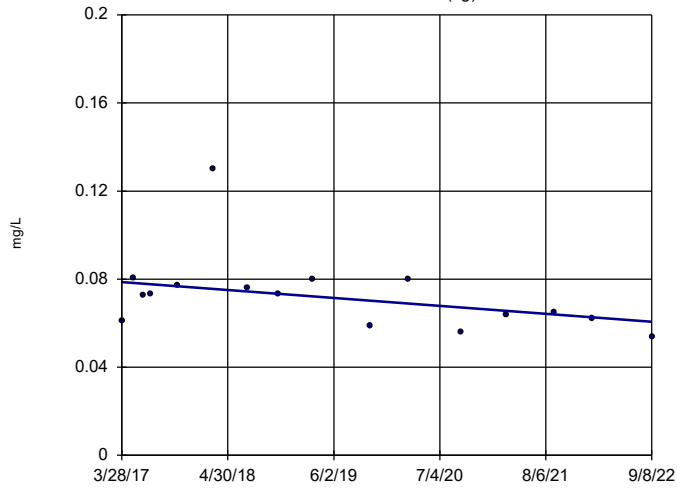
Appendix III Trend Test - All Results

Plant McDonough Client: Southern Company Data: McDonough AP Printed 10/17/2022, 2:09 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron, total (mg/L)	DGWA-53 (bg)	-0.003305	-39	-58	No	16	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	DGWA-70A (bg)	0	33	58	No	16	56.25	n/a	n/a	0.01	NP
Boron, total (mg/L)	DGWA-71 (bg)	0.0007215	16	53	No	15	26.67	n/a	n/a	0.01	NP
Boron, total (mg/L)	DGWC-37	-0.0417	-33	-58	No	16	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	DGWC-38	-0.04359	-36	-58	No	16	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	DGWC-39	-0.08204	-54	-58	No	16	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	DGWC-40	-0.02553	-55	-58	No	16	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	DGWC-67	0.1184	55	58	No	16	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	DGWC-68A	-0.04241	-21	-58	No	16	0	n/a	n/a	0.01	NP
Boron, total (mg/L)	DGWC-69	-0.03589	-58	-68	No	18	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	DGWA-53 (bg)	-3.715	-76	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	DGWA-70A (bg)	-0.03479	-12	-58	No	16	6.25	n/a	n/a	0.01	NP
Calcium, total (mg/L)	DGWA-71 (bg)	-0.4482	-35	-53	No	15	6.667	n/a	n/a	0.01	NP
Calcium, total (mg/L)	DGWC-37	1.067	39	58	No	16	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	DGWC-38	2.106	58	58	No	16	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	DGWC-39	0.6502	15	58	No	16	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	DGWC-40	0.5648	37	58	No	16	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	DGWC-67	1.043	58	58	No	16	0	n/a	n/a	0.01	NP
Calcium, total (mg/L)	DGWC-68A	1.413	56	58	No	16	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	DGWA-53 (bg)	-0.1771	-85	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	DGWA-70A (bg)	-0.06575	-45	-58	No	16	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	DGWA-71 (bg)	0.3259	40	58	No	16	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	DGWC-38	0.1424	49	58	No	16	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	DGWC-40	-0.4831	-61	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride, Total (mg/L)	DGWC-67	0.5636	100	58	Yes	16	0	n/a	n/a	0.01	NP
pH, Field (SU)	DGWA-53 (bg)	0.01874	12	74	No	19	0	n/a	n/a	0.01	NP
pH, Field (SU)	DGWA-70A (bg)	-0.02257	-32	-68	No	18	0	n/a	n/a	0.01	NP
pH, Field (SU)	DGWA-71 (bg)	0	1	74	No	19	0	n/a	n/a	0.01	NP
pH, Field (SU)	DGWC-40	-0.02747	-46	-68	No	18	0	n/a	n/a	0.01	NP
pH, Field (SU)	DGWC-68A	-0.008902	-26	-68	No	18	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWA-53 (bg)	-0.7643	-32	-63	No	17	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWA-70A (bg)	-0.1765	-60	-58	Yes	16	43.75	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWA-71 (bg)	-1.051	-88	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWC-37	-2.312	-38	-53	No	15	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWC-38	-10.06	-61	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWC-39	-23.39	-81	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWC-40	-9.834	-60	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate as SO4 (mg/L)	DGWC-67	-0.2587	-17	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	DGWA-53 (bg)	-21.09	-79	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	DGWA-70A (bg)	-2.113	-12	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	DGWA-71 (bg)	-3.712	-40	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	DGWC-37	-2.185	-9	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	DGWC-38	-0.4188	-2	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	DGWC-39	-15.95	-60	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	DGWC-40	-4.306	-21	-53	No	15	0	n/a	n/a	0.01	NP
Total Dissolved Solids [TDS] (mg/L)	DGWC-68A	-5.853	-43	-58	No	16	0	n/a	n/a	0.01	NP

Sen's Slope Estimator

DGWA-53 (bg)



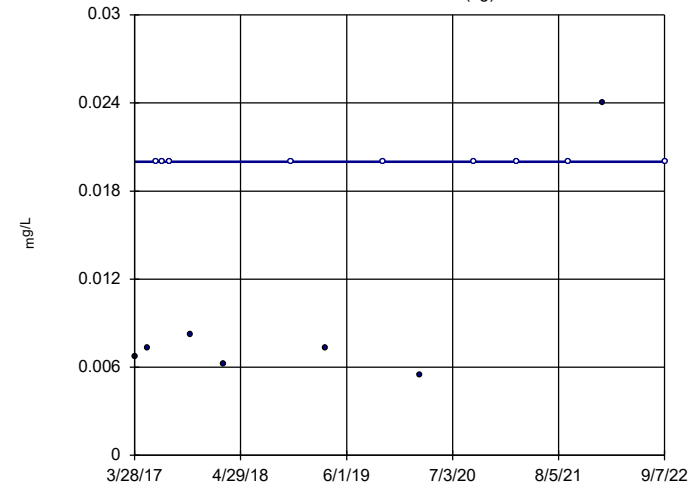
n = 16
 Slope = -0.003305 units per year.
 Mann-Kendall statistic = -39
 critical = -58
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron, total Analysis Run 10/17/2022 2:07 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Hollow symbols indicate censored values.

Sen's Slope Estimator

DGWA-70A (bg)



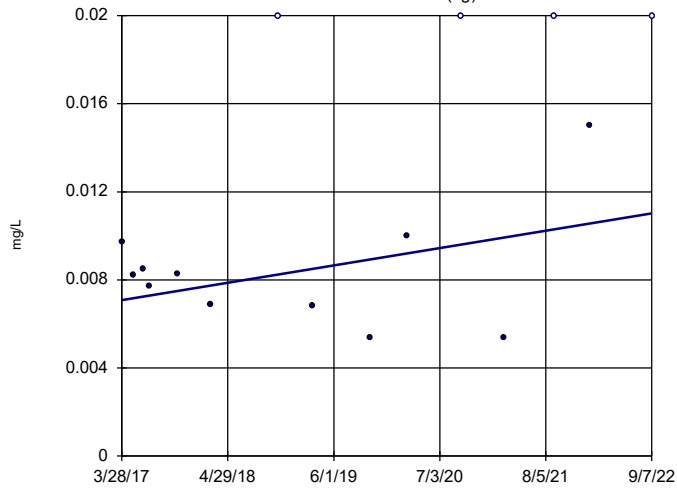
n = 16
 Slope = 0 units per year.
 Mann-Kendall statistic = 33
 critical = 58
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron, total Analysis Run 10/17/2022 2:07 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Hollow symbols indicate censored values.

Sen's Slope Estimator

DGWA-71 (bg)

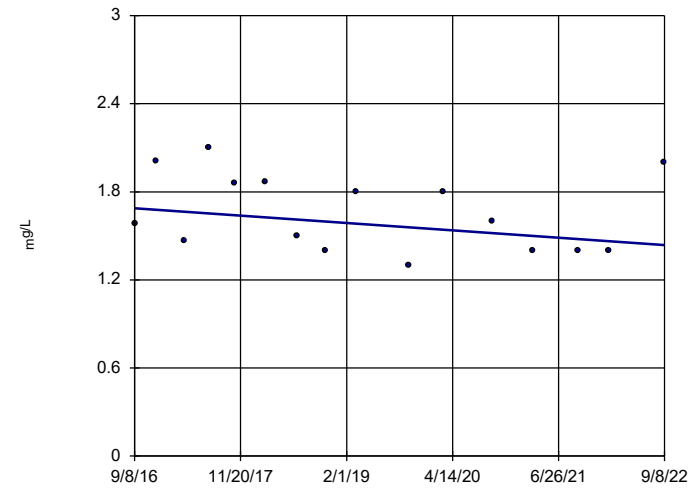


n = 15
 Slope = 0.0007215 units per year.
 Mann-Kendall statistic = 16
 critical = 53
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron, total Analysis Run 10/17/2022 2:07 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWC-37

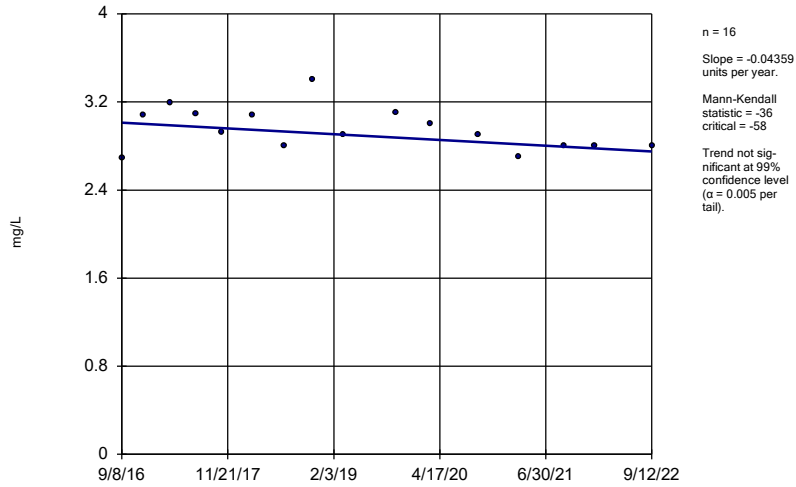


n = 16
 Slope = -0.0417 units per year.
 Mann-Kendall statistic = -33
 critical = -58
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Boron, total Analysis Run 10/17/2022 2:07 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

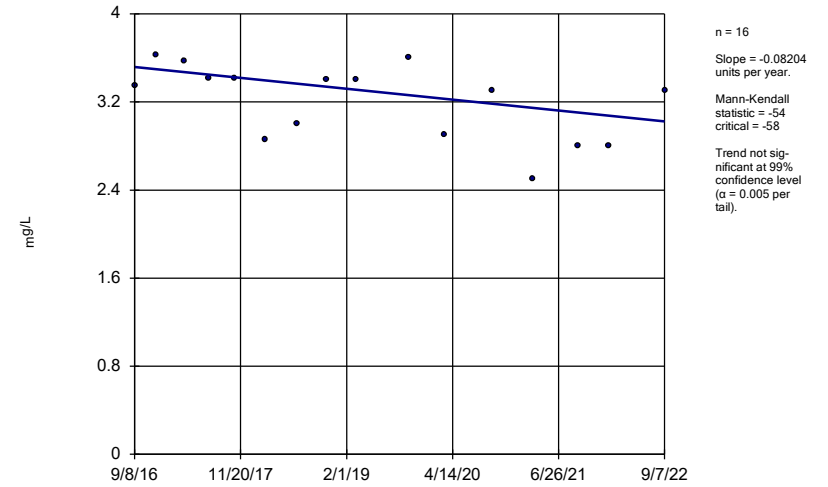
DGWC-38



Constituent: Boron, total Analysis Run 10/17/2022 2:07 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

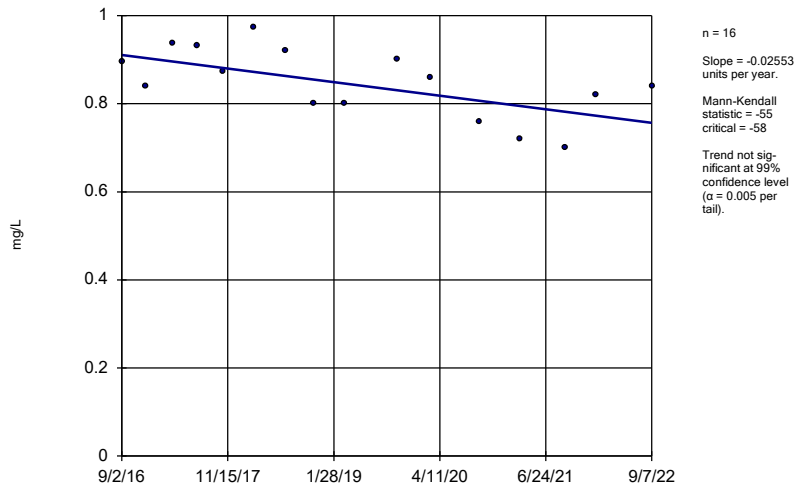
DGWC-39



Constituent: Boron, total Analysis Run 10/17/2022 2:07 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

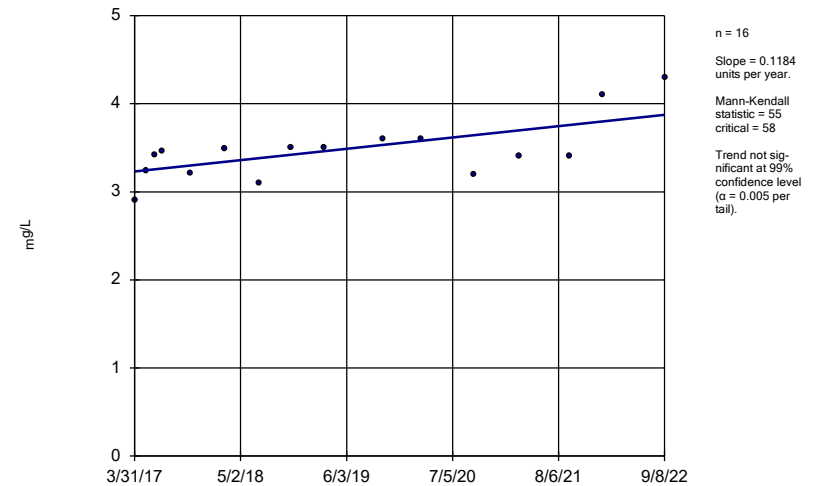
DGWC-40



Constituent: Boron, total Analysis Run 10/17/2022 2:07 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

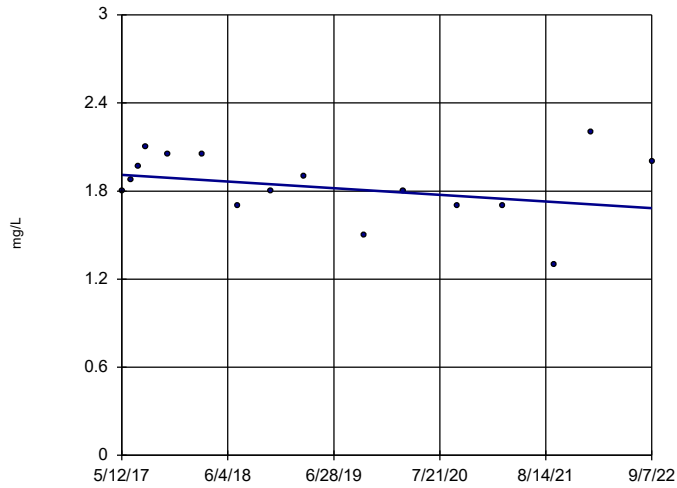
Sen's Slope Estimator

DGWC-67



Constituent: Boron, total Analysis Run 10/17/2022 2:07 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

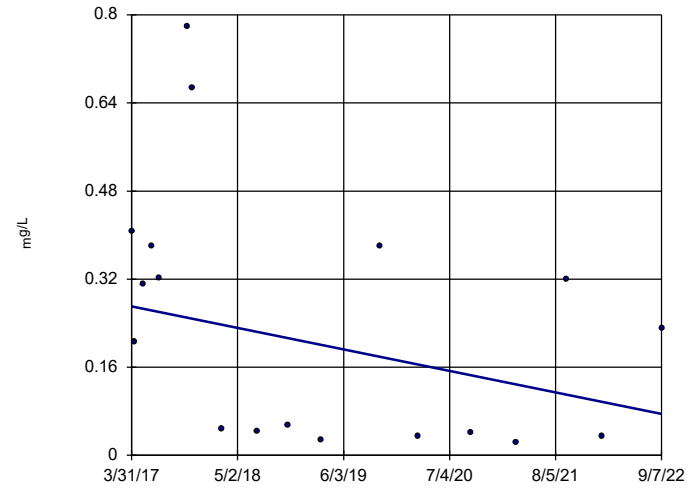
Sen's Slope Estimator
DGWC-68A



n = 16
Slope = -0.04241
units per year.
Mann-Kendall
statistic = -21
critical = -58
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Boron, total Analysis Run 10/17/2022 2:07 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

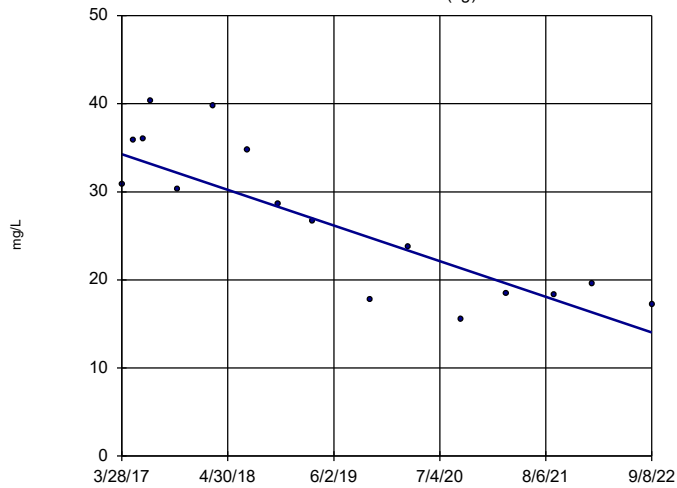
Sen's Slope Estimator
DGWC-69



n = 18
Slope = -0.03589
units per year.
Mann-Kendall
statistic = -58
critical = -68
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Boron, total Analysis Run 10/17/2022 2:07 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

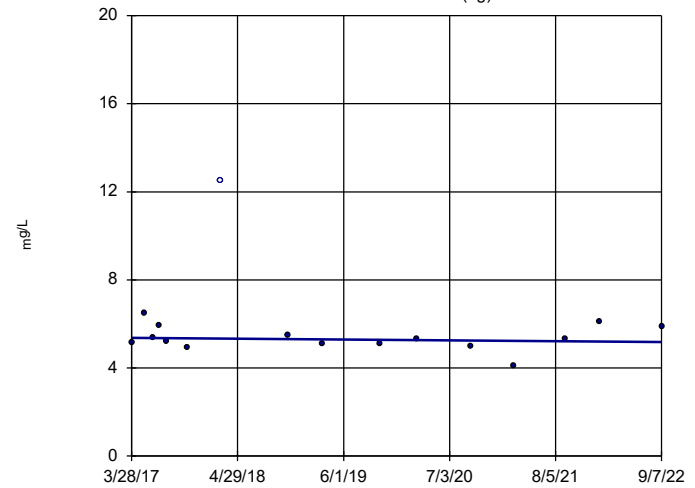
Sen's Slope Estimator
DGWA-53 (bg)



n = 16
Slope = -3.715
units per year.
Mann-Kendall
statistic = -76
critical = -58
Decreasing trend
significant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Calcium, total Analysis Run 10/17/2022 2:07 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator
DGWA-70A (bg)

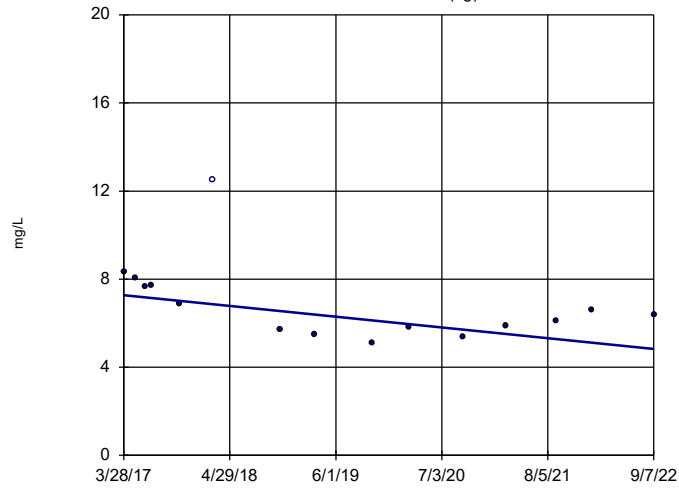


n = 16
Slope = -0.03479
units per year.
Mann-Kendall
statistic = -12
critical = -58
Trend not sig-
nificant at 99%
confidence level
($\alpha = 0.005$ per
tail).

Constituent: Calcium, total Analysis Run 10/17/2022 2:07 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWA-71 (bg)

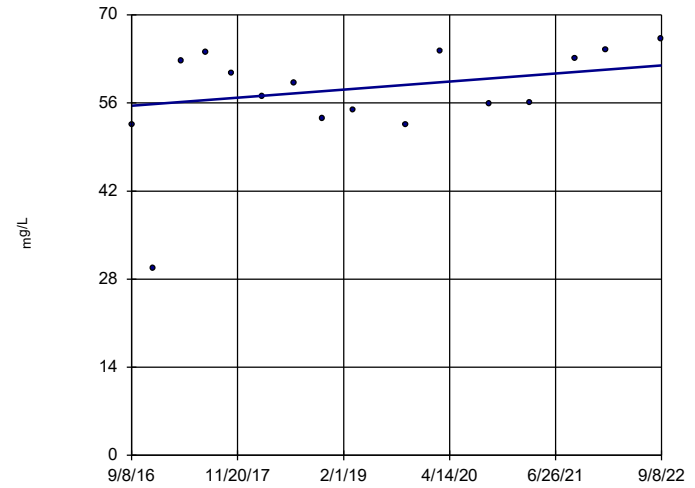


n = 15
 Slope = -0.4482
 units per year.
 Mann-Kendall
 statistic = -35
 critical = -53
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Calcium, total Analysis Run 10/17/2022 2:07 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWC-37

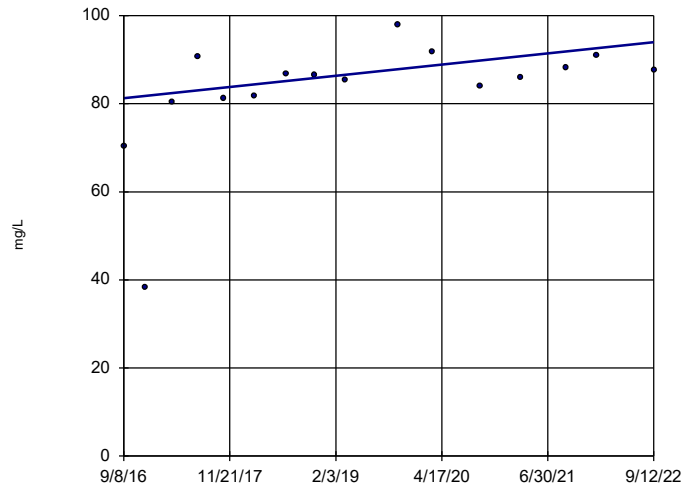


n = 16
 Slope = 1.067
 units per year.
 Mann-Kendall
 statistic = 39
 critical = 58
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Calcium, total Analysis Run 10/17/2022 2:08 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWC-38

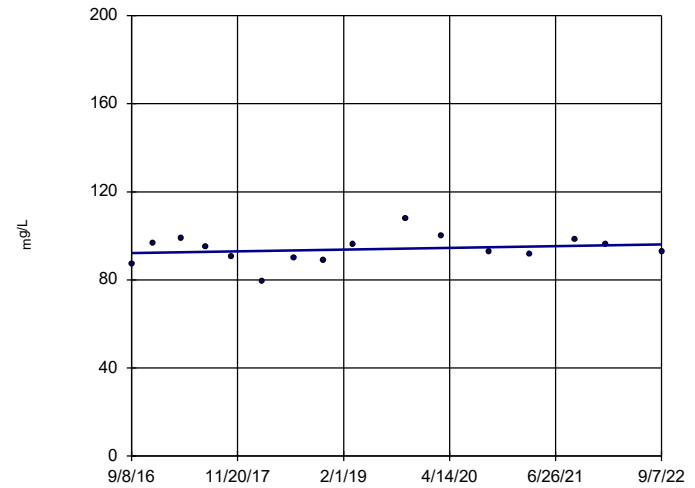


n = 16
 Slope = 2.106
 units per year.
 Mann-Kendall
 statistic = 58
 critical = 58
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Calcium, total Analysis Run 10/17/2022 2:08 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWC-39

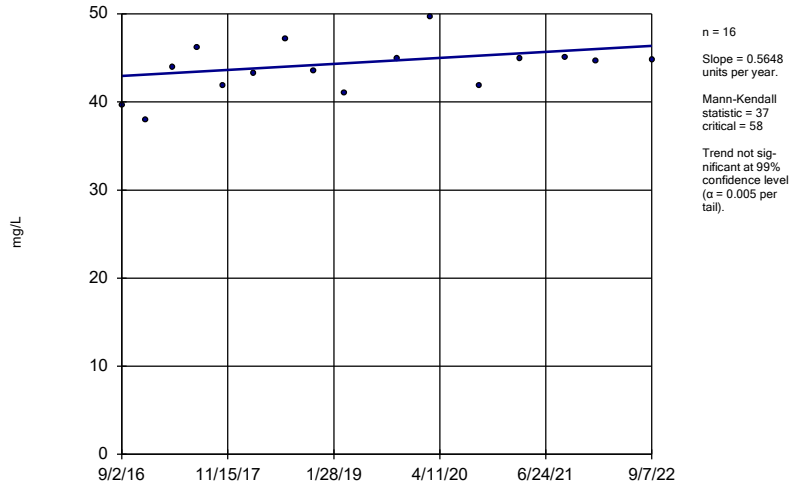


n = 16
 Slope = 0.6502
 units per year.
 Mann-Kendall
 statistic = 15
 critical = 58
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Calcium, total Analysis Run 10/17/2022 2:08 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

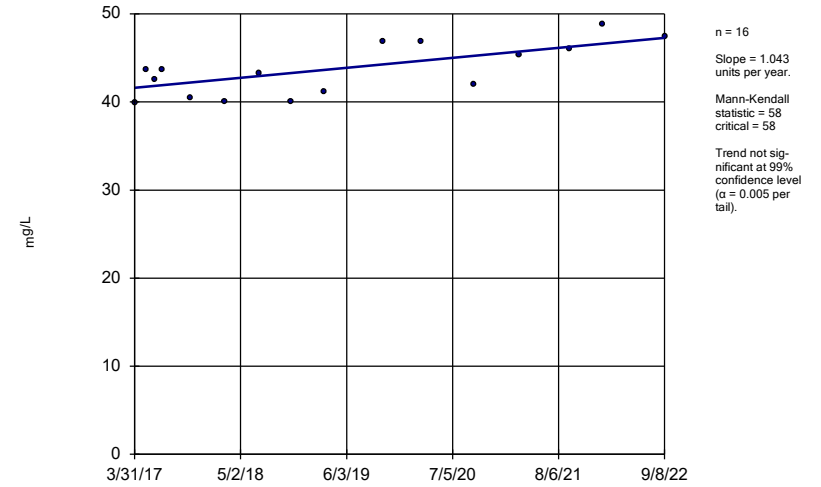
DGWC-40



Constituent: Calcium, total Analysis Run 10/17/2022 2:08 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

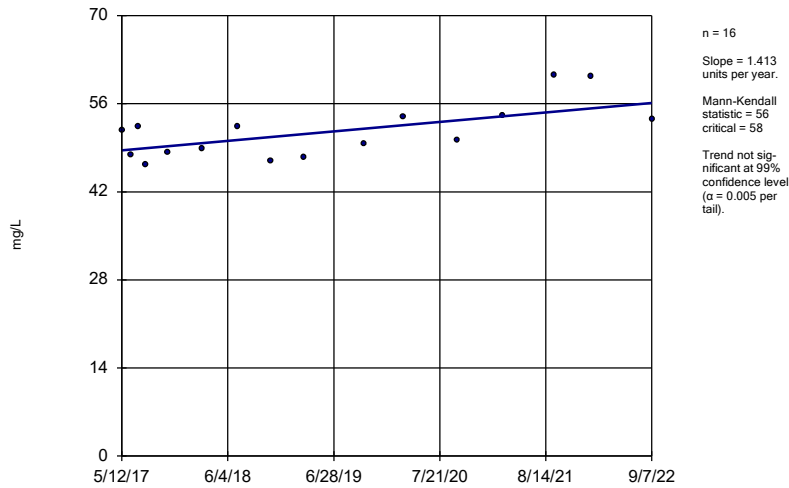
DGWC-67



Constituent: Calcium, total Analysis Run 10/17/2022 2:08 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

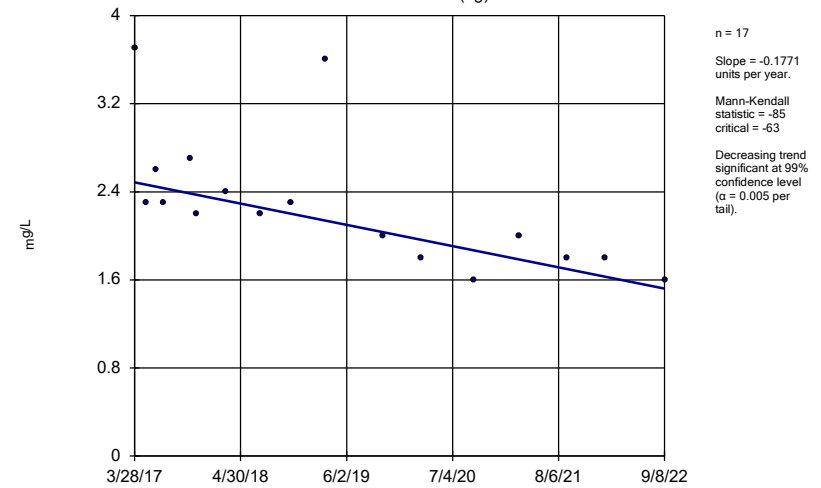
DGWC-68A



Constituent: Calcium, total Analysis Run 10/17/2022 2:08 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

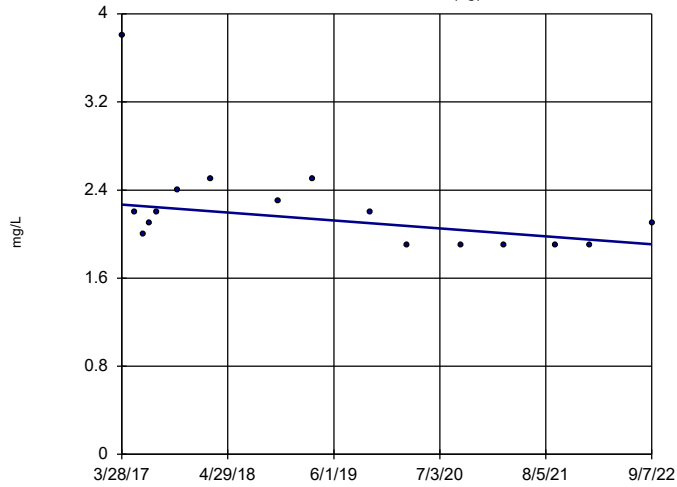
DGWA-53 (bg)



Constituent: Chloride, Total Analysis Run 10/17/2022 2:08 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWA-70A (bg)

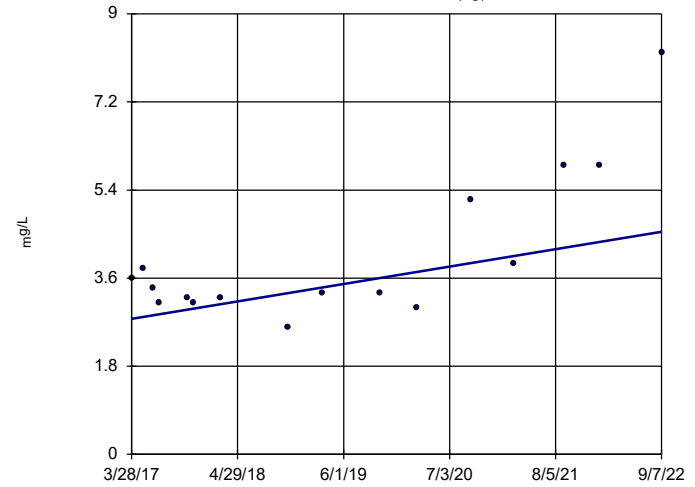


n = 16
 Slope = -0.06575 units per year.
 Mann-Kendall statistic = -45
 critical = -58
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride, Total Analysis Run 10/17/2022 2:08 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWA-71 (bg)

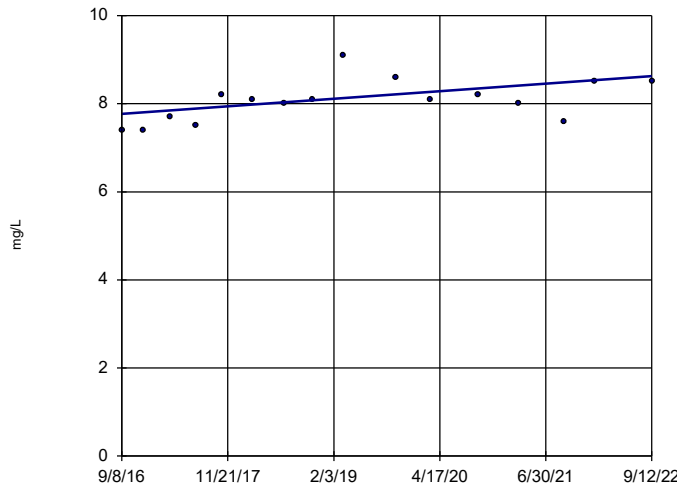


n = 16
 Slope = 0.3259 units per year.
 Mann-Kendall statistic = 40
 critical = 58
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride, Total Analysis Run 10/17/2022 2:08 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWC-38

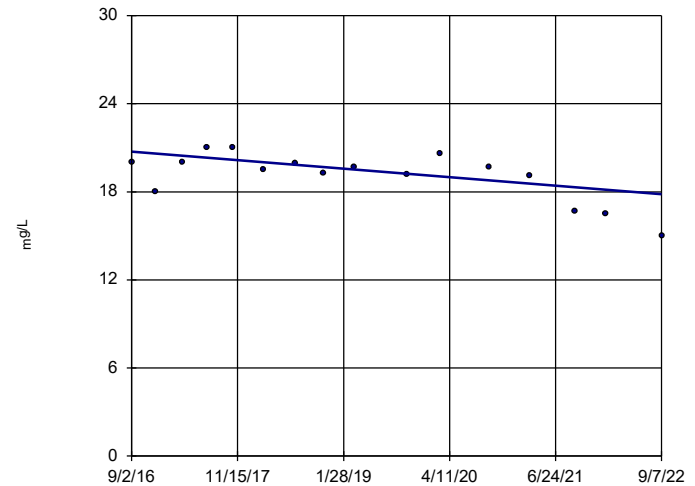


n = 16
 Slope = 0.1424 units per year.
 Mann-Kendall statistic = 49
 critical = 58
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride, Total Analysis Run 10/17/2022 2:08 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWC-40

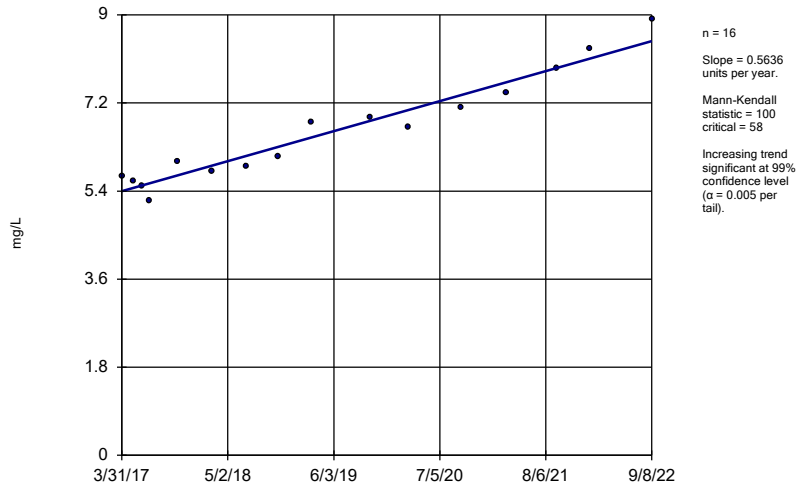


n = 16
 Slope = -0.4831 units per year.
 Mann-Kendall statistic = -61
 critical = -58
 Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Chloride, Total Analysis Run 10/17/2022 2:08 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

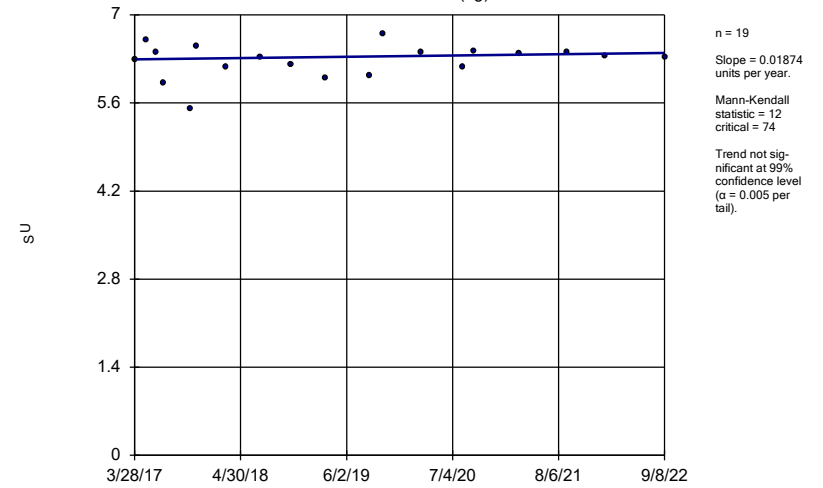
DGWC-67



Constituent: Chloride, Total Analysis Run 10/17/2022 2:08 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

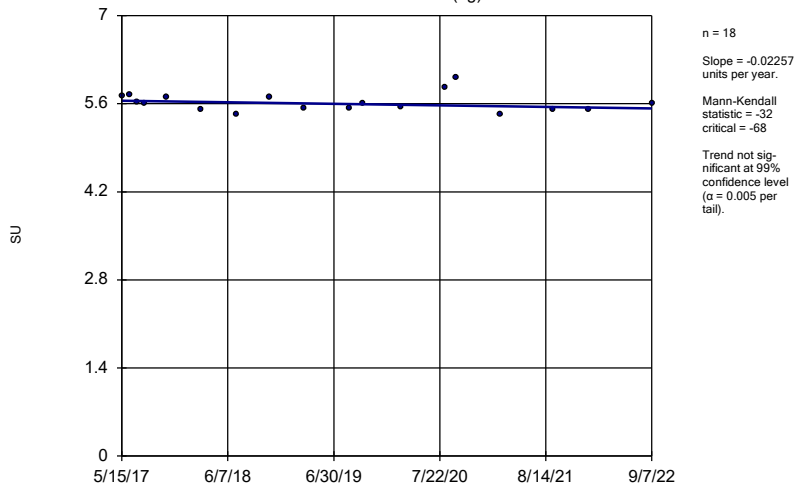
DGWA-53 (bg)



Constituent: pH, Field Analysis Run 10/17/2022 2:08 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

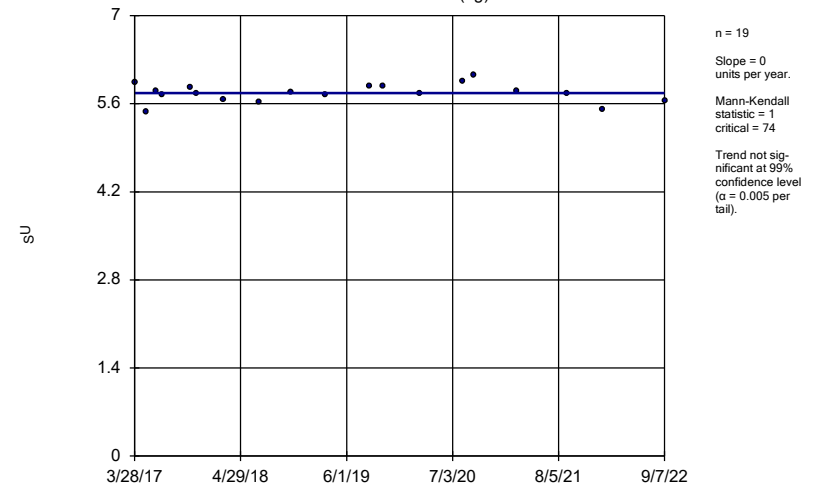
DGWA-70A (bg)



Constituent: pH, Field Analysis Run 10/17/2022 2:08 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

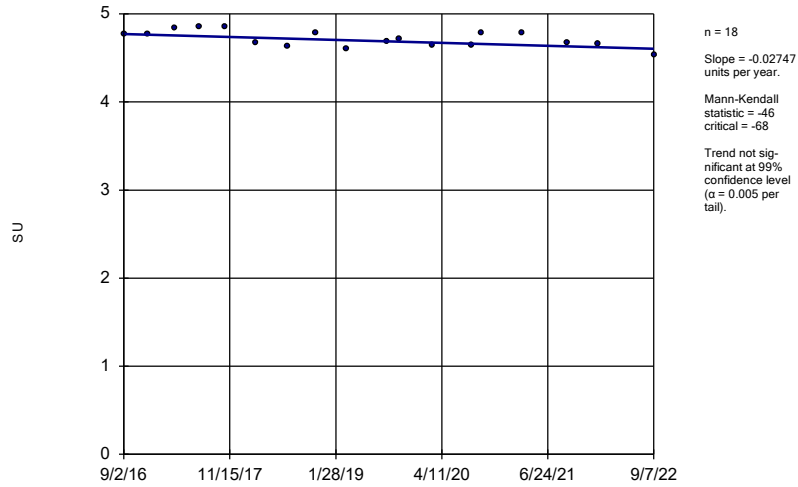
DGWA-71 (bg)



Constituent: pH, Field Analysis Run 10/17/2022 2:08 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

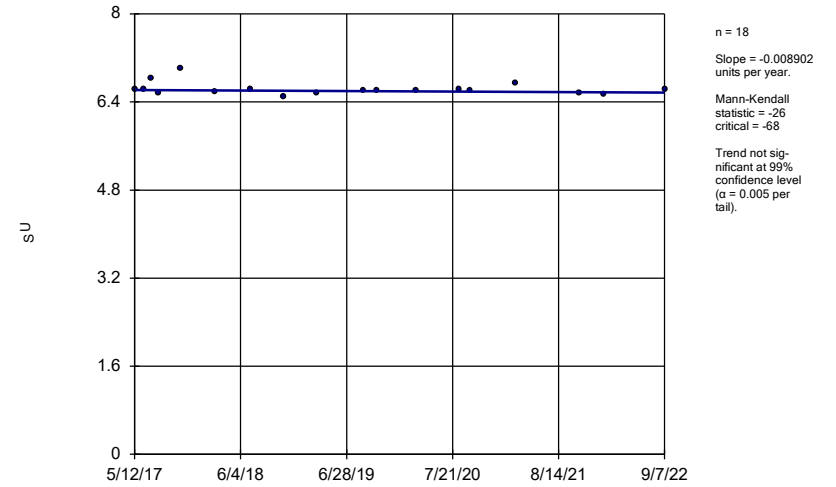
DGWC-40



Constituent: pH, Field Analysis Run 10/17/2022 2:08 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

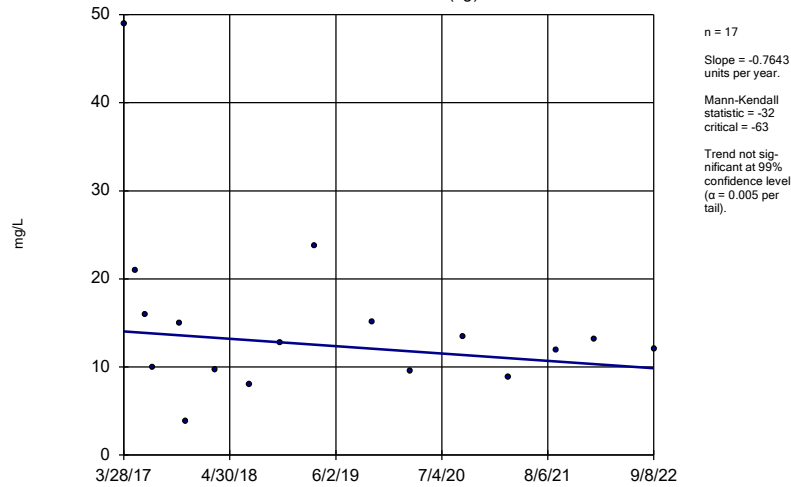
DGWC-68A



Constituent: pH, Field Analysis Run 10/17/2022 2:08 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWA-53 (bg)

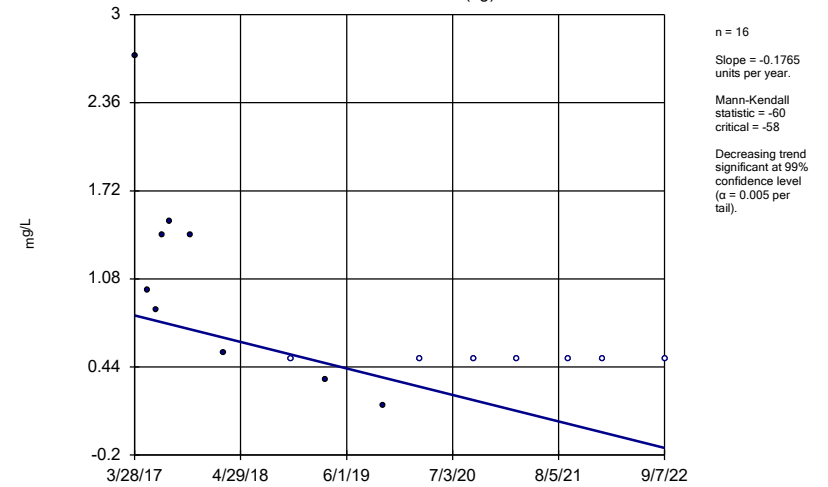


Constituent: Sulfate as SO4 Analysis Run 10/17/2022 2:08 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

Hollow symbols indicate censored values.

Sen's Slope Estimator

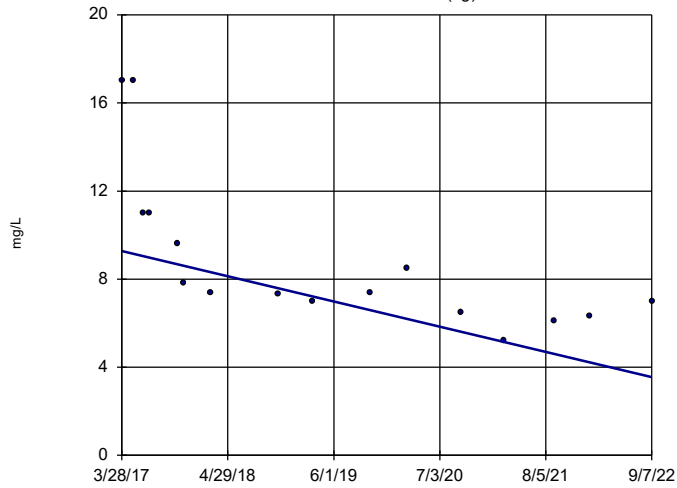
DGWA-70A (bg)



Constituent: Sulfate as SO4 Analysis Run 10/17/2022 2:08 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWA-71 (bg)

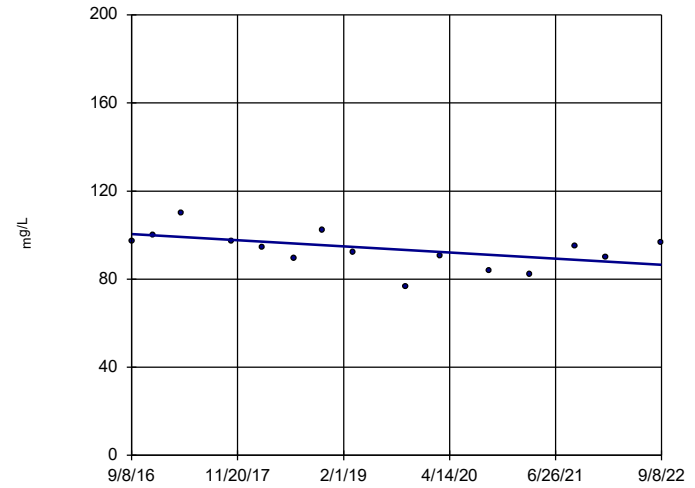


n = 16
 Slope = -1.051
 units per year.
 Mann-Kendall
 statistic = -.88
 critical = -.58
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate as SO4 Analysis Run 10/17/2022 2:08 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWC-37

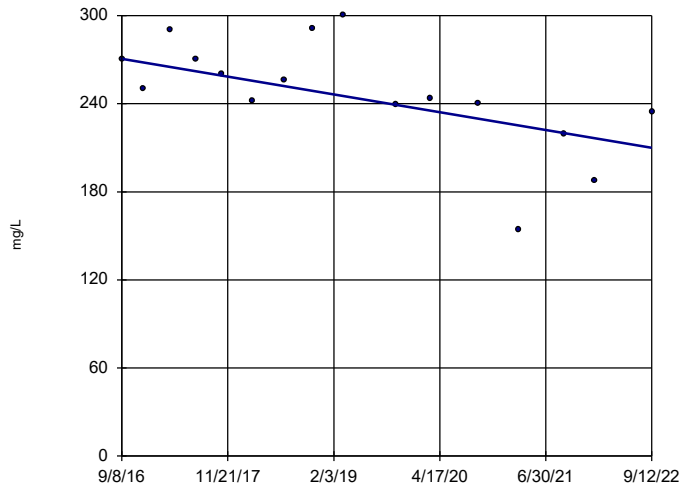


n = 15
 Slope = -2.312
 units per year.
 Mann-Kendall
 statistic = -.38
 critical = -.53
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate as SO4 Analysis Run 10/17/2022 2:08 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWC-38

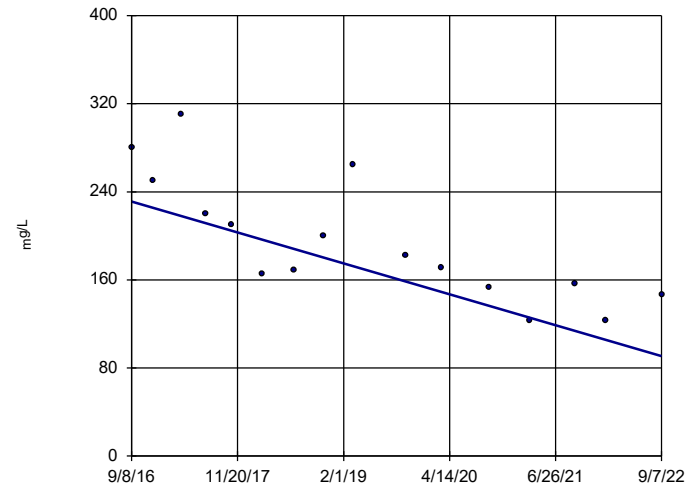


n = 16
 Slope = -10.06
 units per year.
 Mann-Kendall
 statistic = -.61
 critical = -.58
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate as SO4 Analysis Run 10/17/2022 2:08 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWC-39

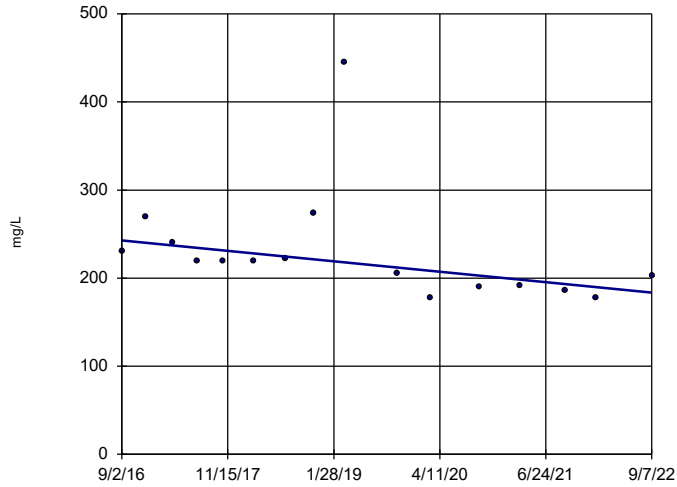


n = 16
 Slope = -23.39
 units per year.
 Mann-Kendall
 statistic = -.81
 critical = -.58
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Sulfate as SO4 Analysis Run 10/17/2022 2:08 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

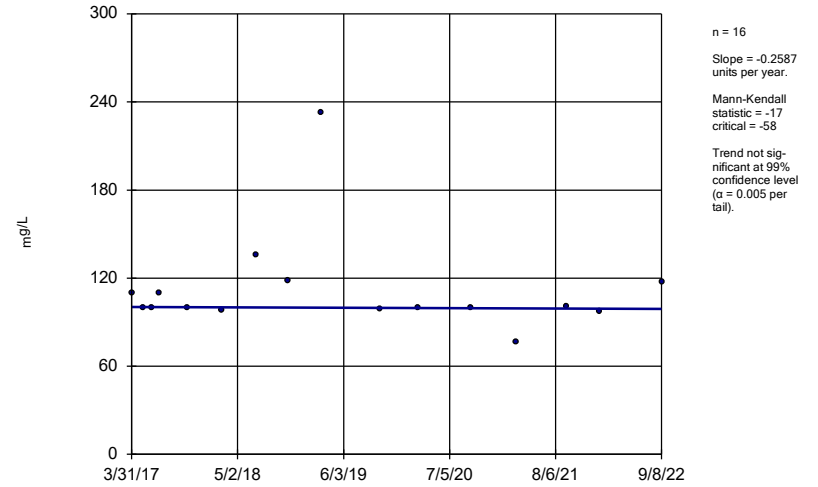
DGWC-40



Constituent: Sulfate as SO4 Analysis Run 10/17/2022 2:08 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

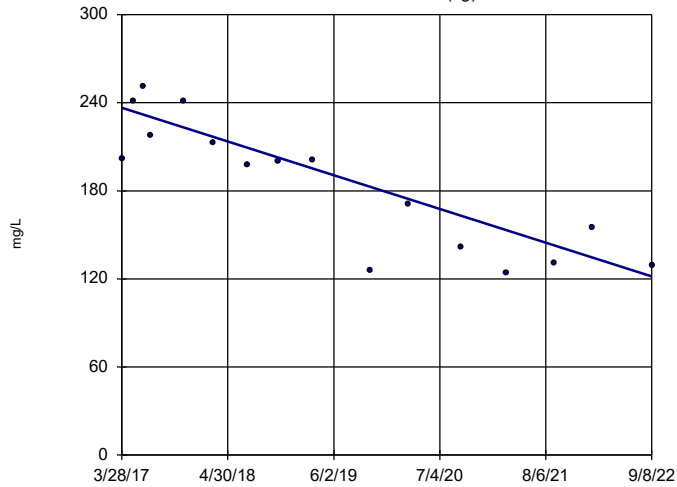
DGWC-67



Constituent: Sulfate as SO4 Analysis Run 10/17/2022 2:08 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

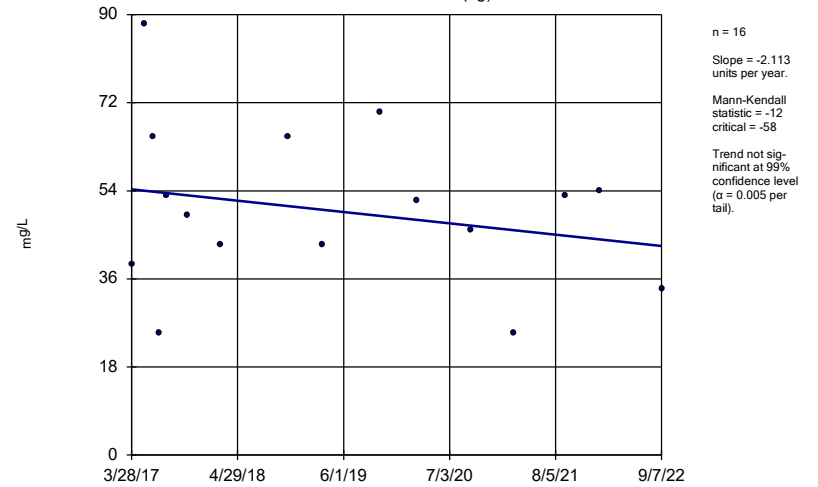
DGWA-53 (bg)



Constituent: Total Dissolved Solids [TDS] Analysis Run 10/17/2022 2:08 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

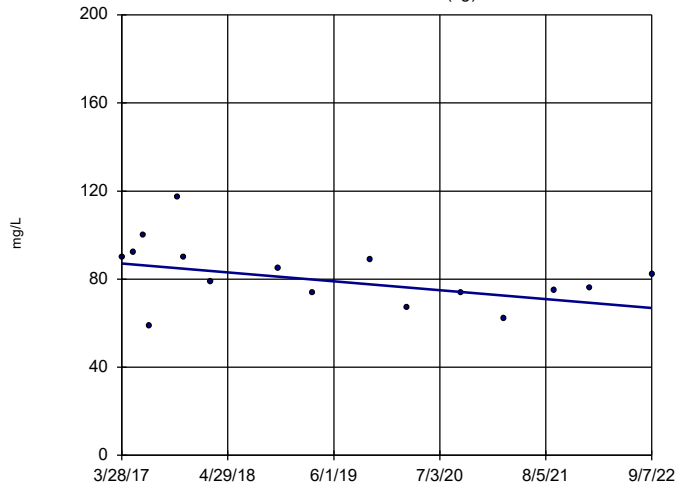
DGWA-70A (bg)



Constituent: Total Dissolved Solids [TDS] Analysis Run 10/17/2022 2:08 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWA-71 (bg)

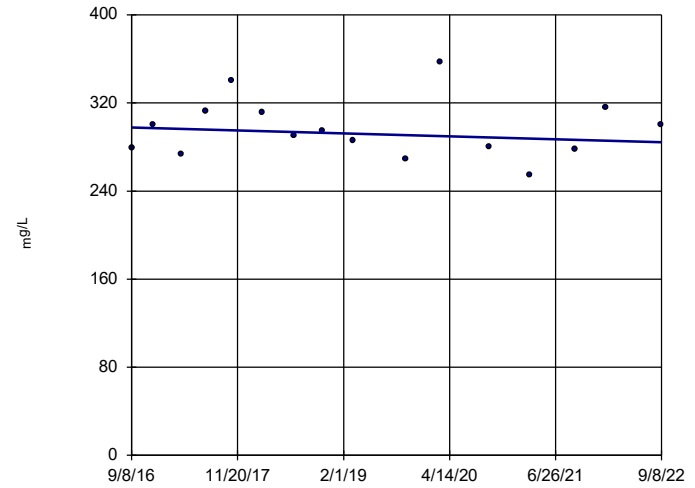


n = 16
 Slope = -3.712 units per year.
 Mann-Kendall statistic = -40
 critical = -58
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 10/17/2022 2:08 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWC-37

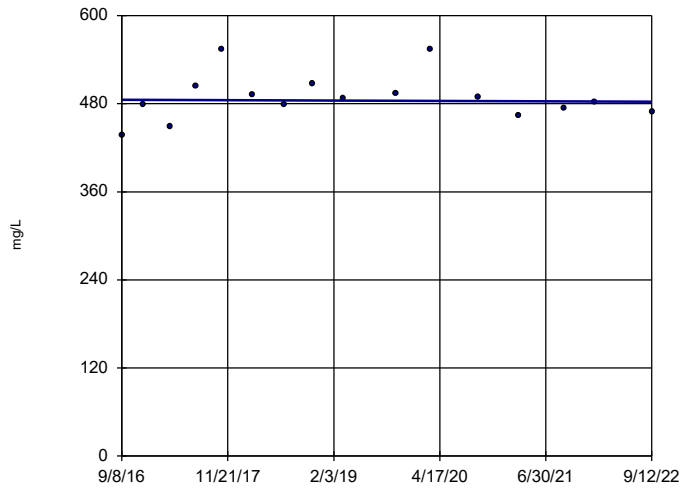


n = 16
 Slope = -2.185 units per year.
 Mann-Kendall statistic = -9
 critical = -58
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 10/17/2022 2:08 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWC-38

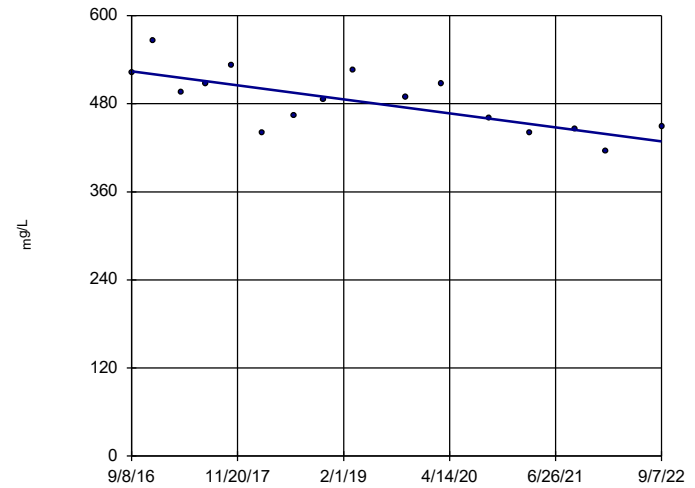


n = 16
 Slope = -0.4188 units per year.
 Mann-Kendall statistic = -2
 critical = -58
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 10/17/2022 2:08 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWC-39

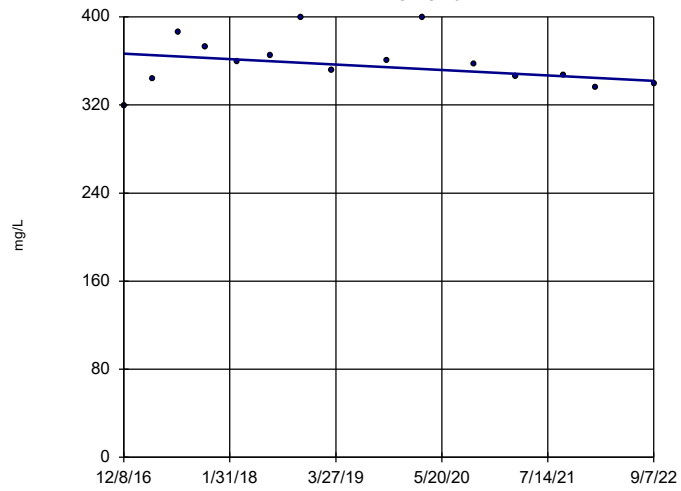


n = 16
 Slope = -15.95 units per year.
 Mann-Kendall statistic = -60
 critical = -58
 Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 10/17/2022 2:08 PM View: All Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWC-40

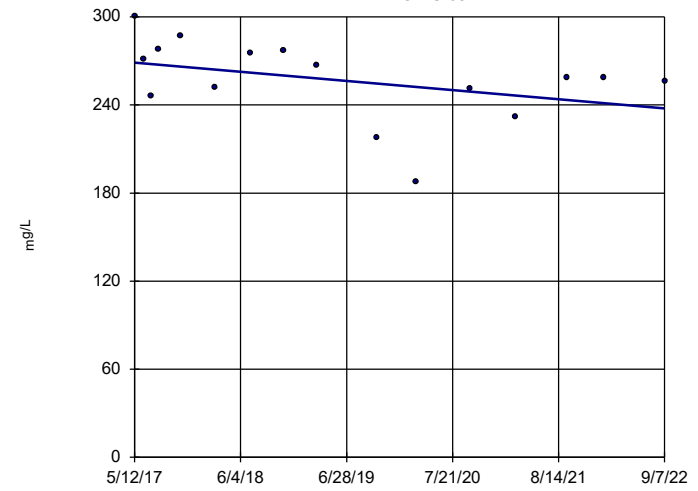


n = 15
Slope = -4.306 units per year.
Mann-Kendall statistic = -21
critical = -53
Trend not significant at 99% confidence level ($\alpha = 0.005$ per tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 10/17/2022 2:08 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWC-68A



n = 16
Slope = -5.853 units per year.
Mann-Kendall statistic = -43
critical = -58
Trend not significant at 99% confidence level ($\alpha = 0.005$ per tail).

Constituent: Total Dissolved Solids [TDS] Analysis Run 10/17/2022 2:08 PM View: All Trend Test
Plant McDonough Client: Southern Company Data: McDonough AP

FIGURE F.

Upper Tolerance Limit Summary Table

Plant McDonough Client: Southern Company Data: McDonough AP Printed 11/16/2022, 1:37 PM

Constituent	Well	Upper Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	n/a	0.003	n/a	n/a	n/a	50	n/a	n/a	82	n/a	n/a	0.07694	NP Inter(NDs)
Arsenic (mg/L)	n/a	0.0054	n/a	n/a	n/a	50	n/a	n/a	74	n/a	n/a	0.07694	NP Inter(normality)
Barium (mg/L)	n/a	0.19	n/a	n/a	n/a	50	n/a	n/a	0	n/a	n/a	0.07694	NP Inter(normality)
Beryllium (mg/L)	n/a	0.0009	n/a	n/a	n/a	51	n/a	n/a	58.82	n/a	n/a	0.0731	NP Inter(normality)
Cadmium (mg/L)	n/a	0.0005	n/a	n/a	n/a	50	n/a	n/a	94	n/a	n/a	0.07694	NP Inter(NDs)
Chromium (mg/L)	n/a	0.005	n/a	n/a	n/a	49	n/a	n/a	65.31	n/a	n/a	0.08099	NP Inter(normality)
Cobalt (mg/L)	n/a	0.0322	n/a	n/a	n/a	50	n/a	n/a	40	n/a	n/a	0.07694	NP Inter(normality)
Combined Radium 226 + 228 (pCi/L)	n/a	4.8	n/a	n/a	n/a	52	1.098	0.5322	0	None	sqrt(x)	0.05	Inter
Fluoride, total (mg/L)	n/a	0.42	n/a	n/a	n/a	54	n/a	n/a	50	n/a	n/a	0.06267	NP Inter(normality)
Lead (mg/L)	n/a	0.001	n/a	n/a	n/a	50	n/a	n/a	82	n/a	n/a	0.07694	NP Inter(NDs)
Lithium (mg/L)	n/a	0.03	n/a	n/a	n/a	50	n/a	n/a	36	n/a	n/a	0.07694	NP Inter(normality)
Mercury (mg/L)	n/a	0.0002	n/a	n/a	n/a	50	n/a	n/a	84	n/a	n/a	0.07694	NP Inter(NDs)
Molybdenum (mg/L)	n/a	0.0409	n/a	n/a	n/a	50	n/a	n/a	64	n/a	n/a	0.07694	NP Inter(normality)
Selenium (mg/L)	n/a	0.005	n/a	n/a	n/a	50	n/a	n/a	100	n/a	n/a	0.07694	NP Inter(NDs)
Thallium (mg/L)	n/a	0.001	n/a	n/a	n/a	50	n/a	n/a	96	n/a	n/a	0.07694	NP Inter(NDs)

FIGURE G.

PLANT MCDONOUGH ASH POND 1 GWPS TABLE				
Constituent Name	MCL	CCR-Rule Specified	Background Limit	GWPS
Antimony, Total (mg/L)	0.006		0.003	0.006
Arsenic, Total (mg/L)	0.01		0.0054	0.01
Barium, Total (mg/L)	2		0.19	2
Beryllium, Total (mg/L)	0.004		0.0009	0.004
Cadmium, Total (mg/L)	0.005		0.0005	0.005
Chromium, Total (mg/L)	0.1		0.005	0.1
Cobalt, Total (mg/L)		0.006	0.032	0.032
Combined Radium, Total (pCi/L)	5		4.8	5
Fluoride, Total (mg/L)	4		0.42	4
Lead, Total (mg/L)		0.015	0.001	0.015
Lithium, Total (mg/L)		0.04	0.03	0.04
Mercury, Total (mg/L)	0.002		0.0002	0.002
Molybdenum, Total (mg/L)		0.1	0.041	0.1
Selenium, Total (mg/L)	0.05		0.005	0.05
Thallium, Total (mg/L)	0.002		0.001	0.002

**Highlighted cells indicated Background is higher than MCLs or CCR-Rule*

**MCL = Maximum Contaminant Level*

**CCR = Coal Combustion Residual*

**GWPS = Groundwater Protection Standard*

FIGURE H.

Confidence Intervals - Significant Results

Plant McDonough Client: Southern Company Data: McDonough AP Printed 11/18/2022, 1:02 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	DGWC-69	0.03677	0.01314	0.01	Yes	19	0.03285	0.03918	0	None	In(x)	0.01	Param.
Cobalt (mg/L)	DGWC-40	0.04503	0.03796	0.032	Yes	17	0.04149	0.005638	0	None	No	0.01	Param.
Molybdenum (mg/L)	DGWC-68A	0.2224	0.1962	0.1	Yes	17	0.2096	0.02181	0	None	x^(1/3)	0.01	Param.

Confidence Intervals - All Results

Plant McDonough Client: Southern Company Data: McDonough AP Printed 11/18/2022, 1:02 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	B-100	0.003	0.0013	0.006	No	6	0.0025	0.0007849	66.67	None	No	0.0155	NP (NDs)
Antimony (mg/L)	B-105D	0.0082	0.00069	0.006	No	5	0.003578	0.002771	60	None	No	0.031	NP (NDs)
Antimony (mg/L)	B-112D	0.003	0.00041	0.006	No	4	0.002353	0.001295	75	None	No	0.0625	NP (NDs)
Antimony (mg/L)	B-113D	0.003	0.0021	0.006	No	4	0.002775	0.00045	75	None	No	0.0625	NP (NDs)
Antimony (mg/L)	B-62	0.003	0.00046	0.006	No	9	0.002718	0.0008467	88.89	None	No	0.002	NP (NDs)
Antimony (mg/L)	DGWC-40	0.003	0.00033	0.006	No	16	0.002833	0.0006675	93.75	None	No	0.01	NP (NDs)
Antimony (mg/L)	DGWC-67	0.003	0.0023	0.006	No	16	0.002656	0.0008246	81.25	None	No	0.01	NP (NDs)
Antimony (mg/L)	DGWC-68A	0.003	0.0008	0.006	No	16	0.002695	0.000838	87.5	None	No	0.01	NP (NDs)
Antimony (mg/L)	DGWC-69	0.003	0.0019	0.006	No	17	0.002729	0.0006469	82.35	None	No	0.01	NP (NDs)
Arsenic (mg/L)	B-105D	0.0051	0.0025	0.01	No	5	0.00404	0.001361	40	None	No	0.031	NP (normality)
Arsenic (mg/L)	B-112D	0.005	0.00078	0.01	No	4	0.003945	0.00211	50	None	No	0.0625	NP (normality)
Arsenic (mg/L)	B-113D	0.005	0.0018	0.01	No	4	0.0042	0.0016	75	None	No	0.0625	NP (NDs)
Arsenic (mg/L)	B-62	0.005	0.0033	0.01	No	9	0.004811	0.0005667	88.89	None	No	0.002	NP (NDs)
Arsenic (mg/L)	DGWC-37	0.005	0.0019	0.01	No	17	0.004818	0.0007519	94.12	None	No	0.01	NP (NDs)
Arsenic (mg/L)	DGWC-38	0.005	0.0005	0.01	No	17	0.004735	0.001091	94.12	None	No	0.01	NP (NDs)
Arsenic (mg/L)	DGWC-39	0.005	0.00075	0.01	No	17	0.003069	0.002132	52.94	None	No	0.01	NP (NDs)
Arsenic (mg/L)	DGWC-40	0.005	0.003	0.01	No	17	0.004138	0.001675	76.47	None	No	0.01	NP (NDs)
Arsenic (mg/L)	DGWC-67	0.005	0.0033	0.01	No	17	0.004384	0.00148	82.35	None	No	0.01	NP (NDs)
Arsenic (mg/L)	DGWC-68A	0.005	0.0016	0.01	No	17	0.0048	0.0008246	94.12	None	No	0.01	NP (NDs)
Arsenic (mg/L)	DGWC-69	0.03677	0.01314	0.01	Yes	19	0.03285	0.03918	0	None	ln(x)	0.01	Param.
Barium (mg/L)	B-100	0.02353	0.01731	2	No	6	0.02067	0.002875	0	None	x^4	0.01	Param.
Barium (mg/L)	B-105D	0.04396	0.02924	2	No	5	0.0366	0.004393	0	None	No	0.01	Param.
Barium (mg/L)	B-112D	0.026	0.0026	2	No	4	0.0088	0.01147	0	None	No	0.0625	NP (normality)
Barium (mg/L)	B-113D	0.0051	0.0032	2	No	4	0.00455	0.000911	0	None	No	0.0625	NP (selected)
Barium (mg/L)	B-62	0.02611	0.01944	2	No	9	0.02278	0.003456	0	None	No	0.01	Param.
Barium (mg/L)	DGWC-37	0.1078	0.08781	2	No	17	0.09782	0.01597	0	None	No	0.01	Param.
Barium (mg/L)	DGWC-38	0.03344	0.03161	2	No	17	0.03242	0.001701	0	None	x^5	0.01	Param.
Barium (mg/L)	DGWC-39	0.09609	0.08532	2	No	17	0.09071	0.008597	0	None	No	0.01	Param.
Barium (mg/L)	DGWC-40	0.019	0.0168	2	No	17	0.01793	0.002504	0	None	No	0.01	NP (normality)
Barium (mg/L)	DGWC-67	0.1105	0.09714	2	No	17	0.1038	0.01067	0	None	No	0.01	Param.
Barium (mg/L)	DGWC-68A	0.092	0.086	2	No	17	0.08978	0.00419	0	None	No	0.01	NP (normality)
Barium (mg/L)	DGWC-69	0.09793	0.06626	2	No	18	0.08209	0.02617	0	None	No	0.01	Param.
Beryllium (mg/L)	B-100	0.0005956	0.0003544	0.004	No	6	0.000475	0.00008781	0	None	No	0.01	Param.
Beryllium (mg/L)	B-62	0.0005	0.00009	0.004	No	10	0.0001948	0.0001623	20	None	No	0.011	NP (normality)
Beryllium (mg/L)	DGWC-37	0.0005	0.00007	0.004	No	17	0.0003246	0.0002163	58.82	None	No	0.01	NP (NDs)
Beryllium (mg/L)	DGWC-38	0.0005	0.000058	0.004	No	17	0.000474	0.0001072	94.12	None	No	0.01	NP (NDs)
Beryllium (mg/L)	DGWC-40	0.00331	0.002937	0.004	No	17	0.003124	0.0002969	5.882	None	No	0.01	Param.
Beryllium (mg/L)	DGWC-68A	0.0005	0.000084	0.004	No	17	0.0004497	0.000142	88.24	None	No	0.01	NP (NDs)
Beryllium (mg/L)	DGWC-69	0.0005	0.000061	0.004	No	18	0.0003298	0.0002196	61.11	None	No	0.01	NP (NDs)
Cadmium (mg/L)	B-100	0.00059	0.00027	0.005	No	6	0.00038	0.0001628	0	None	No	0.0155	NP (normality)
Cadmium (mg/L)	B-113D	0.0005	0.00019	0.005	No	4	0.0004225	0.000155	75	None	No	0.0625	NP (NDs)
Cadmium (mg/L)	DGWC-37	0.0005	0.0002	0.005	No	17	0.0004	0.0001639	70.59	None	No	0.01	NP (NDs)
Cadmium (mg/L)	DGWC-38	0.0005	0.00017	0.005	No	17	0.0003194	0.0002461	17.65	None	No	0.01	NP (normality)
Cadmium (mg/L)	DGWC-40	0.0008771	0.0007382	0.005	No	17	0.0008076	0.0001108	11.76	None	No	0.01	Param.
Cadmium (mg/L)	DGWC-67	0.00053	0.00021	0.005	No	17	0.0004259	0.0001426	70.59	None	No	0.01	NP (NDs)
Cadmium (mg/L)	DGWC-68A	0.0002439	0.0001408	0.005	No	17	0.0003747	0.0002229	47.06	Kaplan-Meier	sqrt(x)	0.01	Param.
Cadmium (mg/L)	DGWC-69	0.0005	0.0002	0.005	No	18	0.0004261	0.0001436	77.78	Kaplan-Meier	No	0.01	NP (NDs)
Chromium (mg/L)	B-100	0.005	0.00057	0.1	No	6	0.003585	0.002195	66.67	None	No	0.0155	NP (NDs)
Chromium (mg/L)	B-105D	0.005	0.0012	0.1	No	5	0.00424	0.001699	80	None	No	0.031	NP (NDs)
Chromium (mg/L)	B-112D	0.00182	0.0005715	0.1	No	4	0.003062	0.002248	50	Kaplan-Meier	sqrt(x)	0.01	Param.
Chromium (mg/L)	B-113D	0.005	0.0011	0.1	No	4	0.004025	0.00195	75	Kaplan-Meier	No	0.0625	NP (NDs)
Chromium (mg/L)	B-62	0.005	0.00098	0.1	No	9	0.004553	0.00134	88.89	Kaplan-Meier	No	0.002	NP (NDs)
Chromium (mg/L)	DGWC-37	0.005	0.0007	0.1	No	17	0.004487	0.001448	88.24	None	No	0.01	NP (NDs)
Chromium (mg/L)	DGWC-38	0.005	0.00092	0.1	No	17	0.004227	0.001724	82.35	None	No	0.01	NP (NDs)
Chromium (mg/L)	DGWC-40	0.005	0.00061	0.1	No	17	0.002589	0.002108	41.18	None	No	0.01	NP (normality)

Confidence Intervals - All Results

Plant McDonough Client: Southern Company Data: McDonough AP Printed 11/18/2022, 1:02 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Chromium (mg/L)	DGWC-67	0.005	0.0014	0.1	No	17	0.004028	0.001814	76.47	None	No	0.01	NP (NDs)
Chromium (mg/L)	DGWC-68A	0.005	0.0005	0.1	No	17	0.004735	0.001091	94.12	None	No	0.01	NP (NDs)
Chromium (mg/L)	DGWC-69	0.005	0.0012	0.1	No	18	0.003888	0.001851	72.22	None	No	0.01	NP (NDs)
Cobalt (mg/L)	B-100	0.087	0.028	0.032	No	8	0.05125	0.02684	0	None	No	0.004	NP (normality)
Cobalt (mg/L)	B-105D	0.01197	0.001108	0.032	No	5	0.00654	0.003242	0	None	No	0.01	Param.
Cobalt (mg/L)	B-112D	0.005	0.00054	0.032	No	4	0.00326	0.002163	50	None	No	0.0625	NP (selected)
Cobalt (mg/L)	B-62	0.005	0.00031	0.032	No	10	0.004061	0.00198	80	None	No	0.011	NP (NDs)
Cobalt (mg/L)	DGWC-37	0.005	0.0005	0.032	No	17	0.004182	0.001821	82.35	None	No	0.01	NP (NDs)
Cobalt (mg/L)	DGWC-38	0.0017	0.0015	0.032	No	17	0.002259	0.002165	11.76	None	No	0.01	NP (normality)
Cobalt (mg/L)	DGWC-39	0.0071	0.0059	0.032	No	17	0.006594	0.001071	11.76	None	No	0.01	NP (normality)
Cobalt (mg/L)	DGWC-40	0.04503	0.03796	0.032	Yes	17	0.04149	0.005638	0	None	No	0.01	Param.
Cobalt (mg/L)	DGWC-67	0.0041	0.0012	0.032	No	17	0.002847	0.002442	11.76	None	No	0.01	NP (normality)
Cobalt (mg/L)	DGWC-68A	0.005	0.0015	0.032	No	17	0.004253	0.001679	82.35	None	No	0.01	NP (NDs)
Cobalt (mg/L)	DGWC-69	0.005	0.0022	0.032	No	18	0.003944	0.001641	66.67	None	No	0.01	NP (NDs)
Combined Radium 226 + 228 (pCi/L)	B-100	1.3	0.2178	5	No	6	0.7588	0.3938	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	B-105D	3.252	1	5	No	5	2.126	0.6718	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	B-112D	0.945	0.241	5	No	4	0.6698	0.3008	0	None	No	0.0625	NP (selected)
Combined Radium 226 + 228 (pCi/L)	B-113D	1.383	0.1014	5	No	4	0.742	0.2822	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	B-62	1.964	1.348	5	No	8	1.656	0.2907	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	DGWC-37	1.002	0.5303	5	No	17	0.7924	0.4146	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	DGWC-38	1.004	0.339	5	No	17	0.7331	0.5821	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	DGWC-39	1.265	0.6155	5	No	17	0.9404	0.5186	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	DGWC-40	1.515	0.6792	5	No	17	1.097	0.6673	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	DGWC-67	0.9662	0.4851	5	No	17	0.7256	0.3839	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	DGWC-68A	1.238	0.4841	5	No	17	0.9218	0.6257	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	DGWC-69	1.801	1.18	5	No	18	1.49	0.5135	0	None	No	0.01	Param.
Fluoride, total (mg/L)	B-100	0.072	0.05	4	No	6	0.05367	0.008981	83.33	None	No	0.0155	NP (NDs)
Fluoride, total (mg/L)	B-105D	0.3186	0.0337	4	No	5	0.1282	0.1089	0	None	ln(x)	0.01	Param.
Fluoride, total (mg/L)	B-112D	0.3789	0.2011	4	No	4	0.29	0.03916	0	None	No	0.01	Param.
Fluoride, total (mg/L)	B-113D	1.132	0.5282	4	No	4	0.83	0.1329	0	None	No	0.01	Param.
Fluoride, total (mg/L)	B-62	0.43	0.093	4	No	8	0.1678	0.1145	0	None	No	0.004	NP (normality)
Fluoride, total (mg/L)	DGWC-37	0.084	0.054	4	No	18	0.09767	0.07404	5.556	None	No	0.01	NP (normality)
Fluoride, total (mg/L)	DGWC-38	0.13	0.058	4	No	18	0.1201	0.1064	11.11	None	No	0.01	NP (normality)
Fluoride, total (mg/L)	DGWC-39	0.17	0.085	4	No	18	0.1517	0.1134	5.556	None	No	0.01	NP (normality)
Fluoride, total (mg/L)	DGWC-40	0.2755	0.1304	4	No	18	0.2286	0.1538	5.556	None	ln(x)	0.01	Param.
Fluoride, total (mg/L)	DGWC-67	0.07	0.038	4	No	18	0.08628	0.1147	50	None	No	0.01	NP (normality)
Fluoride, total (mg/L)	DGWC-68A	0.15	0.076	4	No	18	0.1471	0.1237	5.556	None	No	0.01	NP (normality)
Fluoride, total (mg/L)	DGWC-69	0.1633	0.08908	4	No	19	0.1311	0.06853	5.263	None	sqrt(x)	0.01	Param.
Lead (mg/L)	B-100	0.001	0.000088	0.015	No	6	0.0005797	0.0004622	50	None	No	0.0155	NP (normality)
Lead (mg/L)	B-105D	0.001	0.000052	0.015	No	5	0.0008104	0.000424	80	None	No	0.031	NP (NDs)
Lead (mg/L)	B-112D	0.001	0.00014	0.015	No	4	0.000785	0.00043	75	None	No	0.0625	NP (NDs)
Lead (mg/L)	B-113D	0.001	0.00014	0.015	No	4	0.000785	0.00043	75	None	No	0.0625	NP (NDs)
Lead (mg/L)	DGWC-37	0.0014	0.000061	0.015	No	17	0.0009683	0.0002531	88.24	None	No	0.01	NP (NDs)
Lead (mg/L)	DGWC-38	0.001	0.0001	0.015	No	17	0.0007362	0.0004217	70.59	None	No	0.01	NP (NDs)
Lead (mg/L)	DGWC-39	0.001	0.00022	0.015	No	17	0.0009	0.0002834	88.24	None	No	0.01	NP (NDs)
Lead (mg/L)	DGWC-40	0.001	0.00007	0.015	No	17	0.0005838	0.0004581	52.94	None	No	0.01	NP (NDs)
Lead (mg/L)	DGWC-67	0.001	0.00025	0.015	No	17	0.0007908	0.000391	76.47	None	No	0.01	NP (NDs)
Lead (mg/L)	DGWC-68A	0.001	0.00035	0.015	No	17	0.0009069	0.0002676	88.24	None	No	0.01	NP (NDs)
Lead (mg/L)	DGWC-69	0.001	0.0001	0.015	No	18	0.0007005	0.0004363	66.67	None	No	0.01	NP (NDs)
Lithium (mg/L)	B-100	0.002815	0.001518	0.04	No	6	0.002167	0.0004719	0	None	No	0.01	Param.
Lithium (mg/L)	B-105D	0.0152	0.0124	0.04	No	5	0.0138	0.0008367	0	None	No	0.01	Param.
Lithium (mg/L)	B-112D	0.004947	0.003353	0.04	No	4	0.00415	0.0003512	0	None	No	0.01	Param.
Lithium (mg/L)	B-113D	0.01663	0.005079	0.04	No	4	0.0121	0.002511	0	None	x^2	0.01	Param.
Lithium (mg/L)	B-62	0.03	0.0078	0.04	No	9	0.01094	0.007166	11.11	None	No	0.002	NP (normality)
Lithium (mg/L)	DGWC-37	0.03	0.002	0.04	No	17	0.008794	0.01213	23.53	None	No	0.01	NP (normality)

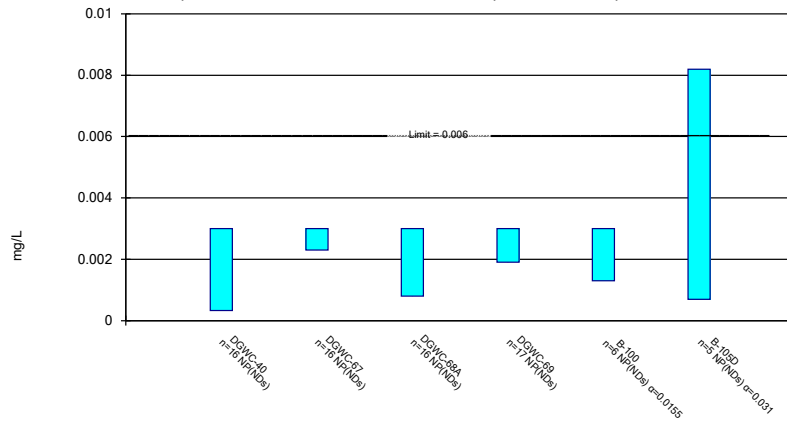
Confidence Intervals - All Results

Plant McDonough Client: Southern Company Data: McDonough AP Printed 11/18/2022, 1:02 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Lithium (mg/L)	DGWC-38	0.0035	0.0029	0.04	No	17	0.004735	0.006516	5.882	None	No	0.01	NP (normality)
Lithium (mg/L)	DGWC-40	0.0027	0.0022	0.04	No	17	0.005588	0.009191	11.76	None	No	0.01	NP (normality)
Lithium (mg/L)	DGWC-67	0.005	0.0043	0.04	No	17	0.006147	0.006156	5.882	None	No	0.01	NP (normality)
Lithium (mg/L)	DGWC-68A	0.03	0.0016	0.04	No	17	0.02661	0.009562	88.24	None	No	0.01	NP (NDs)
Lithium (mg/L)	DGWC-69	0.0032	0.0024	0.04	No	18	0.004306	0.006423	5.556	None	No	0.01	NP (normality)
Mercury (mg/L)	B-100	0.0002	0.00011	0.002	No	5	0.000182	0.00004025	80	None	No	0.031	NP (NDs)
Mercury (mg/L)	B-105D	0.0001737	0.00005334	0.002	No	4	0.0001567	0.00005443	50	Kaplan-Meier	No	0.01	Param.
Mercury (mg/L)	DGWC-37	0.0002	0.000091	0.002	No	16	0.0001747	0.00005512	81.25	None	No	0.01	NP (NDs)
Mercury (mg/L)	DGWC-38	0.0002	0.000085	0.002	No	16	0.0001747	0.00005506	81.25	None	No	0.01	NP (NDs)
Mercury (mg/L)	DGWC-39	0.0002	0.000059	0.002	No	16	0.0001912	0.00003525	93.75	None	No	0.01	NP (NDs)
Mercury (mg/L)	DGWC-40	0.0002	0.00009	0.002	No	16	0.0001737	0.00005738	81.25	None	No	0.01	NP (NDs)
Mercury (mg/L)	DGWC-67	0.0002	0.00007	0.002	No	16	0.0001919	0.0000325	93.75	None	No	0.01	NP (NDs)
Mercury (mg/L)	DGWC-68A	0.0002	0.00007	0.002	No	16	0.0001919	0.0000325	93.75	None	No	0.01	NP (NDs)
Mercury (mg/L)	DGWC-69	0.0002	0.00007	0.002	No	17	0.0001924	0.00003153	94.12	None	No	0.01	NP (NDs)
Molybdenum (mg/L)	B-105D	0.01	0.0011	0.1	No	5	0.00822	0.00398	80	None	No	0.031	NP (NDs)
Molybdenum (mg/L)	B-112D	0.04062	0.02388	0.1	No	4	0.03225	0.003686	0	None	No	0.01	Param.
Molybdenum (mg/L)	B-113D	0.0981	0.0231	0.1	No	5	0.0606	0.02238	0	None	No	0.01	Param.
Molybdenum (mg/L)	DGWC-38	0.01	0.00099	0.1	No	17	0.004752	0.004527	41.18	None	No	0.01	NP (normality)
Molybdenum (mg/L)	DGWC-68A	0.2224	0.1962	0.1	Yes	17	0.2096	0.02181	0	None	x^(1/3)	0.01	Param.
Molybdenum (mg/L)	DGWC-69	0.0117	0.0057	0.1	No	18	0.009783	0.005661	5.556	None	No	0.01	NP (normality)
Selenium (mg/L)	B-100	0.005	0.0019	0.05	No	6	0.004483	0.001266	83.33	Kaplan-Meier	No	0.0155	NP (NDs)
Selenium (mg/L)	DGWC-38	0.005	0.0019	0.05	No	17	0.004818	0.0007519	94.12	None	No	0.01	NP (NDs)
Selenium (mg/L)	DGWC-40	0.00316	0.001836	0.05	No	17	0.003582	0.002276	23.53	Kaplan-Meier	ln(x)	0.01	Param.
Selenium (mg/L)	DGWC-67	0.005	0.0027	0.05	No	17	0.004865	0.0005578	94.12	Kaplan-Meier	No	0.01	NP (NDs)
Selenium (mg/L)	DGWC-68A	0.005	0.0017	0.05	No	17	0.004806	0.0008004	94.12	Kaplan-Meier	No	0.01	NP (NDs)
Thallium (mg/L)	DGWC-38	0.001	0.0001	0.002	No	17	0.0005888	0.0004499	52.94	None	No	0.01	NP (NDs)
Thallium (mg/L)	DGWC-39	0.001	0.00009	0.002	No	17	0.0007312	0.0004293	70.59	None	No	0.01	NP (NDs)
Thallium (mg/L)	DGWC-40	0.001	0.000068	0.002	No	17	0.0007252	0.0004389	70.59	None	No	0.01	NP (NDs)
Thallium (mg/L)	DGWC-68A	0.001	0.00015	0.002	No	17	0.00095	0.0002062	94.12	None	No	0.01	NP (NDs)

Non-Parametric Confidence Interval

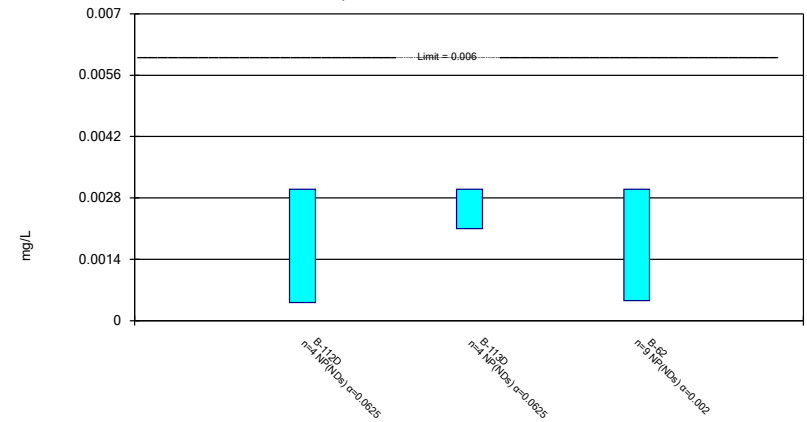
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Antimony Analysis Run 11/18/2022 12:34 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

Non-Parametric Confidence Interval

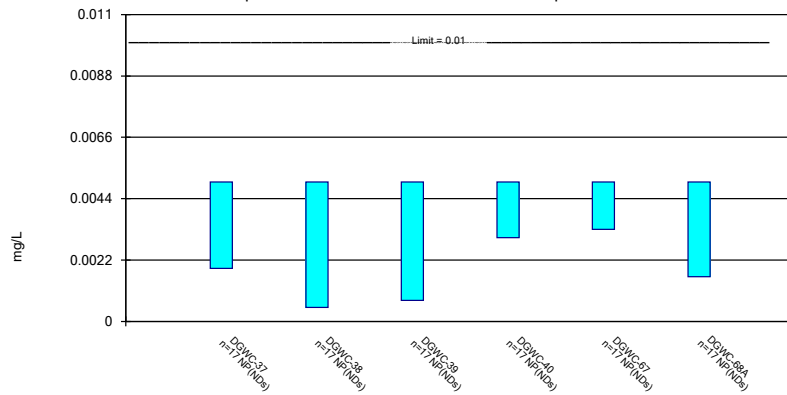
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 11/18/2022 12:34 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

Non-Parametric Confidence Interval

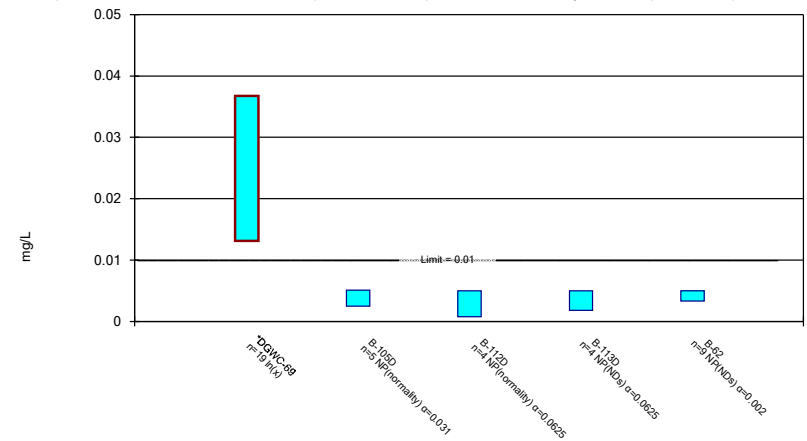
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Arsenic Analysis Run 11/18/2022 12:34 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

Parametric and Non-Parametric (NP) Confidence Interval

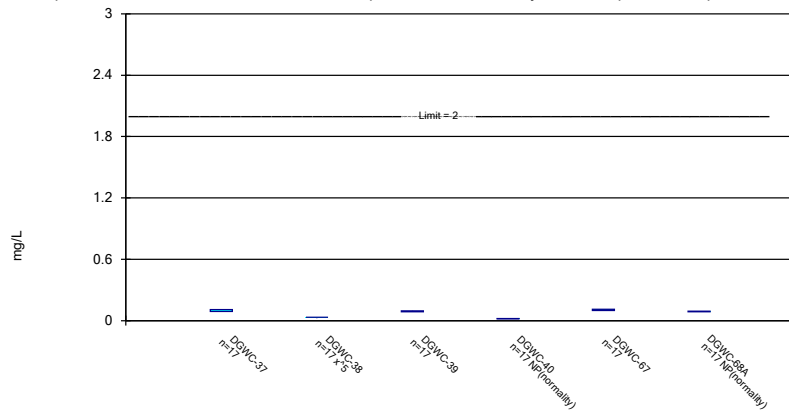
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Arsenic Analysis Run 11/18/2022 12:34 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

Parametric and Non-Parametric (NP) Confidence Interval

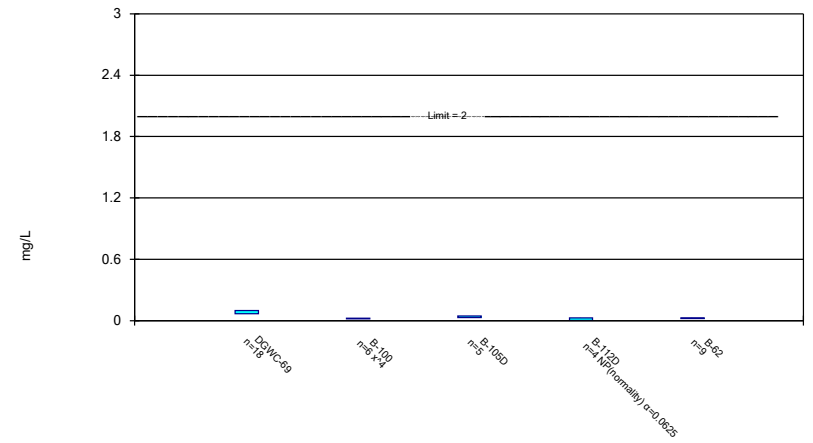
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 11/18/2022 12:34 PM View: AP 1 Confidence Intervals
 Plant McDonough Client: Southern Company Data: McDonough AP

Parametric and Non-Parametric (NP) Confidence Interval

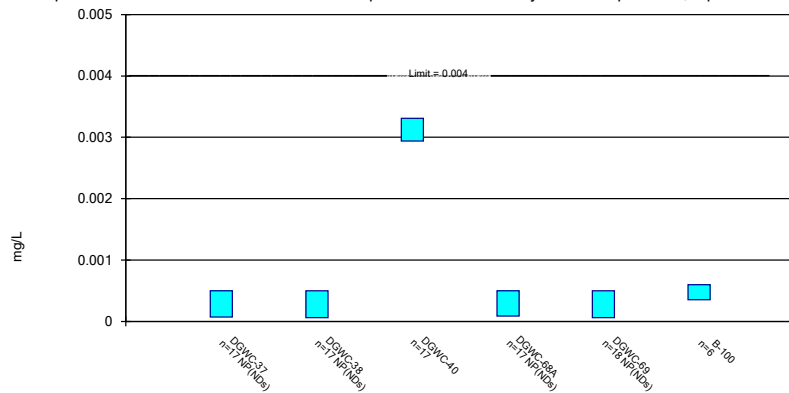
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 11/18/2022 12:34 PM View: AP 1 Confidence Intervals
 Plant McDonough Client: Southern Company Data: McDonough AP

Parametric and Non-Parametric (NP) Confidence Interval

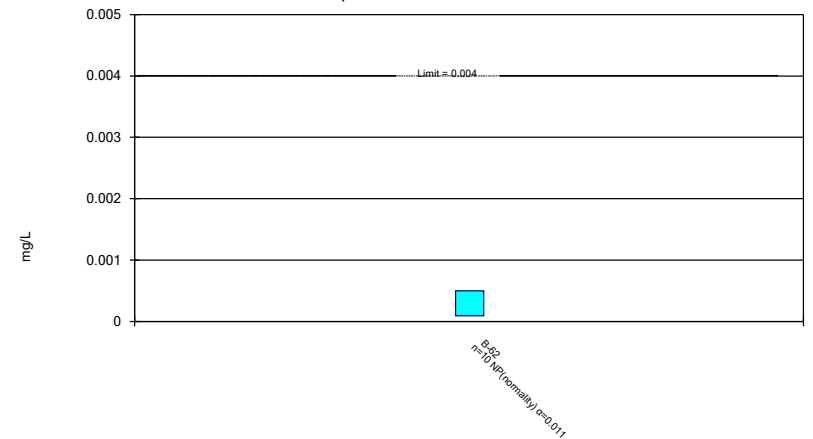
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Beryllium Analysis Run 11/18/2022 12:34 PM View: AP 1 Confidence Intervals
 Plant McDonough Client: Southern Company Data: McDonough AP

Non-Parametric Confidence Interval

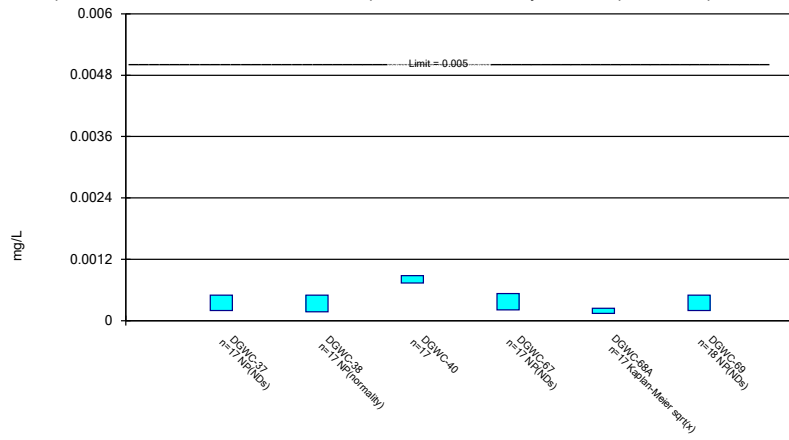
Compliance Limit is not exceeded.



Constituent: Beryllium Analysis Run 11/18/2022 12:34 PM View: AP 1 Confidence Intervals
 Plant McDonough Client: Southern Company Data: McDonough AP

Parametric and Non-Parametric (NP) Confidence Interval

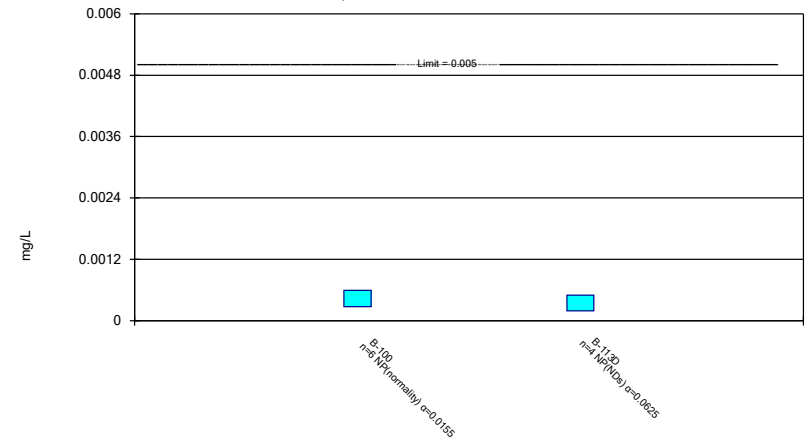
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cadmium Analysis Run 11/18/2022 12:34 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

Non-Parametric Confidence Interval

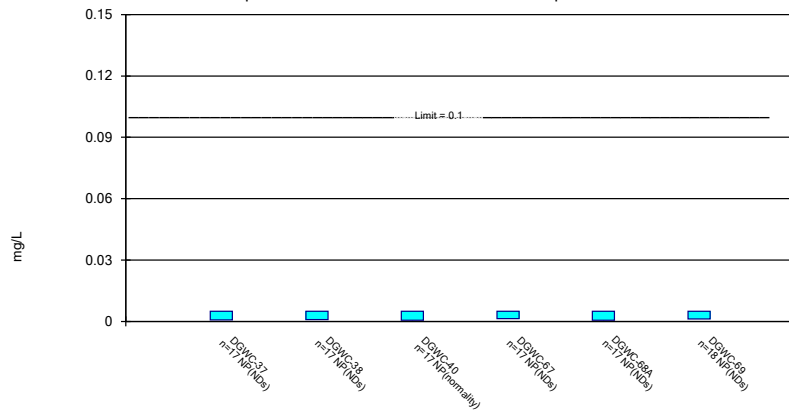
Compliance Limit is not exceeded.



Constituent: Cadmium Analysis Run 11/18/2022 12:34 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

Non-Parametric Confidence Interval

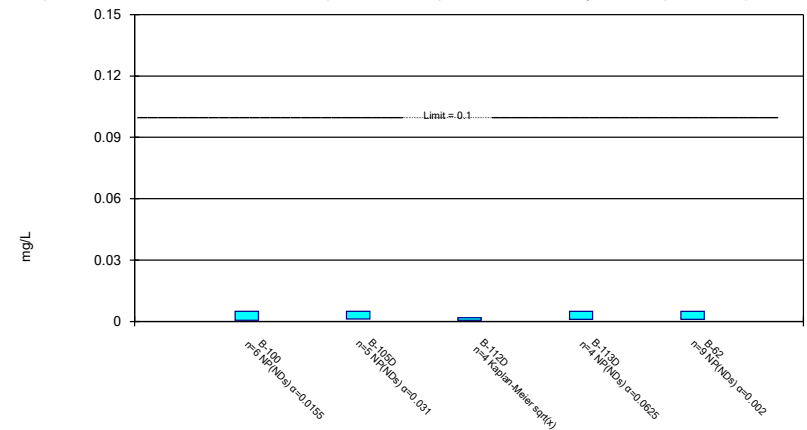
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Chromium Analysis Run 11/18/2022 12:34 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

Parametric and Non-Parametric (NP) Confidence Interval

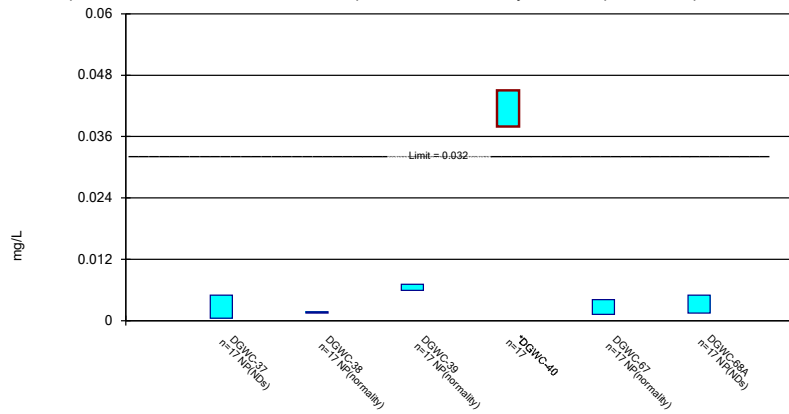
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Chromium Analysis Run 11/18/2022 12:34 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

Parametric and Non-Parametric (NP) Confidence Interval

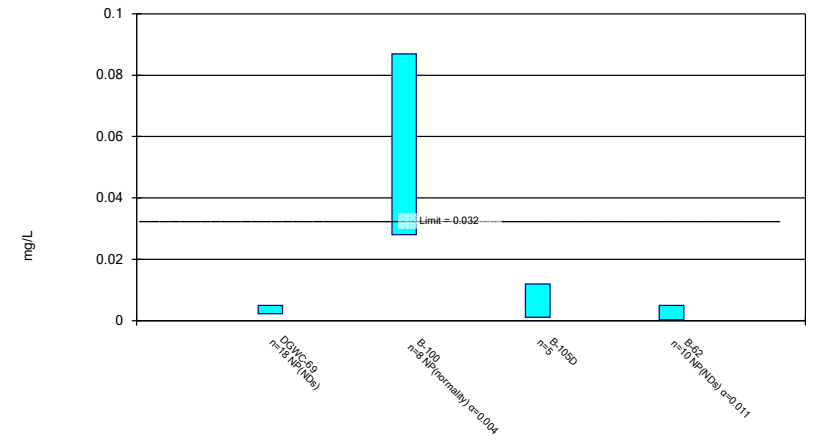
Compliance limit is exceeded.* Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 11/18/2022 12:35 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

Parametric and Non-Parametric (NP) Confidence Interval

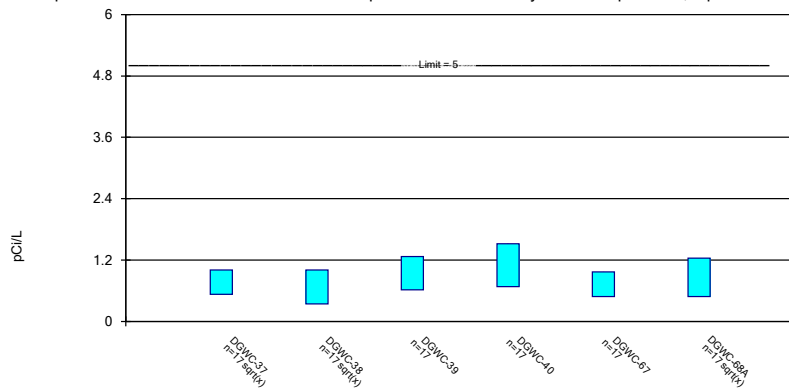
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Cobalt Analysis Run 11/18/2022 12:35 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

Parametric Confidence Interval

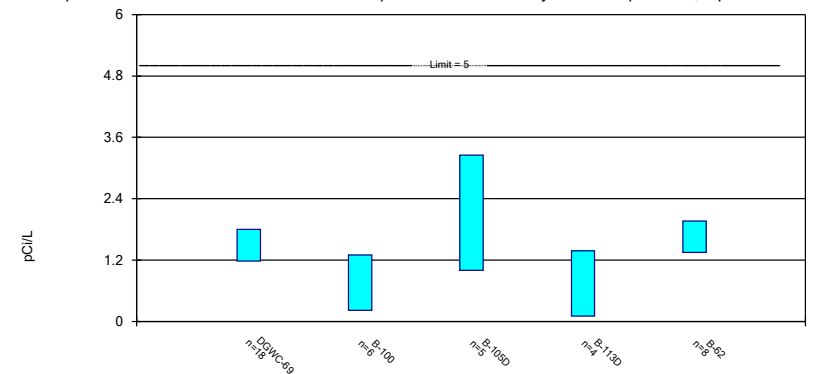
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 11/18/2022 12:35 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

Parametric Confidence Interval

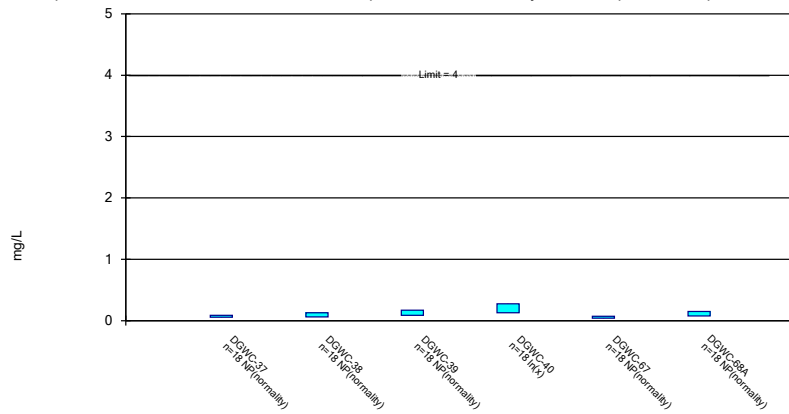
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 11/18/2022 12:35 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

Parametric and Non-Parametric (NP) Confidence Interval

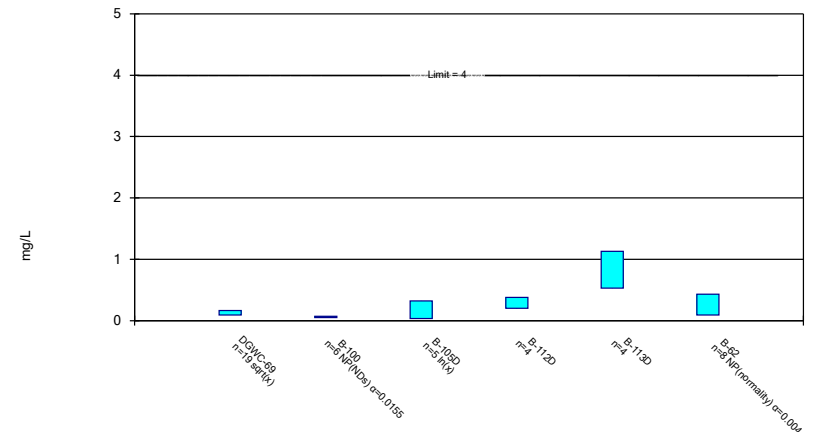
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride, total Analysis Run 11/18/2022 12:35 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

Parametric and Non-Parametric (NP) Confidence Interval

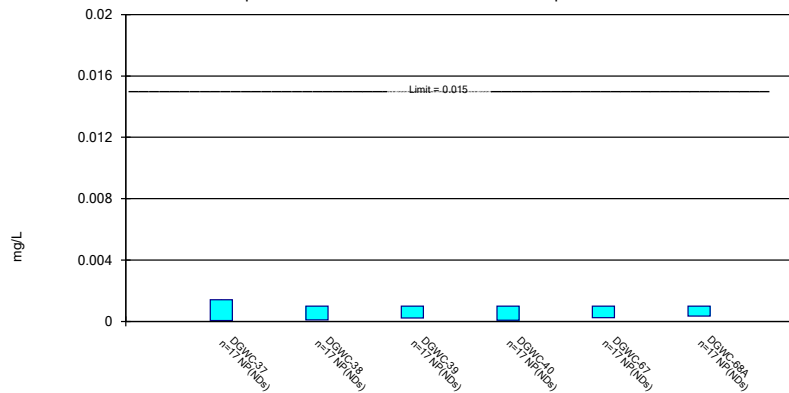
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Fluoride, total Analysis Run 11/18/2022 12:35 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

Non-Parametric Confidence Interval

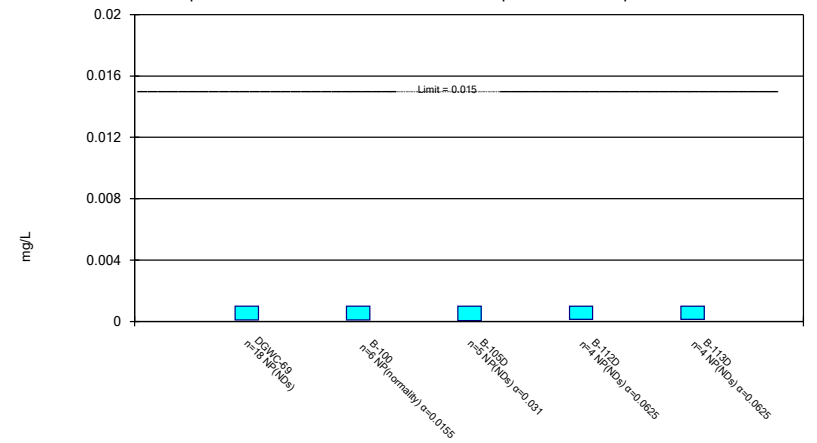
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lead Analysis Run 11/18/2022 12:35 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

Non-Parametric Confidence Interval

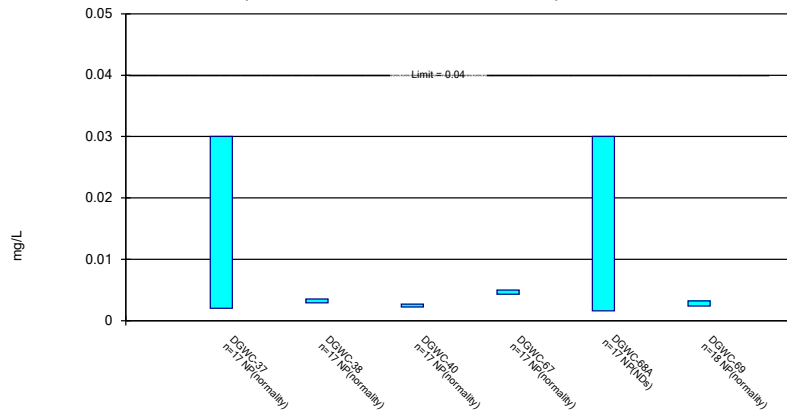
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted.



Constituent: Lead Analysis Run 11/18/2022 12:35 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

Non-Parametric Confidence Interval

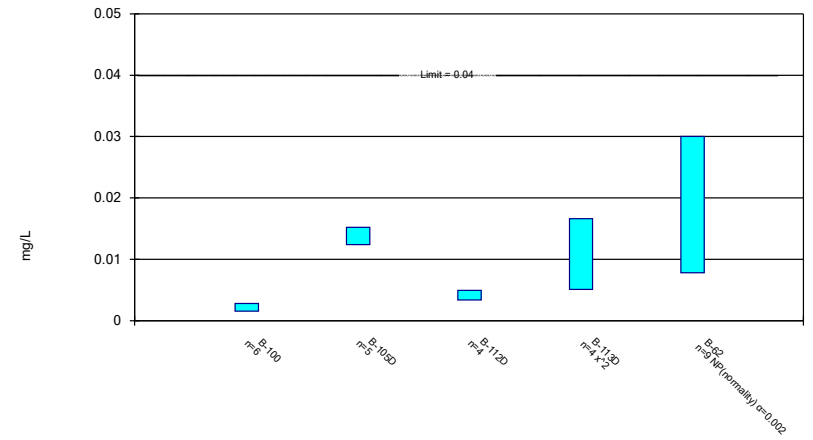
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Lithium Analysis Run 11/18/2022 12:35 PM View: AP 1 Confidence Intervals
 Plant McDonough Client: Southern Company Data: McDonough AP

Parametric and Non-Parametric (NP) Confidence Interval

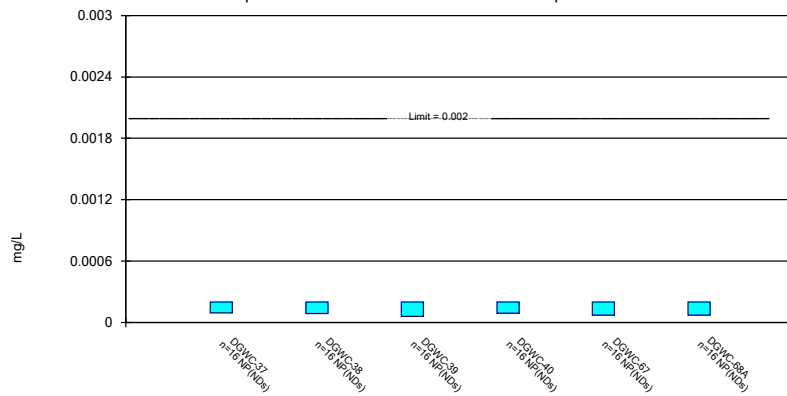
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 11/18/2022 12:35 PM View: AP 1 Confidence Intervals
 Plant McDonough Client: Southern Company Data: McDonough AP

Non-Parametric Confidence Interval

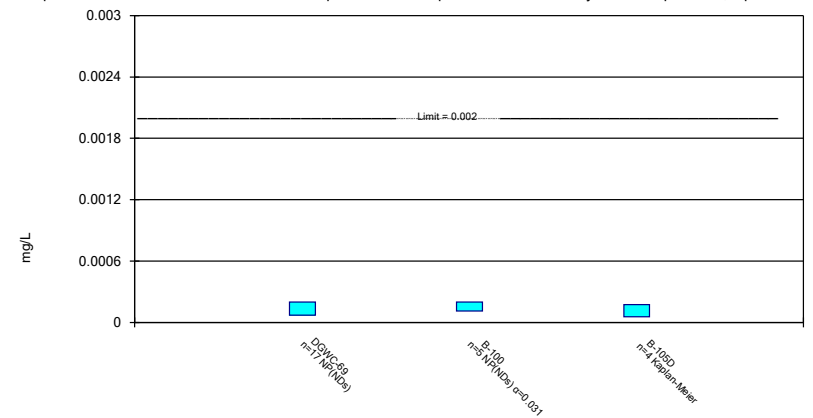
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Mercury Analysis Run 11/18/2022 12:35 PM View: AP 1 Confidence Intervals
 Plant McDonough Client: Southern Company Data: McDonough AP

Parametric and Non-Parametric (NP) Confidence Interval

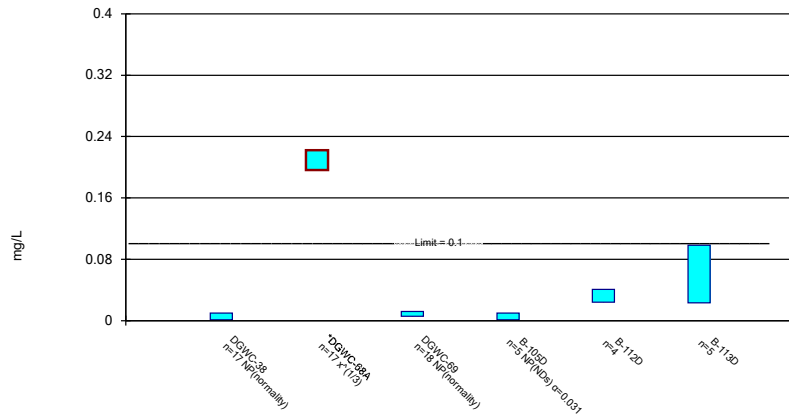
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Mercury Analysis Run 11/18/2022 12:35 PM View: AP 1 Confidence Intervals
 Plant McDonough Client: Southern Company Data: McDonough AP

Parametric and Non-Parametric (NP) Confidence Interval

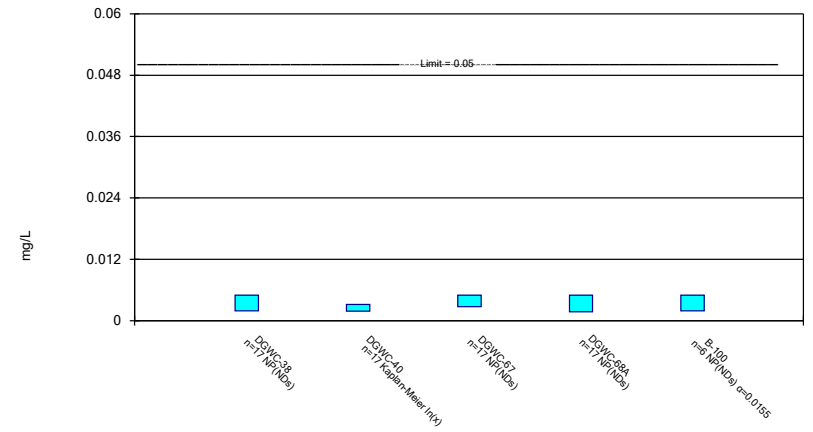
Compliance limit is exceeded.* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Molybdenum Analysis Run 11/18/2022 12:35 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

Parametric and Non-Parametric (NP) Confidence Interval

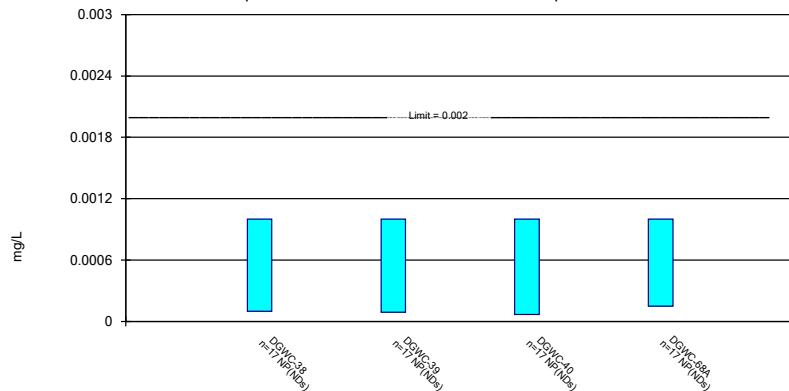
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Selenium Analysis Run 11/18/2022 12:35 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

Non-Parametric Confidence Interval

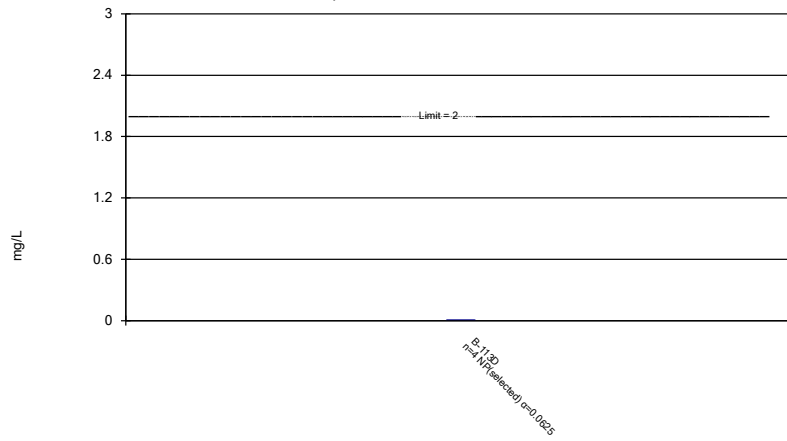
Compliance Limit is not exceeded. Per-well alpha = 0.01.



Constituent: Thallium Analysis Run 11/18/2022 12:35 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

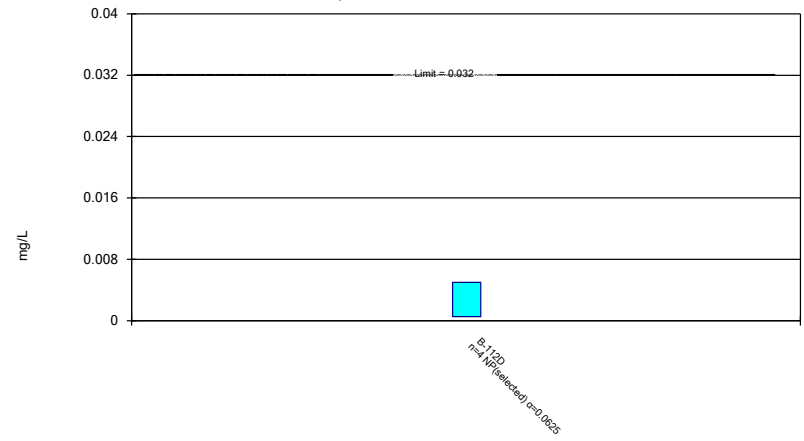


Normality testing disabled.

Constituent: Barium Analysis Run 11/18/2022 12:59 PM View: AP 1 Confidence Intervals Nonparametric
Plant McDonough Client: Southern Company Data: McDonough AP

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.

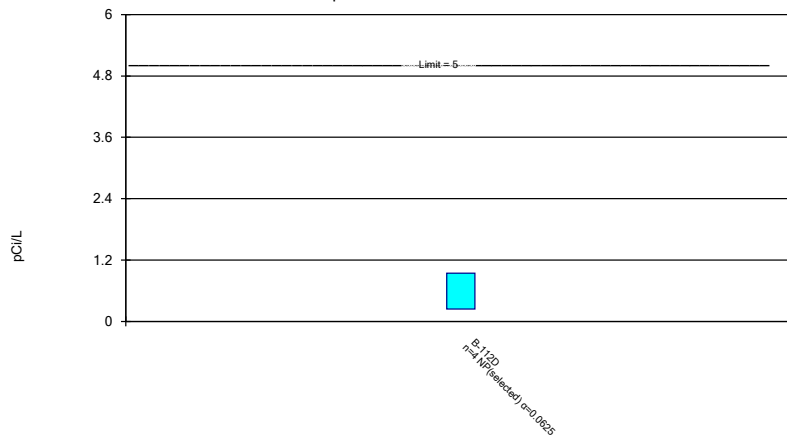


Normality testing disabled.

Constituent: Cobalt Analysis Run 11/18/2022 12:59 PM View: AP 1 Confidence Intervals Nonparametric
Plant McDonough Client: Southern Company Data: McDonough AP

Non-Parametric Confidence Interval

Compliance Limit is not exceeded.



Normality testing disabled.

Constituent: Combined Radium 226 + 228 Analysis Run 11/18/2022 12:59 PM View: AP 1 Confidence Inte
Plant McDonough Client: Southern Company Data: McDonough AP

Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-40	DGWC-67	DGWC-68A	DGWC-69	B-100	B-105D
9/2/2016	<0.003					
12/8/2016	<0.003					
3/30/2017	<0.003					
3/31/2017		0.0004 (J)		<0.003		
5/12/2017		<0.003	<0.003	<0.003		
6/16/2017		0.0008 (J)	0.0008 (J)	0.0007 (J)		
7/13/2017	<0.003	<0.003	<0.003	<0.003		
8/8/2017			<0.003			
10/26/2017	<0.003	<0.003	<0.003	<0.003		
11/15/2017				<0.003		
3/2/2018	<0.003	<0.003	<0.003	<0.003		
7/12/2018	<0.003					
7/13/2018		0.0023 (J)	<0.003	<0.003		
11/8/2018	<0.003	<0.003	<0.003	<0.003		
8/28/2019	<0.003	<0.003	<0.003	<0.003		
3/4/2020	<0.003					
3/9/2020		<0.003	<0.003	<0.003		
8/13/2020	<0.003	<0.003	<0.003	0.0019 (J)		
8/17/2020					0.0013 (J)	
9/23/2020	<0.003	<0.003	<0.003	<0.003		
9/25/2020					<0.003	
12/9/2020						<0.003
3/8/2021	0.00033 (J)				0.0017 (J)	0.00069 (J)
3/10/2021			0.00032 (J)	0.0018 (J)		
3/11/2021		<0.003				
9/13/2021					<0.003	
9/14/2021	<0.003					
9/15/2021						0.0082
9/16/2021		<0.003	<0.003	<0.003		
1/19/2022	<0.003	<0.003				<0.003
1/21/2022					<0.003	
1/25/2022			<0.003	<0.003		
9/7/2022	<0.003		<0.003	<0.003		<0.003
9/8/2022		<0.003			<0.003	
Mean	0.002833	0.002656	0.002695	0.002729	0.0025	0.003578
Std. Dev.	0.0006675	0.0008246	0.000838	0.0006469	0.0007849	0.002771
Upper Lim.	0.003	0.003	0.003	0.003	0.003	0.0082
Lower Lim.	0.00033	0.0023	0.0008	0.0019	0.0013	0.00069

Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

	B-112D	B-113D	B-62
1/30/2019			<0.003
9/11/2019			<0.003
10/21/2019			<0.003
8/13/2020			<0.003
9/24/2020			0.00046 (J)
3/12/2021			<0.003
4/15/2021	0.00041 (J)		
4/16/2021		0.0021 (J)	
9/9/2021			<0.003
9/16/2021	<0.003		
9/17/2021		<0.003	
1/19/2022	<0.003		
1/20/2022			<0.003
1/26/2022		<0.003	
9/7/2022	<0.003		
9/8/2022			<0.003
9/12/2022		<0.003	
Mean	0.002353	0.002775	0.002718
Std. Dev.	0.001295	0.00045	0.0008467
Upper Lim.	0.003	0.003	0.003
Lower Lim.	0.00041	0.0021	0.00046

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67	DGWC-68A
9/2/2016				<0.005		
9/8/2016	<0.005	<0.005	<0.005			
12/7/2016	0.0019 (J)	<0.005	<0.005			
12/8/2016				<0.005		
3/30/2017	<0.005	<0.005	0.0007 (J)	0.0006 (J)		
3/31/2017					<0.005	
5/12/2017					<0.005	<0.005
6/16/2017					<0.005	<0.005
7/13/2017	<0.005	0.0005 (J)	0.0009 (J)	<0.005	<0.005	<0.005
8/8/2017						<0.005
10/26/2017	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
3/1/2018	<0.005	<0.005	0.0011 (J)			
3/2/2018				0.0011 (J)	<0.005	<0.005
7/12/2018	<0.005	<0.005	0.00057 (J)	<0.005		
7/13/2018					<0.005	<0.005
11/8/2018	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005 (J)
8/28/2019	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
10/16/2019						<0.005
10/17/2019					0.00042 (J)	
10/18/2019	<0.005	<0.005	0.00075 (J)	<0.005		
3/4/2020				0.00065 (J)		
3/9/2020	<0.005	<0.005	0.00039 (J)		<0.005	<0.005
8/13/2020	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
9/23/2020				<0.005	<0.005	<0.005
9/24/2020	<0.005	<0.005				
9/25/2020			0.00087 (J)			
3/8/2021				<0.005		
3/10/2021						<0.005
3/11/2021	<0.005	<0.005	<0.005		0.0008 (J)	
9/14/2021				<0.005		
9/15/2021		<0.005				
9/16/2021	<0.005				<0.005	0.46 (o)
9/17/2021			<0.005			
10/27/2021						0.0016 (J)
1/19/2022				0.003 (J)	0.0033 (J)	
1/20/2022			0.0019 (J)			
1/21/2022	<0.005	<0.005				
1/25/2022						<0.005
9/7/2022			<0.005	<0.005		<0.005
9/8/2022	<0.005				<0.005	
9/12/2022		<0.005				
Mean	0.004818	0.004735	0.003069	0.004138	0.004384	0.0048
Std. Dev.	0.0007519	0.001091	0.002132	0.001675	0.00148	0.0008246
Upper Lim.	0.005	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.0019	0.0005	0.00075	0.003	0.0033	0.0016

Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-69	B-105D	B-112D	B-113D	B-62
3/31/2017	0.0239				
4/12/2017	0.0077				
5/12/2017	0.0097				
6/16/2017	0.0113				
7/13/2017	0.0029 (J)				
10/26/2017	0.114				
11/15/2017	0.164				
3/2/2018	0.0127				
7/13/2018	0.017				
11/8/2018	0.02				
1/30/2019					<0.005
8/28/2019	0.025				
9/11/2019					<0.005
10/16/2019	0.023				
10/21/2019					<0.005
3/9/2020	0.029				
8/13/2020	0.029				<0.005
9/23/2020	0.032				
9/24/2020					<0.005
12/9/2020		<0.005			
3/8/2021		0.0025 (J)			
3/10/2021	0.028				
3/12/2021					<0.005
4/15/2021			0.00078 (J)		
4/16/2021				<0.005	
9/9/2021					<0.005
9/15/2021		<0.005			
9/16/2021	0.023		<0.005		
9/17/2021				<0.005	
1/19/2022		0.0051	0.005		
1/20/2022					0.0033 (J)
1/25/2022	0.028				
1/26/2022				0.0018 (J)	
9/7/2022	0.024	0.0026 (J)	<0.005		
9/8/2022					<0.005
9/12/2022				<0.005	
Mean	0.03285	0.00404	0.003945	0.0042	0.004811
Std. Dev.	0.03918	0.001361	0.00211	0.0016	0.0005667
Upper Lim.	0.03677	0.0051	0.005	0.005	0.005
Lower Lim.	0.01314	0.0025	0.00078	0.0018	0.0033

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67	DGWC-68A
9/2/2016				0.0171		
9/8/2016	0.123	0.0333	0.0978			
12/7/2016	0.125	0.0336	0.0844			
12/8/2016				0.0163		
3/30/2017	0.11	0.0325	0.0858	0.0177		
3/31/2017					0.111	
5/12/2017					0.127	0.089
6/16/2017					0.11	0.0855
7/13/2017	0.11	0.0332	0.0919	0.017	0.102	0.0859
8/8/2017						0.0852
10/26/2017	0.112	0.0333	0.0899	0.0168	0.105	0.0878
3/1/2018	0.102	0.0333	0.0742			
3/2/2018				0.0169	0.104	0.0878
7/12/2018	0.11	0.034	0.094	0.018		
7/13/2018					0.11	0.091
11/8/2018	0.11	0.035	0.1	0.017	0.11	0.092
8/28/2019	0.086	0.033	0.099	0.017	0.11	0.089
10/16/2019						0.089
10/17/2019					0.1	
10/18/2019	0.079	0.032	0.1	0.019		
3/4/2020				0.018		
3/9/2020	0.092	0.032	0.076		0.11	0.088
8/13/2020	0.088	0.032	0.089	0.018	0.095	0.088
9/23/2020				0.019	0.1	0.094
9/24/2020	0.094	0.032				
9/25/2020			0.1			
3/8/2021				0.016		
3/10/2021						0.09
3/11/2021	0.075	0.032	0.078		0.11	
9/14/2021				0.027		
9/15/2021		0.032				
9/16/2021	0.083				0.088	0.13 (o)
9/17/2021			0.09			
10/27/2021						0.086
1/19/2022				0.018	0.091	
1/20/2022			0.093			
1/21/2022	0.085	0.031				
1/25/2022						0.1
9/7/2022			0.099	0.016		0.098
9/8/2022	0.079				0.082	
9/12/2022		0.027				
Mean	0.09782	0.03242	0.09071	0.01793	0.1038	0.08978
Std. Dev.	0.01597	0.001701	0.008597	0.002504	0.01067	0.00419
Upper Lim.	0.1078	0.03344	0.09609	0.019	0.1105	0.092
Lower Lim.	0.08781	0.03161	0.08532	0.0168	0.09714	0.086

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-69	B-100	B-105D	B-112D	B-62
3/31/2017	0.0872				
5/12/2017	0.0929				
6/16/2017	0.1				
7/13/2017	0.0985				
10/26/2017	0.136				
11/15/2017	0.107				
3/2/2018	0.0671				
7/13/2018	0.074				
11/8/2018	0.072				
1/30/2019					0.018
8/28/2019	0.061				
9/11/2019					0.023
10/16/2019	0.1				
10/21/2019					0.026
3/9/2020	0.057				
8/13/2020	0.13				0.026
8/17/2020		0.015			
9/23/2020	0.055				
9/24/2020					0.025
9/25/2020		0.022			
12/9/2020			0.03		
3/8/2021		0.022	0.041		
3/10/2021	0.048				
3/12/2021					0.027
4/15/2021				0.026	
9/9/2021					0.021
9/13/2021		0.021			
9/15/2021			0.037		
9/16/2021	0.078			0.0032 (J)	
1/19/2022			0.04	0.0034 (J)	
1/20/2022					0.021
1/21/2022		0.023			
1/25/2022	0.049				
9/7/2022	0.065		0.035	0.0026 (J)	
9/8/2022		0.021			0.018
Mean	0.08209	0.02067	0.0366	0.0088	0.02278
Std. Dev.	0.02617	0.002875	0.004393	0.01147	0.003456
Upper Lim.	0.09793	0.02353	0.04396	0.026	0.02611
Lower Lim.	0.06626	0.01731	0.02924	0.0026	0.01944

Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-37	DGWC-38	DGWC-40	DGWC-68A	DGWC-69	B-100
9/2/2016			0.0028 (J)			
9/8/2016	<0.0005	<0.0005				
12/7/2016	<0.0005	<0.0005				
12/8/2016			0.0026 (J)			
3/30/2017	<0.0005	<0.0005	0.003			
3/31/2017					7E-05 (J)	
5/12/2017				<0.0005	<0.0005	
6/16/2017				<0.0005	<0.0005	
7/13/2017	<0.0005	<0.0005	0.003 (J)	<0.0005	<0.0005	
8/8/2017				<0.0005		
10/26/2017	<0.0005	<0.0005	0.0027 (J)	<0.0005	<0.0005	
11/15/2017					<0.0005	
3/1/2018	<0.0005	<0.0005				
3/2/2018			0.0033	<0.0005	<0.0005	
7/12/2018	7E-05 (J)	<0.0005	0.0032			
7/13/2018				8.4E-05 (J)	5.8E-05 (J)	
11/8/2018	<0.0005	<0.0005	<0.003 (J)	<0.0005	<0.0005	
8/28/2019	8.6E-05 (J)	<0.0005	0.0032	<0.0005	<0.0005	
10/16/2019				<0.0005	<0.0005	
10/18/2019	<0.0005	<0.0005	0.0033			
3/4/2020			0.0039			
3/9/2020	<0.0005	<0.0005		<0.0005	7.5E-05 (J)	
8/13/2020	0.0001 (J)	<0.0005	0.0033	<0.0005	6.3E-05 (J)	
8/17/2020						0.0004 (J)
9/23/2020			0.0031	<0.0005	6.1E-05 (J)	
9/24/2020	8.8E-05 (J)	5.8E-05 (J)				
9/25/2020						0.00035 (J)
3/8/2021			0.003			0.00046 (J)
3/10/2021				6.1E-05 (J)	5E-05 (J)	
3/11/2021	<0.0005	<0.0005				
9/13/2021						0.00053
9/14/2021			0.0032			
9/15/2021		<0.0005				
9/16/2021	5.9E-05 (J)			<0.0005	<0.0005	
1/19/2022			0.0034			
1/21/2022	5.9E-05 (J)	<0.0005				0.00053
1/25/2022				<0.0005	5.9E-05 (J)	
9/7/2022			0.0031	<0.0005	<0.0005	
9/8/2022	5.7E-05 (J)					0.00058
9/12/2022		<0.0005				
Mean	0.0003246	0.000474	0.003124	0.0004497	0.0003298	0.000475
Std. Dev.	0.0002163	0.0001072	0.0002969	0.000142	0.0002196	8.781E-05
Upper Lim.	0.0005	0.0005	0.00331	0.0005	0.0005	0.0005956
Lower Lim.	7E-05	5.8E-05	0.002937	8.4E-05	6.1E-05	0.0003544

Confidence Interval

Constituent: Beryllium (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

	B-62
10/6/2016	9E-05 (J)
1/30/2019	<0.0005
9/11/2019	0.00012 (J)
10/21/2019	7.8E-05 (J)
8/13/2020	0.00011 (J)
9/24/2020	0.00013 (J)
3/12/2021	<0.0005
9/9/2021	0.00014 (J)
1/20/2022	0.00015 (J)
9/8/2022	0.00013 (J)
Mean	0.0001948
Std. Dev.	0.0001623
Upper Lim.	0.0005
Lower Lim.	9E-05

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-37	DGWC-38	DGWC-40	DGWC-67	DGWC-68A	DGWC-69
9/2/2016			0.0008 (J)			
9/8/2016	0.0002 (J)	0.0002 (J)				
12/7/2016	0.0001 (J)	0.0002 (J)				
12/8/2016			0.0007 (J)			
3/30/2017	0.0001 (J)	0.0002 (J)	0.0007 (J)			
3/31/2017				<0.0005		0.0001 (J)
5/12/2017				<0.0005	8E-05 (J)	0.0002 (J)
6/16/2017				<0.0005	<0.0005	0.0002 (J)
7/13/2017	<0.0005	0.0002 (J)	0.0008 (J)	<0.0005	<0.0005	<0.0005
8/8/2017					<0.0005	
10/26/2017	<0.0005	0.0002 (J)	0.0008 (J)	<0.0005	<0.0005	<0.0005
11/15/2017						<0.0005
3/1/2018	<0.0005	<0.0005				
3/2/2018			<0.0005	<0.0005	<0.0005	<0.0005
7/12/2018	<0.0005	0.00024 (J)	0.00087 (J)			
7/13/2018				<0.0005	0.00019 (J)	<0.0005
11/8/2018	<0.0005	<0.001 (J)	<0.001 (J)	<0.0005	<0.001 (J)	<0.0005
8/28/2019	<0.0005	0.0003 (J)	0.00087 (J)	0.00017 (J)	0.00017 (J)	<0.0005
10/16/2019					0.00017 (J)	0.00017 (J)
10/17/2019				<0.0005		
10/18/2019	<0.0005	0.00016 (J)	0.00088 (J)			
3/4/2020			0.00093 (J)			
3/9/2020	<0.0005	0.00017 (J)		0.00021 (J)	0.00026 (J)	<0.0005
8/13/2020	<0.0005	0.00021 (J)	0.00084 (J)	0.00015 (J)	0.00021 (J)	<0.0005
9/23/2020			0.0008 (J)	0.00018 (J)	0.00024 (J)	<0.0005
9/24/2020	0.00027 (J)	0.00081 (J)				
3/8/2021			0.00072			
3/10/2021					<0.0005	<0.0005
3/11/2021	<0.0005	<0.0005		0.00053		
9/14/2021			0.00086			
9/15/2021		0.00021 (J)				
9/16/2021	0.00013 (J)			<0.0005	<0.0005	<0.0005
1/19/2022			0.00085	<0.0005		
1/21/2022	<0.0005	0.0002 (J)				
1/25/2022					0.00035 (J)	<0.0005
9/7/2022			0.00081		0.0002 (J)	<0.0005
9/8/2022	<0.0005			<0.0005		
9/12/2022		0.00013 (J)				
Mean	0.0004	0.0003194	0.0008076	0.0004259	0.0003747	0.0004261
Std. Dev.	0.0001639	0.0002461	0.0001108	0.0001426	0.0002229	0.0001436
Upper Lim.	0.0005	0.0005	0.0008771	0.00053	0.0002439	0.0005
Lower Lim.	0.0002	0.00017	0.0007382	0.00021	0.0001408	0.0002

Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

	B-100	B-113D
8/17/2020	0.00059 (J)	
9/25/2020	0.00027 (J)	
3/8/2021	0.00027 (J)	
4/16/2021		0.00019 (J)
9/13/2021	0.00029 (J)	
9/17/2021		<0.0005
1/21/2022	0.00059	
1/26/2022		<0.0005
9/8/2022	0.00027 (J)	
9/12/2022		<0.0005
Mean	0.00038	0.0004225
Std. Dev.	0.0001628	0.000155
Upper Lim.	0.00059	0.0005
Lower Lim.	0.00027	0.00019

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-37	DGWC-38	DGWC-40	DGWC-67	DGWC-68A	DGWC-69
9/2/2016			<0.005			
9/8/2016	<0.005	<0.005				
12/7/2016	<0.005	<0.005				
12/8/2016			<0.005			
3/30/2017	<0.005	<0.005	0.0007 (J)			
3/31/2017				0.0005 (J)		<0.005
5/12/2017				0.0007 (J)	<0.005	<0.005
6/16/2017				<0.005	<0.005	<0.005
7/13/2017	<0.005	<0.005	0.0006 (J)	<0.005	0.0005 (J)	<0.005
8/8/2017					<0.005	
10/26/2017	0.0007 (J)	0.0005 (J)	0.0007 (J)	<0.005	<0.005	<0.005
11/15/2017						<0.005
3/1/2018	<0.005	<0.005				
3/2/2018			<0.005	<0.005	<0.005	<0.005
7/12/2018	<0.005	<0.005	<0.005			
7/13/2018				<0.005	<0.005	<0.005
11/8/2018	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005
8/28/2019	<0.005	<0.005	0.00061 (J)	<0.005	<0.005	0.00049 (J)
10/16/2019					<0.005	<0.005
10/17/2019				<0.005		
10/18/2019	<0.005	0.00092 (J)	0.00078 (J)			
3/4/2020			0.0011 (J)			
3/9/2020	<0.005	0.00044 (J)		0.00088 (J)	<0.005	0.0012 (J)
8/13/2020	0.00058 (J)	<0.005	0.00072 (J)	<0.005	<0.005	<0.005
9/23/2020			0.0011 (J)	<0.005	<0.005	0.0011 (J)
9/24/2020	<0.005	<0.005				
3/8/2021			0.0006 (J)			
3/10/2021					<0.005	0.0009 (J)
3/11/2021	<0.005	<0.005		0.0014 (J)		
9/14/2021			0.0021 (J)			
9/15/2021		<0.005				
9/16/2021	<0.005			<0.005	0.0014 (J,o)	<0.005
10/27/2021					<0.005	
1/19/2022			<0.005	<0.005		
1/21/2022	<0.005	<0.005				
1/25/2022					<0.005	0.0013 (J)
9/7/2022			<0.005		<0.005	<0.005
9/8/2022	<0.005			<0.005		
9/12/2022		<0.005				
Mean	0.004487	0.004227	0.002589	0.004028	0.004735	0.003888
Std. Dev.	0.001448	0.001724	0.002108	0.001814	0.001091	0.001851
Upper Lim.	0.005	0.005	0.005	0.005	0.005	0.005
Lower Lim.	0.0007	0.00092	0.00061	0.0014	0.0005	0.0012

Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals
 Plant McDonough Client: Southern Company Data: McDonough AP

	B-100	B-105D	B-112D	B-113D	B-62
1/30/2019					<0.005
9/11/2019					<0.005
10/21/2019					0.00098 (J)
8/13/2020					<0.005
8/17/2020	<0.005				
9/24/2020					<0.005
9/25/2020	0.00094 (J)				
12/9/2020		<0.005			
3/8/2021	0.00057 (J)	<0.005			
3/12/2021					<0.005
4/15/2021			0.00085 (J)		
4/16/2021				0.0011 (J)	
9/9/2021					<0.005
9/13/2021	<0.005				
9/15/2021		0.0012 (J)			
9/16/2021			0.0014 (J)		
9/17/2021				<0.005	
1/19/2022		<0.005	<0.005		
1/20/2022					<0.005
1/21/2022	<0.005				
1/26/2022				<0.005	
9/7/2022		<0.005	<0.005		
9/8/2022	<0.005				<0.005
9/12/2022				<0.005	
Mean	0.003585	0.00424	0.003062	0.004025	0.004553
Std. Dev.	0.002195	0.001699	0.002248	0.00195	0.00134
Upper Lim.	0.005	0.005	0.00182	0.005	0.005
Lower Lim.	0.00057	0.0012	0.0005715	0.0011	0.00098

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67	DGWC-68A
9/2/2016				0.0382		
9/8/2016	<0.005	0.0015 (J)	0.0068 (J)			
12/7/2016	0.0005 (J)	0.0017 (J)	0.0071 (J)			
12/8/2016				0.0318		
3/30/2017	<0.005	0.0016 (J)	0.006 (J)	0.0364		
3/31/2017					0.0064 (J)	
5/12/2017					0.0037 (J)	0.0015 (J)
6/16/2017					0.0041 (J)	0.0003 (J)
7/13/2017	0.0003 (J)	0.0016 (J)	0.0063 (J)	0.0394	0.0037 (J)	0.0005 (J)
8/8/2017						<0.005
10/26/2017	0.0003 (J)	0.0016 (J)	0.0062 (J)	0.0371	0.0022 (J)	<0.005
3/1/2018	<0.005	<0.005	<0.005			
3/2/2018				0.0425	<0.005	<0.005
7/12/2018	<0.005	0.0015 (J)	0.0059 (J)	0.044		
7/13/2018					0.0017 (J)	<0.005
11/8/2018	<0.005	<0.01 (J)	<0.01 (J)	0.036	<0.01 (J)	<0.005
8/28/2019	<0.005	0.0016 (J)	0.0067	0.044	0.0013 (J)	<0.005
10/16/2019						<0.005
10/17/2019					0.0013 (J)	
10/18/2019	<0.005	0.0016 (J)	0.007	0.043		
3/4/2020				0.055		
3/9/2020	<0.005	0.0016 (J)	0.007		0.0015 (J)	<0.005
8/13/2020	<0.005	0.0014 (J)	0.006	0.044	0.0015 (J)	<0.005
9/23/2020				0.046	0.0011 (J)	<0.005
9/24/2020	<0.005	0.0013 (J)				
9/25/2020			0.0061			
3/8/2021				0.039		
3/10/2021						<0.005
3/11/2021	<0.005	0.0017 (J)	0.0058		0.0016 (J)	
9/14/2021				0.05		
9/15/2021		0.0016 (J)				
9/16/2021	<0.005				0.0012 (J)	0.0032 (J,o)
9/17/2021			0.0076			
10/27/2021						<0.005
1/19/2022				0.042	0.0011 (J)	
1/20/2022			0.0061			
1/21/2022	<0.005	0.0017 (J)				
1/25/2022						<0.005
9/7/2022			0.0065	0.037		<0.005
9/8/2022	<0.005				0.001 (J)	
9/12/2022		0.0014 (J)				
Mean	0.004182	0.002259	0.006594	0.04149	0.002847	0.004253
Std. Dev.	0.001821	0.002165	0.001071	0.005638	0.002442	0.001679
Upper Lim.	0.005	0.0017	0.0071	0.04503	0.0041	0.005
Lower Lim.	0.0005	0.0015	0.0059	0.03796	0.0012	0.0015

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-69	B-100	B-105D	B-62
3/31/2017	0.0022 (J)			
5/12/2017	0.0016 (J)			
6/16/2017	0.0009 (J)			
7/13/2017	0.0004 (J)			
10/26/2017	0.0031 (J)			
11/15/2017	0.0028 (J)			
3/2/2018	<0.005			
7/13/2018	<0.005			
11/8/2018	<0.005			
1/30/2019				<0.005
8/28/2019	<0.005			
9/11/2019				0.0003 (J)
10/16/2019	<0.005			
10/21/2019				0.00031 (J)
3/9/2020	<0.005			
7/23/2020		0.086		
8/3/2020		0.087		
8/13/2020	<0.005			<0.005
8/17/2020		0.077		
9/23/2020	<0.005			
9/24/2020				<0.005
9/25/2020		0.034		
12/9/2020			0.012	
3/8/2021		0.029	0.0042 (J)	
3/10/2021	<0.005			
3/12/2021				<0.005
9/9/2021				<0.005
9/13/2021		0.035		
9/15/2021			0.0065	
9/16/2021	<0.005			
1/19/2022			0.006	
1/20/2022				<0.005
1/21/2022		0.034		
1/25/2022	<0.005			
9/7/2022	<0.005		0.004 (J)	
9/8/2022		0.028		<0.005
9/9/2022				<0.005
Mean	0.003944	0.05125	0.00654	0.004061
Std. Dev.	0.001641	0.02684	0.003242	0.00198
Upper Lim.	0.005	0.087	0.01197	0.005
Lower Lim.	0.0022	0.028	0.001108	0.00031

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67	DGWC-68A
9/2/2016				1.44		
9/8/2016	0.827 (U)	1.48	1.44			
12/7/2016	0.56 (U)	0.22 (U)	2.16			
12/8/2016				2.56		
3/30/2017	0.302 (U)	0.519 (U)	0.264 (U)	0.0844 (U)		
3/31/2017					0.404 (U)	
5/12/2017					0.206 (U)	1.18
6/16/2017					0.966 (U)	0.332 (U)
7/13/2017	0.731 (U)	1.11	0.517 (U)	0.963 (U)	0.387 (U)	0.304 (U)
8/8/2017						1.4
10/26/2017	1.04 (U)	1.13 (U)	0.875 (U)	0.748 (U)	0.619 (U)	0.477 (U)
3/1/2018	0.344 (U)	0.985 (U)	1.24			
3/2/2018				0.485 (U)	1.31	1.13
7/12/2018	0.566 (U)	0.615 (U)	0.935 (U)	0.231 (U)		
7/13/2018					0.667 (U)	0.407 (U)
11/8/2018	0.623 (U)	0.58 (U)	1.15 (U)	0.465 (U)	0.911 (U)	0.393 (U)
8/28/2019	1.24 (U)	0.517 (U)	1.15 (U)	0.592 (U)	0.751 (U)	1.77
10/16/2019						2.12
1/6/2020	2.01	0.527 (U)	1.4	1.6	0.965 (U)	
3/4/2020				1.62		
3/9/2020	0.499 (U)	1.04	1.36		0.819 (U)	1.33
8/13/2020	0.99	0.132 (U)	0.626 (U)	1.6	0.897 (U)	1.46
9/23/2020				1.28 (U)	0.131 (U)	0.563 (U)
9/24/2020	1.03 (U)	0.593 (U)				
9/25/2020			0.181 (U)			
3/8/2021				0.714 (U)		
3/10/2021						0.568 (U)
3/11/2021	0.956 (U)	0.0784 (U)	0.969 (U)		1.55	
9/14/2021				1.8		
9/15/2021		2.37				
9/16/2021	0.691 (U)				0.201 (U)	1.74
9/17/2021			0.911 (U)			
1/19/2022				1.7	0.853 (U)	
1/20/2022			0.172 (U)			
1/21/2022	0.343 (U)	0.0873 (U)				
1/25/2022						0.323 (U)
9/7/2022			0.637 (U)	0.772 (U)		0.174 (U)
9/8/2022					0.699 (U)	
9/9/2022	0.719 (U)					
9/12/2022		0.479 (U)				
Mean	0.7924	0.7331	0.9404	1.097	0.7256	0.9218
Std. Dev.	0.4146	0.5821	0.5186	0.6673	0.3839	0.6257
Upper Lim.	1.002	1.004	1.265	1.515	0.9662	1.238
Lower Lim.	0.5303	0.339	0.6155	0.6792	0.4851	0.4841

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-69	B-100	B-105D	B-113D	B-62
3/31/2017	1.39				
5/12/2017	1.29				
6/16/2017	1.61				
7/13/2017	1.14				
10/26/2017	2.04				
11/15/2017	1.99				
3/2/2018	0.918 (U)				
7/13/2018	1.36 (U)				
11/8/2018	0.719 (U)				
1/30/2019					1.97 (U)
8/28/2019	1.38				
10/16/2019	0.826 (U)				
10/21/2019					1.82
3/9/2020	1.39				
8/13/2020	2.66				1.63
8/17/2020		1.4 (U)			
9/23/2020	1.8				
9/24/2020					1.28 (U)
9/25/2020		0.799 (U)			
12/9/2020			1.25 (U)		
3/8/2021		0.168 (U)	1.87		
3/10/2021	1.6				
3/12/2021					1.18 (U)
4/16/2021				0.852 (U)	
9/9/2021					1.7
9/13/2021		0.774 (U)			
9/15/2021			2.01		
9/16/2021	2.06				
9/17/2021				1.08 (U)	
1/19/2022			2.45		
1/20/2022					1.71
1/21/2022		0.769 (U)			
1/25/2022	0.834 (U)				
1/26/2022				0.596 (U)	
9/7/2022	1.82		3.05		
9/8/2022		0.643 (U)			
9/9/2022					1.96
9/12/2022				0.44 (U)	
Mean	1.49	0.7588	2.126	0.742	1.656
Std. Dev.	0.5135	0.3938	0.6718	0.2822	0.2907
Upper Lim.	1.801	1.3	3.252	1.383	1.964
Lower Lim.	1.18	0.2178	1	0.1014	1.348

Confidence Interval

Constituent: Fluoride, total (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67	DGWC-68A
9/2/2016				0.5		
9/8/2016	0.08 (J)	0.1 (J)	0.17 (J)			
12/7/2016	0.21 (J)	0.27 (J)	0.33			
12/8/2016				0.35		
3/30/2017	0.05 (J)	0.12 (J)	0.17 (J)	0.21 (J)		
3/31/2017					0.02 (J)	
5/12/2017					<0.1	0.37
6/16/2017					0.03 (J)	0.12 (J)
7/13/2017	0.06 (J)	0.13 (J)	0.14 (J)	0.2 (J)	0.03 (J)	0.12 (J)
8/8/2017						0.11 (J)
10/26/2017	0.08 (J)	0.47	0.54	0.5	<0.1	0.11 (J)
3/1/2018	0.22	<0.1	0.13			
3/2/2018				0.33	<0.1	0.23
7/12/2018	0.32	0.23 (J)	0.13 (J)	0.57		
7/13/2018					0.25 (J)	0.099 (J)
11/8/2018	<0.1	<0.1	<0.3 (J)	<0.3 (J)	0.5	<0.3 (J)
3/13/2019	0.08 (J)	0.084 (J)	0.085 (J)	0.15 (J)	0.07 (J)	0.12 (J)
8/28/2019	0.074 (J)	0.066 (J)	0.086 (J)	0.14	<0.1	0.1
10/16/2019						0.093 (J)
10/17/2019					0.038 (J)	
10/18/2019	0.075 (J)	0.073 (J)	0.14 (J)	0.13 (J)		
3/4/2020				0.11 (J)		
3/9/2020	0.054 (J)	0.064 (J)	0.075 (J)		<0.1	0.082 (J)
8/13/2020	0.068 (J)	0.06 (J)	0.076 (J)	0.16	<0.1	0.076 (J)
9/23/2020				0.054 (J)	<0.1	0.07 (J)
9/24/2020	0.061 (J)	0.057 (J)				
9/25/2020			0.086 (J)			
3/8/2021				0.17		
3/10/2021						0.07 (J)
3/11/2021	0.057 (J)	0.058 (J)	0.083 (J)		<0.1	
9/14/2021				0.13		
9/15/2021		0.06 (J)				
9/16/2021	0.084 (J)				0.069 (J)	0.55
9/17/2021			0.13			
1/19/2022				0.12	<0.1	
1/20/2022			0.1			
1/21/2022	0.053 (J)	0.1				
1/25/2022						0.067 (J)
9/7/2022			0.11	0.14		0.11
9/8/2022	0.082 (J)				0.096 (J)	
9/12/2022		0.12				
Mean	0.09767	0.1201	0.1517	0.2286	0.08628	0.1471
Std. Dev.	0.07404	0.1064	0.1134	0.1538	0.1147	0.1237
Upper Lim.	0.084	0.13	0.17	0.2755	0.07	0.15
Lower Lim.	0.054	0.058	0.085	0.1304	0.038	0.076

Confidence Interval

Constituent: Fluoride, total (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-69	B-100	B-105D	B-112D	B-113D	B-62
3/31/2017	0.16 (J)					
5/12/2017	0.12 (J)					
6/16/2017	0.16 (J)					
7/13/2017	0.13 (J)					
10/26/2017	0.29 (J)					
11/15/2017	0.28 (J)					
3/2/2018	0.18					
7/13/2018	0.19 (J)					
11/8/2018	<0.3 (J)					
1/30/2019						0.43
3/13/2019	0.086 (J)					
8/28/2019	0.07 (J)					
10/16/2019	0.13 (J)					
10/21/2019						0.23 (J)
3/9/2020	0.068 (J)					
8/13/2020	0.084 (J)					0.11
8/17/2020		<0.1				
9/23/2020	0.064 (J)					
9/24/2020						0.093 (J)
9/25/2020		<0.1				
12/9/2020			0.075 (J)			
3/8/2021		<0.1	0.32			
3/10/2021	0.055 (J)					
3/12/2021						0.11
4/15/2021				0.3		
4/16/2021					0.71	
9/9/2021						0.14
9/13/2021		<0.1				
9/15/2021			0.078 (J)			
9/16/2021	0.11			0.34		
9/17/2021					0.87	
1/19/2022			0.058 (J)	0.25		
1/20/2022						0.099 (J)
1/21/2022		<0.1				
1/25/2022	0.054 (J)					
1/26/2022					0.74	
9/7/2022	0.11		0.11	0.27		
9/8/2022		0.072 (J)				0.13
9/12/2022					1	
Mean	0.1311	0.05367	0.1282	0.29	0.83	0.1678
Std. Dev.	0.06853	0.008981	0.1089	0.03916	0.1329	0.1145
Upper Lim.	0.1633	0.072	0.3186	0.3789	1.132	0.43
Lower Lim.	0.08908	0.05	0.0337	0.2011	0.5282	0.093

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67	DGWC-68A
9/2/2016				<0.001		
9/8/2016	<0.001	<0.001	<0.001			
12/7/2016	<0.001	<0.001	<0.001			
12/8/2016				<0.001		
3/30/2017	0.0014 (J)	<0.001	<0.001	7E-05 (J)		
3/31/2017					<0.001	
5/12/2017					9E-05 (J)	<0.001
6/16/2017					<0.001	<0.001
7/13/2017	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/8/2017						<0.001
10/26/2017	<0.001	0.0001 (J)	<0.001	7E-05 (J)	<0.001	<0.001
3/1/2018	<0.001	<0.001	<0.001			
3/2/2018				<0.001	<0.001	<0.001
7/12/2018	<0.001	<0.001	<0.001	<0.001		
7/13/2018					<0.001	<0.001
11/8/2018	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
8/28/2019	6.1E-05 (J)	<0.001	8E-05 (J)	8.1E-05 (J)	<0.001	<0.001
10/16/2019						<0.001
10/17/2019					<0.001	
10/18/2019	<0.001	7.4E-05 (J)	<0.001	0.00015 (J)		
3/4/2020				0.00017 (J)		
3/9/2020	<0.001	6.1E-05 (J)	<0.001		4.7E-05 (J)	<0.001
8/13/2020	<0.001	<0.001	<0.001	4.9E-05 (J)	5.6E-05 (J)	<0.001
9/23/2020				0.00028 (J)	<0.001	0.00035 (J)
9/24/2020	<0.001	0.00014 (J)				
9/25/2020			0.00022 (J)			
3/8/2021				5.4E-05 (J)		
3/10/2021						6.7E-05 (J)
3/11/2021	<0.001	0.00014 (J)	<0.001		0.00025 (J)	
9/14/2021				<0.001		
9/15/2021		<0.001				
9/16/2021	<0.001				<0.001	<0.001
9/17/2021			<0.001			
1/19/2022				<0.001	<0.001	
1/20/2022			<0.001			
1/21/2022	<0.001	<0.001				
1/25/2022						<0.001
9/7/2022			<0.001	<0.001		<0.001
9/8/2022	<0.001				<0.001	
9/12/2022		<0.001				
Mean	0.0009683	0.0007362	0.0009	0.0005838	0.0007908	0.0009069
Std. Dev.	0.0002531	0.0004217	0.0002834	0.0004581	0.000391	0.0002676
Upper Lim.	0.0014	0.001	0.001	0.001	0.001	0.001
Lower Lim.	6.1E-05	0.0001	0.00022	7E-05	0.00025	0.00035

Confidence Interval

Constituent: Lead (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals
 Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-69	B-100	B-105D	B-112D	B-113D
3/31/2017	<0.001				
5/12/2017	0.0001 (J)				
6/16/2017	<0.001				
7/13/2017	<0.001				
10/26/2017	<0.001				
11/15/2017	9E-05 (J)				
3/2/2018	<0.001				
7/13/2018	<0.001				
11/8/2018	<0.001				
8/28/2019	<0.001				
10/16/2019	<0.001				
3/9/2020	9E-05 (J)				
8/13/2020	5.9E-05 (J)				
8/17/2020		8.8E-05 (J)			
9/23/2020	0.00017 (J)				
9/25/2020		0.00021 (J)			
12/9/2020			5.2E-05 (J)		
3/8/2021		0.00018 (J)	<0.001		
3/10/2021	0.0001 (J)				
4/15/2021				0.00014 (J)	
4/16/2021					0.00014 (J)
9/13/2021		<0.001			
9/15/2021			<0.001		
9/16/2021	<0.001			<0.001	
9/17/2021					<0.001
1/19/2022			<0.001	<0.001	
1/21/2022		<0.001			
1/25/2022	<0.001				
1/26/2022					<0.001
9/7/2022	<0.001		<0.001	<0.001	
9/8/2022		<0.001			
9/12/2022					<0.001
Mean	0.0007005	0.0005797	0.0008104	0.000785	0.000785
Std. Dev.	0.0004363	0.0004622	0.000424	0.00043	0.00043
Upper Lim.	0.001	0.001	0.001	0.001	0.001
Lower Lim.	0.0001	8.8E-05	5.2E-05	0.00014	0.00014

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-37	DGWC-38	DGWC-40	DGWC-67	DGWC-68A	DGWC-69
9/2/2016			0.0022 (J)			
9/8/2016	<0.03	0.0032 (J)				
12/7/2016	<0.03	0.0035 (J)				
12/8/2016			<0.03			
3/30/2017	0.0029 (J)	0.0035 (J)	0.0023 (J)			
3/31/2017				0.0052 (J)		0.0031 (J)
5/12/2017				0.0054 (J)	0.0016 (J)	0.003 (J)
6/16/2017				0.0048 (J)	<0.03	0.0031 (J)
7/13/2017	<0.03	0.0032 (J)	0.0023 (J)	0.0044 (J)	<0.03	0.0029 (J)
8/8/2017					<0.03	
10/26/2017	0.0018 (J)	0.0034 (J)	0.0021 (J)	0.0043 (J)	<0.03	0.0034 (J)
11/15/2017						0.0034 (J)
3/1/2018	0.0024 (J)	0.0033 (J)				
3/2/2018			0.0023 (J)	0.0047 (J)	<0.03	0.0028 (J)
7/12/2018	0.0028 (J)	0.0034 (J)	0.0022 (J)			
7/13/2018				0.0041 (J)	<0.03	0.0026 (J)
11/8/2018	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
8/28/2019	0.0025 (J)	0.0034 (J)	0.0022 (J)	0.0046 (J)	<0.03	0.0024 (J)
10/16/2019					<0.03	0.0032 (J)
10/17/2019				0.0047 (J)		
10/18/2019	0.0026 (J)	0.0032 (J)	0.0024 (J)			
3/4/2020			0.0027 (J)			
3/9/2020	0.0017 (J)	0.0033 (J)		0.0048 (J)	<0.03	0.0025 (J)
8/13/2020	0.0023 (J)	0.0028 (J)	0.0022 (J)	0.0044 (J)	<0.03	0.0031 (J)
9/23/2020			0.0022 (J)	0.0043 (J)	<0.03	0.0023 (J)
9/24/2020	0.0021 (J)	0.0029 (J)				
3/8/2021			0.0022 (J)			
3/10/2021					<0.03	0.0023 (J)
3/11/2021	0.0024 (J)	0.003 (J)		0.005 (J)		
9/14/2021			0.003 (J)			
9/15/2021		0.0029 (J)				
9/16/2021	0.0021 (J)			0.0044 (J)	0.00082 (J)	0.0023 (J)
1/19/2022			0.0024 (J)	0.0046 (J)		
1/21/2022	0.002 (J)	0.0025 (J)				
1/25/2022					<0.03	0.0026 (J)
9/7/2022			0.0023 (J)		<0.03	0.0025 (J)
9/8/2022	0.0019 (J)			0.0048 (J)		
9/12/2022		0.003 (J)				
Mean	0.008794	0.004735	0.005588	0.006147	0.02661	0.004306
Std. Dev.	0.01213	0.006516	0.009191	0.006156	0.009562	0.006423
Upper Lim.	0.03	0.0035	0.0027	0.005	0.03	0.0032
Lower Lim.	0.002	0.0029	0.0022	0.0043	0.0016	0.0024

Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals

Plant McDonough Client: Southern Company Data: McDonough AP

	B-100	B-105D	B-112D	B-113D	B-62
1/30/2019					<0.03
9/11/2019					0.0078 (J)
10/21/2019					0.0078 (J)
8/13/2020					0.0087 (J)
8/17/2020	0.0013 (J)				
9/24/2020					0.0084 (J)
9/25/2020	0.0027 (J)				
12/9/2020		0.014 (J)			
3/8/2021	0.0024 (J)	0.015 (J)			
3/12/2021					0.0087 (J)
4/15/2021			0.0045 (J)		
4/16/2021				0.013 (J)	
9/9/2021					0.0094 (J)
9/13/2021	0.0022 (J)				
9/15/2021		0.014 (J)			
9/16/2021			0.0038 (J)		
9/17/2021				0.013 (J)	
1/19/2022		0.013 (J)	0.0044 (J)		
1/20/2022					0.0092 (J)
1/21/2022	0.0021 (J)				
1/26/2022				0.014 (J)	
9/7/2022		0.013 (J)	0.0039 (J)		
9/8/2022	0.0023 (J)				0.0085 (J)
9/12/2022				0.0084 (J)	
Mean	0.002167	0.0138	0.00415	0.0121	0.01094
Std. Dev.	0.0004719	0.0008367	0.0003512	0.002511	0.007166
Upper Lim.	0.002815	0.0152	0.004947	0.01663	0.03
Lower Lim.	0.001518	0.0124	0.003353	0.005079	0.0078

Confidence Interval

Constituent: Mercury (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-37	DGWC-38	DGWC-39	DGWC-40	DGWC-67	DGWC-68A
9/2/2016				4.4E-05 (J)		
9/8/2016	<0.0002	<0.0002	<0.0002			
12/7/2016	<0.0002	<0.0002	<0.0002			
12/8/2016				<0.0002		
3/30/2017	6E-05 (J)	7E-05 (J)	5.9E-05 (J)	9E-05 (J)		
3/31/2017					<0.0002	
5/12/2017					<0.0002	<0.0002
6/16/2017					7E-05 (J)	7E-05 (J)
7/13/2017	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
8/8/2017						<0.0002
10/26/2017	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
3/1/2018	<0.0002	<0.0002	<0.0002			
3/2/2018				<0.0002	<0.0002	<0.0002
7/12/2018	4.4E-05 (J)	4E-05 (J)	<0.0002	4.5E-05 (J)		
7/13/2018					<0.0002	<0.0002
11/8/2018	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
8/28/2019	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
10/16/2019						<0.0002
10/17/2019					<0.0002	
10/18/2019	<0.0002	<0.0002	<0.0002	<0.0002		
3/4/2020				<0.0002		
3/9/2020	<0.0002	<0.0002	<0.0002		<0.0002	<0.0002
8/13/2020	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002
9/23/2020				<0.0002	<0.0002	<0.0002
9/24/2020	9.1E-05 (J)	8.5E-05 (J)				
9/25/2020			<0.0002			
9/14/2021				<0.0002		
9/15/2021		<0.0002				
9/16/2021	<0.0002				<0.0002	<0.0002
9/17/2021			<0.0002			
1/19/2022				<0.0002	<0.0002	
1/20/2022			<0.0002			
1/21/2022	<0.0002	<0.0002				
1/25/2022						<0.0002
9/7/2022			<0.0002	<0.0002		<0.0002
9/8/2022	<0.0002				<0.0002	
9/12/2022		<0.0002				
Mean	0.0001747	0.0001747	0.0001912	0.0001737	0.0001919	0.0001919
Std. Dev.	5.512E-05	5.506E-05	3.525E-05	5.738E-05	3.25E-05	3.25E-05
Upper Lim.	0.0002	0.0002	0.0002	0.0002	0.0002	0.0002
Lower Lim.	9.1E-05	8.5E-05	5.9E-05	9E-05	7E-05	7E-05

Confidence Interval

Constituent: Mercury (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals
Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-69	B-100	B-105D
3/31/2017	<0.0002		
5/12/2017	<0.0002		
6/16/2017	7E-05 (J)		
7/13/2017	<0.0002		
10/26/2017	<0.0002		
11/15/2017	<0.0002		
3/2/2018	<0.0002		
7/13/2018	<0.0002		
11/8/2018	<0.0002		
8/28/2019	<0.0002		
10/16/2019	<0.0002		
3/9/2020	<0.0002		
8/13/2020	<0.0002		
8/17/2020		0.00011 (J)	
9/23/2020	<0.0002		
9/25/2020		<0.0002	
12/9/2020			8.7E-05 (J)
9/13/2021		<0.0002	
9/15/2021			<0.0002
9/16/2021	<0.0002		
1/19/2022			<0.0002
1/21/2022		<0.0002	
1/25/2022	<0.0002		
9/7/2022	<0.0002		0.00014 (J)
9/8/2022		<0.0002	
Mean	0.0001924	0.000182	0.0001567
Std. Dev.	3.153E-05	4.025E-05	5.443E-05
Upper Lim.	0.0002	0.0002	0.0001737
Lower Lim.	7E-05	0.00011	5.334E-05

Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-38	DGWC-68A	DGWC-69	B-105D	B-112D	B-113D
9/8/2016	<0.01					
12/7/2016	<0.01					
3/30/2017	0.0011 (J)					
3/31/2017			0.0124			
5/12/2017		0.275	0.0117			
6/16/2017		0.19	0.0087 (J)			
7/13/2017	0.0012 (J)	0.211	0.0053 (J)			
8/8/2017		0.207				
10/26/2017	0.0011 (J)	0.226	0.0244			
11/15/2017			0.0237			
3/1/2018	<0.01					
3/2/2018		0.215	0.0072 (J)			
7/12/2018	<0.01					
7/13/2018		0.22	0.007 (J)			
11/8/2018	<0.01	0.2	<0.01 (J)			
8/28/2019	<0.01	0.21	0.0059 (J)			
10/16/2019		0.22	0.01			
10/18/2019	<0.01					
3/9/2020	0.001 (J)	0.19	0.0062 (J)			
8/13/2020	0.00098 (J)	0.19	0.011			
9/23/2020		0.2	0.0056 (J)			
9/24/2020	0.001 (J)					
12/9/2020				<0.01		
3/8/2021				0.0011 (J)		
3/10/2021		0.2	0.0056 (J)			
3/11/2021	0.00092 (J)					
3/26/2021						0.025
4/15/2021					0.037	
4/16/2021						0.078
9/15/2021	0.00099 (J)			<0.01		
9/16/2021		0.18	0.009 (J)		0.032	
9/17/2021						0.074
1/19/2022				<0.01	0.032	
1/21/2022	0.0013 (J)					
1/25/2022		0.23	0.0057 (J)			
1/26/2022						0.074
9/7/2022		0.2	0.0067 (J)	<0.01	0.028	
9/12/2022	0.0012 (J)					0.052
Mean	0.004752	0.2096	0.009783	0.00822	0.03225	0.0606
Std. Dev.	0.004527	0.02181	0.005661	0.00398	0.003686	0.02238
Upper Lim.	0.01	0.2224	0.0117	0.01	0.04062	0.0981
Lower Lim.	0.00099	0.1962	0.0057	0.0011	0.02388	0.0231

Confidence Interval

Constituent: Selenium (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-38	DGWC-40	DGWC-67	DGWC-68A	B-100
9/2/2016		0.0019 (J)			
9/8/2016	<0.005				
12/7/2016	<0.005				
12/8/2016		0.0022 (J)			
3/30/2017	<0.005	0.0023 (J)			
3/31/2017			<0.005		
5/12/2017			<0.005	<0.005	
6/16/2017			<0.005	<0.005	
7/13/2017	<0.005	0.0025 (J)	<0.005	<0.005	
8/8/2017				<0.005	
10/26/2017	<0.005	0.0036 (J)	<0.005	<0.005	
3/1/2018	<0.005				
3/2/2018		<0.005	<0.005	<0.005	
7/12/2018	<0.005	<0.005			
7/13/2018			<0.005	<0.005	
11/8/2018	<0.005	<0.01 (J)	<0.005	<0.005	
8/28/2019	<0.005	0.0017 (J)	<0.005	<0.005	
10/16/2019				<0.005	
10/17/2019			<0.005		
10/18/2019	<0.005	0.0027 (J)			
3/4/2020		0.0049 (J)			
3/9/2020	<0.005		<0.005	<0.005	
8/13/2020	<0.005	0.0018 (J)	<0.005	<0.005	
8/17/2020					<0.005
9/23/2020		0.0067 (J)	<0.005	<0.005	
9/24/2020	<0.005				
9/25/2020					<0.005
3/8/2021		0.0023 (J)			0.0019 (J)
3/10/2021				0.0017 (J)	
3/11/2021	0.0019 (J)		0.0027 (J)		
9/13/2021					<0.005
9/14/2021		0.0015 (J)			
9/15/2021	<0.005				
9/16/2021			<0.005	<0.005	
1/19/2022		<0.005	<0.005		
1/21/2022	<0.005				<0.005
1/25/2022				<0.005	
9/7/2022		0.0018 (J)		<0.005	
9/8/2022			<0.005		<0.005
9/12/2022	<0.005				
Mean	0.004818	0.003582	0.004865	0.004806	0.004483
Std. Dev.	0.0007519	0.002276	0.0005578	0.0008004	0.001266
Upper Lim.	0.005	0.00316	0.005	0.005	0.005
Lower Lim.	0.0019	0.001836	0.0027	0.0017	0.0019

Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals

Plant McDonough Client: Southern Company Data: McDonough AP

	DGWC-38	DGWC-39	DGWC-40	DGWC-68A
9/2/2016			<0.001	
9/8/2016	<0.001	<0.001		
12/7/2016	<0.001	<0.001		
12/8/2016			<0.001	
3/30/2017	0.0001 (J)	0.0001 (J)	6E-05 (J)	
5/12/2017				<0.001
6/16/2017				<0.001
7/13/2017	0.0001 (J)	9E-05 (J)	6E-05 (J)	<0.001
8/8/2017				<0.001
10/26/2017	0.0001 (J)	0.0001 (J)	7E-05 (J)	<0.001
3/1/2018	<0.001	<0.001		
3/2/2018			<0.001	<0.001
7/12/2018	<0.001	<0.001	<0.001	
7/13/2018				0.00015 (J)
11/8/2018	<0.001	<0.001	<0.001	<0.001
8/28/2019	0.00014 (J)	6.9E-05 (J)	7E-05 (J)	<0.001
10/16/2019				<0.001
10/18/2019	0.0001 (J)	<0.001	<0.001	
3/4/2020			6.8E-05 (J)	
3/9/2020	0.00016 (J)	7.1E-05 (J)		<0.001
8/13/2020	0.00016 (J)	<0.001	<0.001	<0.001
9/23/2020			<0.001	<0.001
9/24/2020	0.00015 (J)			
9/25/2020		<0.001		
3/8/2021			<0.001	
3/10/2021				<0.001
3/11/2021	<0.001	<0.001		
9/14/2021			<0.001	
9/15/2021	<0.001			
9/16/2021				<0.001
9/17/2021		<0.001		
1/19/2022			<0.001	
1/20/2022		<0.001		
1/21/2022	<0.001			
1/25/2022				<0.001
9/7/2022		<0.001	<0.001	<0.001
9/12/2022	<0.001			
Mean	0.0005888	0.0007312	0.0007252	0.00095
Std. Dev.	0.0004499	0.0004293	0.0004389	0.0002062
Upper Lim.	0.001	0.001	0.001	0.001
Lower Lim.	0.0001	9E-05	6.8E-05	0.00015

Confidence Interval

Constituent: Barium (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals Nonparametric
Plant McDonough Client: Southern Company Data: McDonough AP

	B-113D
4/16/2021	0.0032 (J)
9/17/2021	0.0048 (J)
1/26/2022	0.0051
9/12/2022	0.0051
Mean	0.00455
Std. Dev.	0.000911
Upper Lim.	0.0051
Lower Lim.	0.0032

Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals Nonparametric
Plant McDonough Client: Southern Company Data: McDonough AP

	B-112D
4/15/2021	0.0025 (J)
9/16/2021	0.00054 (J)
1/19/2022	<0.005
9/7/2022	<0.005
Mean	0.00326
Std. Dev.	0.002163
Upper Lim.	0.005
Lower Lim.	0.00054

Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 11/18/2022 1:02 PM View: AP 1 Confidence Intervals Nonparametric
Plant McDonough Client: Southern Company Data: McDonough AP

	B-112D
4/15/2021	0.945 (U)
9/16/2021	0.241 (U)
1/19/2022	0.738 (U)
9/7/2022	0.755 (U)
Mean	0.6698
Std. Dev.	0.3008
Upper Lim.	0.945
Lower Lim.	0.241

FIGURE I.

Appendix IV Trend Test - Confidence Interval Exceedances - Significant Results

Plant McDonough Client: Southern Company Data: McDonough AP Printed 11/15/2022, 4:52 PM

<u>Constituent</u>	<u>Well</u>	<u>Slope</u>	<u>Calc.</u>	<u>Critical</u>	<u>Sig.</u>	<u>N</u>	<u>%NDs</u>	<u>Normality</u>	<u>Xform</u>	<u>Alpha</u>	<u>Method</u>
Cobalt (mg/L)	DGWA-53 (bg)	-0.004341	-86	-63	Yes	17	0	n/a	n/a	0.01	NP

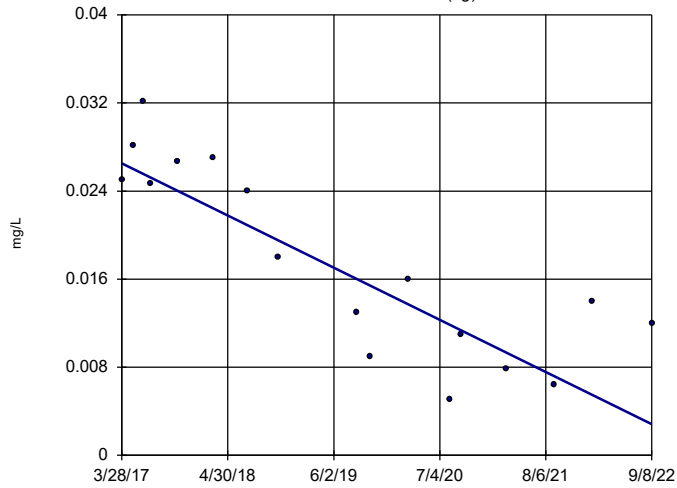
Appendix IV Trend Test - Confidence Interval Exceedances - All Results

Plant McDonough Client: Southern Company Data: McDonough AP Printed 11/15/2022, 4:52 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Arsenic (mg/L)	DGWA-53 (bg)	0	2	63	No	17	58.82	n/a	n/a	0.01	NP
Arsenic (mg/L)	DGWA-70A (bg)	0	-31	-63	No	17	82.35	n/a	n/a	0.01	NP
Arsenic (mg/L)	DGWA-71 (bg)	0	24	58	No	16	81.25	n/a	n/a	0.01	NP
Arsenic (mg/L)	DGWC-69	0.003451	60	74	No	19	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	DGWA-53 (bg)	-0.004341	-86	-63	Yes	17	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	DGWA-70A (bg)	0	29	63	No	17	52.94	n/a	n/a	0.01	NP
Cobalt (mg/L)	DGWA-71 (bg)	0	45	58	No	16	68.75	n/a	n/a	0.01	NP
Cobalt (mg/L)	DGWC-40	0.001513	45	63	No	17	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	DGWA-53 (bg)	-0.00174	-31	-63	No	17	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	DGWA-70A (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	DGWA-71 (bg)	0	15	58	No	16	93.75	n/a	n/a	0.01	NP
Molybdenum (mg/L)	DGWC-68A	-0.004125	-34	-63	No	17	0	n/a	n/a	0.01	NP

Sen's Slope Estimator

DGWA-53 (bg)



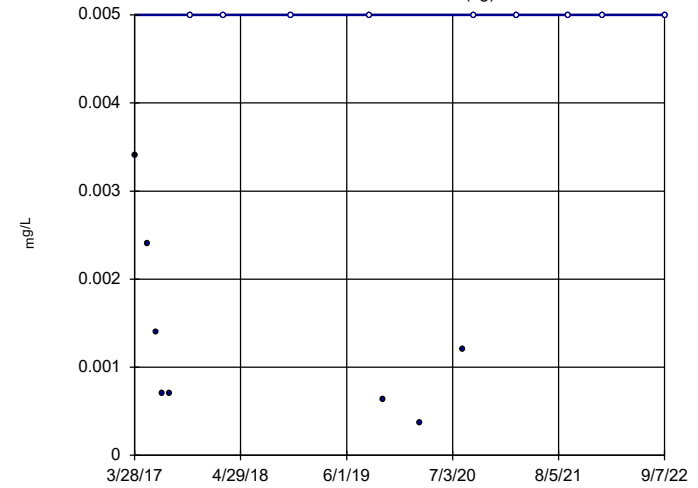
n = 17
 Slope = -0.004341
 units per year.
 Mann-Kendall
 statistic = -86
 critical = -63
 Decreasing trend
 significant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Cobalt Analysis Run 11/15/2022 4:51 PM View: A4 Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Hollow symbols indicate censored values.

Sen's Slope Estimator

DGWA-70A (bg)



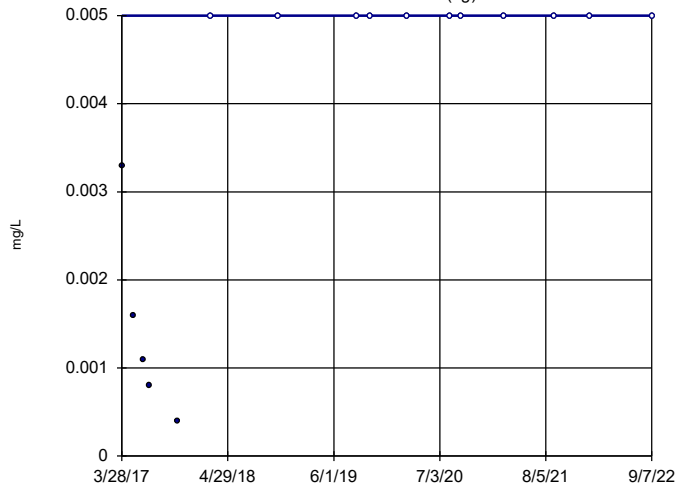
n = 17
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = 29
 critical = 63
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Cobalt Analysis Run 11/15/2022 4:51 PM View: A4 Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Hollow symbols indicate censored values.

Sen's Slope Estimator

DGWA-71 (bg)

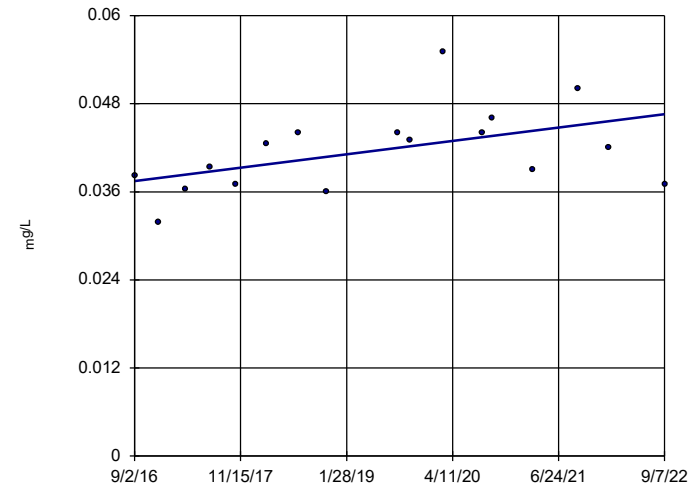


n = 16
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = 45
 critical = 58
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Cobalt Analysis Run 11/15/2022 4:51 PM View: A4 Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWC-40

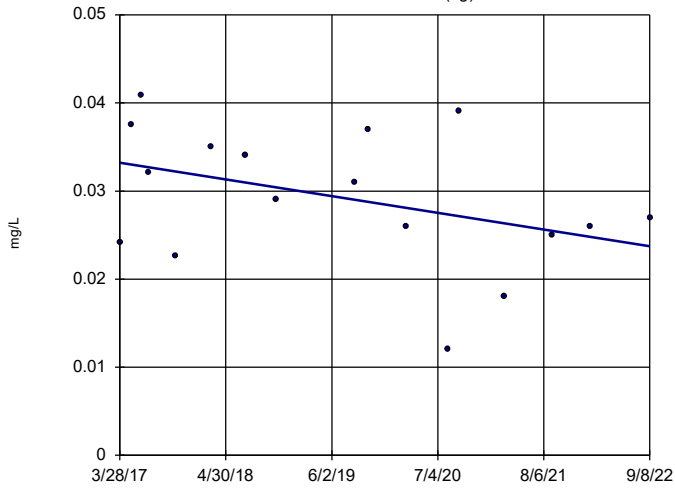


n = 17
 Slope = 0.001513
 units per year.
 Mann-Kendall
 statistic = 45
 critical = 63
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Cobalt Analysis Run 11/15/2022 4:51 PM View: A4 Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWA-53 (bg)



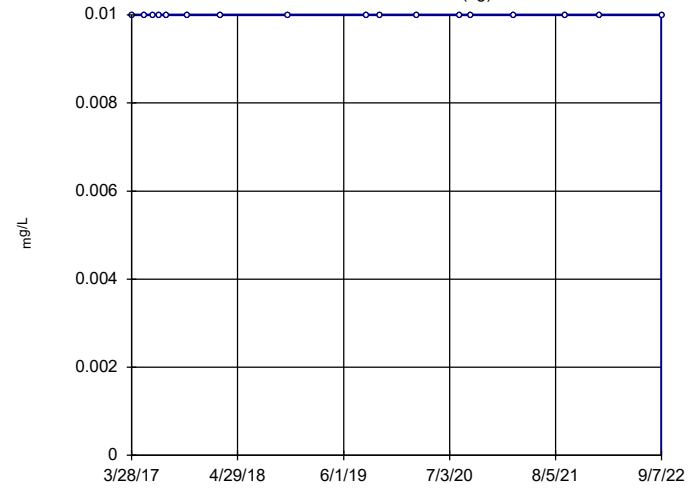
n = 17
 Slope = -0.00174
 units per year.
 Mann-Kendall
 statistic = -31
 critical = -63
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Molybdenum Analysis Run 11/15/2022 4:51 PM View: A4 Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Hollow symbols indicate censored values.

Sen's Slope Estimator

DGWA-70A (bg)



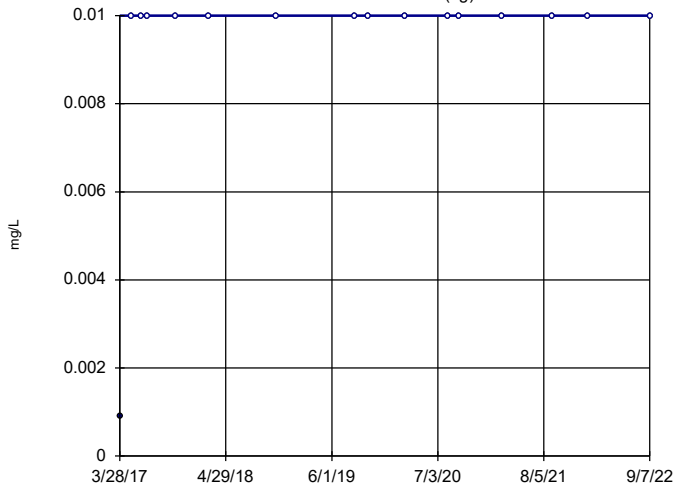
n = 17
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = 0
 critical = 63
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Molybdenum Analysis Run 11/15/2022 4:51 PM View: A4 Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Hollow symbols indicate censored values.

Sen's Slope Estimator

DGWA-71 (bg)

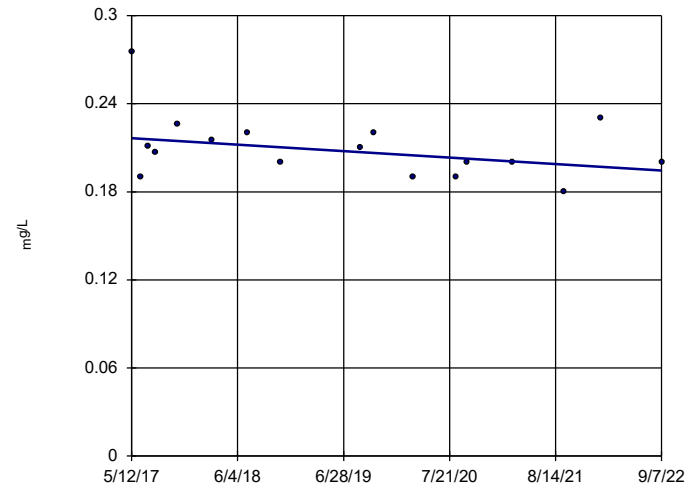


n = 16
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = 15
 critical = 58
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Molybdenum Analysis Run 11/15/2022 4:51 PM View: A4 Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWC-68A



n = 17
 Slope = -0.004125
 units per year.
 Mann-Kendall
 statistic = -34
 critical = -63
 Trend not sig-
 nificant at 99%
 confidence level
 (α = 0.005 per
 tail).

Constituent: Molybdenum Analysis Run 11/15/2022 4:51 PM View: A4 Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

APPENDIX E

Semi-Annual Remedy Selection and Design Progress Report



REPORT

2022 Semi-Annual Remedy Selection and Design Progress Report

Plant McDonough-Atkinson Ash Pond 1

Submitted to:

Georgia Power Company

241 Ralph McGill Boulevard, Atlanta, Georgia 30308

Submitted by:

WSP USA Inc.

5170 Peachtree Road Building 100 Suite 300, Atlanta, Georgia, USA 30341

+1 770 496-1893

February 28, 2023



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Certification

This *Semi-Annual Remedy Selection and Design Progress Report, Georgia Power Company – Plant McDonough-Atkinson, Ash Pond 1* has been prepared in accordance with the United States Environmental Protection Agency coal combustion residual rule, specifically 40 Code of Federal (CFR) 257.97(a) and the Georgia Environmental Protection Division Rules for Solid Waste Management 341-3-4-.10(6)(a). I hereby certify that I am a qualified groundwater scientist, in accordance with the Georgia Rules of Solid Waste Management, and 40 CFR Part 258.50(g).

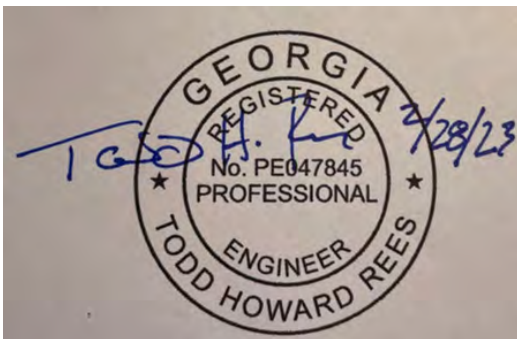
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1.0 INTRODUCTION

In accordance with the United States Environmental Protection Agency (US EPA) coal combustion residuals (CCR) rule [40 Code of Federal Regulations (CFR) 257 Subpart D]; published in 80 FR 21302-21501, April 17, 2015 (CCR Rule; USEPA, 2015a), WSP USA Inc. (WSP) has prepared this *Semi-Annual Remedy Selection and Design Progress Report Plant McDonough-Atkinson Ash Pond 1* (February 2023; Semi-Annual Progress Report) for the Georgia Power Company (Georgia Power) Plant McDonough-Atkinson Ash Pond 1 (AP-1 or Site). Specifically, this semi-annual progress report has been prepared pursuant to 40 CFR § 257.97(a) and the Georgia Environmental Protection Division (GA EPD) Rules for Solid Waste Management 391-3-4-.10(6)(a). This semi-annual report documents activities conducted in support of the previously submitted *Assessment of Corrective Measures Report – Plant McDonough-Atkinson Ash Pond 1* (ACM Report; Golder, 2020).

Plant McDonough, formerly a coal-fired power generating facility, was converted to a natural gas combined-cycle power generating facility in 2011. A Site location map is included as Figure 1.

Pursuant to § 257.96, Georgia Power initiated an ACM for AP-1 on July 9, 2020 to address the occurrence of cobalt and molybdenum in groundwater at statistically significant levels (SSLs). Georgia Power completed the ACM Report on December 4, 2020 and posted it to the CCR compliance website in January 2021. Since submission of the ACM Report, arsenic was identified as an SSL on January 28, 2021 at well DGWC-69 and was added to the ACM evaluation.

The purpose of the ACM Report (and subsequent semi-annual progress reports) is to document the process of evaluating and selecting corrective measure(s) to improve groundwater quality. This process is typically iterative and may be composed of multiple steps to analyze the effectiveness of corrective measures. Once potential corrective measures are identified, they are further evaluated using the criteria outlined in § 257.96(c) and Rule 391-3-4-.10(6)(a). The selected corrective measure must meet the additional protection criteria outlined in § 257.97(b) and corresponding Rule 391-3-4-.10(6)(a). Pursuant to § 257.97(a) and Rule 391-3-4-.10(6)(a), semi-annual progress reports have been regularly submitted to document the efforts of evaluating and progressing toward selecting a groundwater corrective measure.

In 2022, an updated well survey of potential groundwater wells within a two-mile radius of Plant McDonough was conducted and consisted of reviewing federal, state, county records, and online sources. Based on review of the EDR GeoCheck® Report (Appendix A), the findings from this well survey are consistent with the previous well survey conducted in 2020 (NewFields, 2020).

A potable well survey of potential groundwater wells within a two-mile radius of AP-1 was conducted in January 2023 and consisted of reviewing federal, state, and county records, and online resources. A survey conducted by Environmental Data Resources (EDR) is included in Appendix A. Additional federal, state, and county records, and online sources outside of the EDR survey were also reviewed by WSP. The Cobb County Environmental Health Department responded that they did not have records of approved water wells within a 2-mile radius of AP-1. The EDR report identified nine water wells and eight U.S. Geological Survey (USGS) wells. Seven of the eight USGS wells overlapped with the location of water wells and the wells were listed as inactive on the USGS well database. The wells identified with a “B” identifier in the EDR report are associated with industrial activity at the nearby Metro Green II facility and are not for potable water use. The three water wells identified with a “C” identifier in the EDR Report are associated with various water treatment facilities beyond the two-mile radius of AP-1 and are misidentified on the EDR Report Physical Setting Map. The well Identified with the “P18” identifier

on the EDR Report is a surface water intake associated with the City of Atlanta. The water well with a “D” identifier on the EDR Report is associated with a former gas station and was likely used for groundwater monitoring. Twelve wells from the 2020 well survey (Wood 2020) were not included in the 2023 EDR report and cannot be verified.

In addition to the assessment monitoring program at the Site, Georgia Power conducted a human health and ecological risk evaluation of the cobalt and molybdenum SSLs in groundwater at AP-1. The evaluation provides one of many lines of evidence that will be assessed and factored into the remedy selection process, which will be completed in accordance with § 257.97. The risk evaluation concludes that concentrations of cobalt and molybdenum, detected in groundwater at AP-1 between August 2016 and March 2020 are not expected to pose a risk to human health or the environment (Wood, 2020). Cobalt and molybdenum data collected since March 2020 are consistent with data used in the risk evaluation; therefore, the conclusions of the *2020 Risk Evaluation Report* are supported by current conditions. The risk evaluation will be updated to include arsenic, and the results will be submitted with the final Remedy Selection Report.

1.1 AP-1 Closure Activities

AP-1 is currently capped and undergoing closure construction activities to further control infiltration and erosion and to meet or exceed the requirements of § 257.102(d)(3)(ii). The AP-1 Closure Plan (Golder, 2019) was prepared in accordance with § 257, Subpart D and meets the requirements of § 257.102(b). Maintenance will be performed on the final cover system for the required post-closure care period to preserve the integrity and effectiveness of the final cover system.

As part of Site closure and source control, Georgia Power has submitted a permit request for GA EPD approval to install a Subsurface Vertical Barrier Wall (SVBW) around AP-1 as an Advanced Engineering Method (AEM).

1.2 Evaluation of Corrective Measures Alternatives

Pursuant to § 257.97, Georgia Power is evaluating the potential corrective measures in the ACM report to identify a remedy or combination of remedies as soon as possible. The following corrective measures identified in the ACM as potentially feasible for use at AP-1:

- Geochemical Approaches (In-Situ Injection)
- Hydraulic Containment (Pump and Treat)
- Monitored Natural Attenuation (MNA)
- In-Situ Solidification/Stabilization (ISS)
- Permeable Reactive Barrier (PRB)
- Phytoremediation
- Subsurface Vertical Barrier Wall (SVBW).

An evaluation of remedial technologies is presented in Table 1. As required by the CCR Rule, this Semi-Annual Progress Report describes the progress made in selecting and designing a remedy.

The following remedial alternatives have been retained for further evaluation.

- **Geochemical Approaches (In-Situ Injection):** An injection well network, or other means of introducing reagents or air into the subsurface, is used to provide suitable reagents for either anaerobic or aerobic conditions to attenuate the SSL constituents (arsenic and cobalt). In-situ chemical oxidation (ISCO) or in-situ chemical reduction (ISCR) can be used to chemically alter the redox environment in the subsurface. Bench-scale treatability studies have indicated this treatment can be effective in reducing arsenic and cobalt to below GWPS in groundwater and therefore has been retained for further evaluation.
- **Hydraulic Containment (Pump and Treat):** Hydraulic containment involves extracting groundwater from wells or collection trenches to depress the water table and locally control the flow of groundwater. Groundwater extraction well installation is feasible, and wells can be screened in the unconsolidated saprolite, transition zone, and fractured bedrock zones at the Site for effective hydraulic capture. A groundwater flow model for the site is in process and further evaluation of a potential extraction system is warranted and therefore hydraulic containment has been retained for further evaluation.
- **Monitored Natural Attenuation (MNA):** MNA relies on natural attenuation processes to achieve site-specific remediation objectives within a reasonable time frame relative to more active methods. Continued testing of the site soil and groundwater is ongoing to determine the adsorption and desorption capacity of the site materials. As such, MNA is retained for further evaluation.

The following remedial alternatives have been removed from consideration:

- **In-Situ Solidification Stabilization (ISS):** AP-1 is currently capped and in the process of being closed in place. The application of ISS is redundant with the current closure in-place plan. Other retained alternatives are more effective in addressing groundwater corrective action.
- **Permeable Reactive Barrier (PRB):** Constructing a PRB wall outside of the alignment of the planned SVBW may impact the integrity of the SVBW. Additionally, there is limited space between the planned SVBW and either the property boundary or the adjacent surface water feature. As such, other retained options are more suitable for corrective action rather than the installation of a PRB at AP-1.
- **Phytoremediation:** Insufficient space is available downgradient of the impacted wells for tree plantings to achieve groundwater uptake for phytoremediation to be effective. The technology is not feasible at AP-1.
- **Subsurface Vertical Barrier Wall (SVBW):** A SVBW installed around AP-1 is currently planned as an Advanced Engineering Method (AEM) to enhance the closure of AP-1. Constructing a second SVBW outside the perimeter of the planned barrier wall is redundant and there is limited area for the construction of a second barrier.

1.3 Adaptive Site Management

Georgia Power has proactively initiated an adaptive Site management protocol as outlined in the ACM Report (Golder, 2020) to support the groundwater remedy selection process and address potential changes in Site conditions as appropriate during the ash pond closure. The adaptive Site management approach will take existing Site conditions, including natural attenuation mechanisms, into account. Characterization activities to evaluate attenuation mechanisms at the Site may include collection of data necessary to progressively evaluate the existing and long-term effectiveness of these processes in the aquifer and reduce uncertainty for decision making at each screening step as listed in the US EPA guidelines for MNA (US EPA 2007, 2015b). The 2007 MNA

technical guidance is specific to inorganic contaminants and lists four MNA demonstration “tiers.” The 2015 MNA guidance retains these four “tiers,” but describes them as “phases” as described below.

- **Phase I:** Demonstration that the groundwater plume is *not expanding*.
- **Phase II:** Determination that the *mechanism and rate* of the attenuation process are sufficient.
- **Phase III:** Determination that the *capacity* of the aquifer is sufficient to attenuate the mass of contaminant within the plume and the *stability* of the immobilized contaminant is sufficient to resist re-mobilization.
- **Phase IV:** Design of a *performance monitoring program* based on an understanding of the mechanism of the attenuation process, and establishment of contingency remedies tailored to site-specific characteristics.

Georgia Power will address Phase IV as appropriate during the development of the future corrective action monitoring plan, after the final remedy selection report.

2.0 SUMMARY OF WORK COMPLETED

The following subsections summarize field investigation activities and supplemental data collected since the previous *Semi-Annual Remedy Selection and Design Progress Report* (Golder, 2022a). These activities support Site characterization and delineation of Appendix IV SSLs, as well as evaluation of the corrective measures presented in the ACM report. These data will be used to evaluate the feasibility, mechanisms, rates, and stability of identified remedial alternatives to address SSLs of arsenic, cobalt, and molybdenum in groundwater at AP-1. An evaluation of these data as they relate to remedy selection alternatives is ongoing and will be presented in future report(s).

2.1 Nature and Extent Delineation

The July through December 2022 assessment monitoring groundwater data show SSLs, as presented in the table below, at concentrations exceeding the state and/or federal Groundwater Protection Standards (GWPS). Details are provided in the *2022 Semi-Annual Groundwater Monitoring and Corrective Action Report* (Golder, 2023).

AP-1 Statistically Significant Level Exceedances	
AP-1 Monitoring Well	Appendix IV Parameter
DGWC-40	Cobalt
DGWC-68A	Molybdenum
DGWC-69	Arsenic

The locations of the Site monitoring wells and piezometers are shown on Figure 2. Table 2 provides a summary of construction details for each of the Site monitoring wells and piezometers. A potentiometric surface contour map of the groundwater elevations measured on September 6, 2022 is provided as Figure 3.

Potential trends in SSL constituent concentrations were further evaluated by Groundwater Stats Consulting (GSC) using the Sen’s Slope/Mann Kendall test (Appendix B). The full report generated from the analyses is provided in the *2022 Semi-Annual Groundwater Monitoring and Corrective Action Report* (Golder, 2023). No statistically

significant trends were noted in the three wells exhibiting SSLs. The lack of increasing trends at confirms the chemical stability of the groundwater and the plume appears to be stable.

Based on Site data, the molybdenum SSL at the Site originates from naturally occurring molybdenum in the bedrock and not the result of a release from the AP-1. An Alternate Source Demonstration (ASD) has been prepared and submitted for the Site (Golder, 2022b). The evidence for a natural source of molybdenum to groundwater includes:

- Molybdenite crystals identified in gneissic/pegmatitic bedrock immediately below screened interval of DGWC-68A.
- Molybdenum concentrations observed in bedrock samples are substantially higher (>800 times) than average values for various rock types (i.e., crustal, felsic, or mafic).
- Molybdenum is known to be present in regional aquifer materials based on previous studies.

Based on information presented in the ASD, the molybdenum concentrations at DGWC-68A are attributed to a natural source, i.e., the molybdenum-rich bedrock just below the screened interval of DGWC-68A, and not due to a release from the Ash Pond.

Horizontal and Vertical Delineation

To characterize the nature and extent of arsenic, cobalt, and molybdenum SSLs, multiple wells have been installed and sampled at the Site (Golder, 2022c). The table below lists the SSL constituent delineation wells. In addition, surface water has been sampled at multiple locations to demonstrate horizontal delineation where proximity to surface water prevented installation of additional wells. Figures 4 and 5 present isoconcentration contour maps for the two constituents with an exceedance of the GWPS: arsenic and cobalt, respectively.

Constituent of Concern	Detection Monitoring Well with SSL	Vertical Delineation Well	Horizontal Delineation Well/ Surface Water Monitoring Location
Arsenic	DGWC-69	B-112D	UT02
Molybdenum ^[1]	DGWC-68A	NA	NA
Cobalt	DGWC-40	B-105D	B-62

Notes:

[1] An Alternate Source Demonstration (ASD) for molybdenum has been submitted for Plant McDonough (Golder, 2022b). Georgia Power will continue to monitor the occurrence of molybdenum until such time that GA EPD approves the ASD. NA – not applicable

Horizontal delineation of the SSL constituents is complete based on review of the analytical results, statistical analyses, and the isoconcentration contours. Vertical delineation of molybdenum at DGWC-68A is currently on hold pending GA EPD’s review and concurrence with the molybdenum ASD. Vertical delineation of arsenic and cobalt are complete based on data collected to date indicating that arsenic in B-112D is below the GWPS, and cobalt in B-105D is below background. Details regarding the specific well pairs used for delineation are described in detail in the *2022 Semi-Annual Groundwater Monitoring and Corrective Action Report* (Golder, 2023).

2.2 Supplemental Data Collection and Analysis

Additional field investigation activities and data analyses have been performed to evaluate alternate sources and possible remedial alternatives. Groundwater samples collected from the detection and assessment monitoring well networks in September 2022 were analyzed for major ions (magnesium, potassium, sodium, and total and bicarbonate alkalinity) and minor ions (iron and manganese). Results are included in the *2022 Annual Groundwater Monitoring and Corrective Action Report* (Golder, 2023).

Bench-Scale Treatability Study

Terra Systems, Inc. (TSI) was subcontracted to perform a bench-scale treatability study to evaluate potential in-situ geotechnical remediation approaches for reducing SSL constituents in AP-1 groundwater. Soil samples from borings drilled adjacent to monitoring wells DGWC-68A, DGWC-69, and DGWC-40 and groundwater samples from each of these three wells were collected in July 2022 and submitted to TSI for testing. The treatability study evaluated SSL constituent neutralization/precipitation with potassium and sodium bicarbonates and precipitation/adsorption with ferric oxide and ferrous sulfide. TSI’s October 21, 2022 bench study report is presented in Appendix C.

TSI prepared test aliquots of each AP-1 sample by mixing soil/groundwater at approximately 40% soil and 60% groundwater by weight. Each soil/groundwater sample (DGWC-68A, DGWC-69, and DGWC-40) was tested at three dosages for each reagent (potassium bicarbonate, sodium bicarbonate, ferric oxide, and ferrous sulfide). The dosed aliquots were mixed for seven days and the dissolved concentrations in the supernatant were then compared to the raw groundwater concentrations to assess reagent performance. The treatability study results for arsenic, cobalt, and molybdenum are summarized below.

- **Arsenic.** For DGWC-69 groundwater and soil, the control, all ferric oxide treatments, and the 10 g/L ferrous sulfide treatments reduced arsenic to below the GWPS. Sodium or potassium bicarbonate and high ferrous sulfide treatments were not effective in treating arsenic to below the GWPS. For DGWC-68A, treatments

with 5 g/L KHCO_3 , 2 g/L NaHCO_3 , and 20 g/L ferrous sulfide were effective in treating arsenic to below the GWPS.

- **Cobalt.** All of the potassium bicarbonate, sodium bicarbonate and ferrous sulfide treatments reduced dissolved cobalt in the DGWC-40 groundwater and soil to below the GWPS.
- **Molybdenum.** All of the treatments, including the control, were below the GWPS for molybdenum in the DGWC-69 samples. None of the treatments reduced dissolved molybdenum below the GWPS in the DGWC-68A samples, though the ferric oxide treatments produced the lowest dissolved molybdenum concentrations (0.28 to 0.41 mg/L versus the 0.10 mg/l molybdenum GWPS).

The treatability study indicates that in-situ pH and redox adjustments have potential applicability as treatment options for AP-1 groundwater. Oxidizing conditions (ferric oxide) tended to produce the most favorable results for arsenic and molybdenum but were not effective for arsenic in the DGWC-69 samples. Reducing conditions (ferrous sulfide) and pH neutralization (both bicarbonates) were effective for sequestering cobalt.

3.0 SITE CONCEPTUAL MODEL

The additional data collected since the issuance of the ACM are consistent with the current conceptual Site model (CSM). The following summarizes the current understanding of the CSM within the context of selecting an appropriate groundwater corrective measure for AP-1.

- Data collected during this reporting period are consistent with the CSM as described in the Hydrogeologic Assessment Report (HAR, Golder, 2022c).
- Groundwater elevations recorded from newly installed piezometers have been used to further refine the Site potentiometric surface contour map. The September 2022 potentiometric surface continues to show groundwater flow is generally west towards the unnamed stream channel and south towards the Chattahoochee River, as shown on Figure 3.

4.0 PLANNED ACTIVITIES

Georgia Power has initiated activities as outlined in the ACM Report (Golder, 2020) to support the groundwater remedy selection process and address potential changes in Site conditions, as appropriate. The adaptive Site management approach toward remedy selection may be adjusted over the Site's life cycle as new Site information and technologies become available. To this end, Georgia Power will continue data collection efforts as necessary to refine the CSM and to further evaluate the feasibility of each corrective measure identified in the ACM Report.

Supplementary data collection and evaluation activities proposed to be completed within the next 6 months are presented in Table 3, with the key elements summarized below.

- In addition to Appendix III/IV constituents, samples may also be analyzed for major cations/anions and other parameters for further characterization of groundwater and evaluation of plume stability as well as potential remedies.
- Collect aquifer solids samples in the vicinity of DGWC-40 and DGWC-68A. Samples will be analyzed for soil chemical and mineral data and used to evaluate adsorption capacity of the aquifer and support geochemical modeling at the site.

- Perform geochemical modeling to determine the attenuation capacity of the Site soils as well as adsorption/desorption capacity of the aquifer materials. This information will be used to confirm whether MNA is a feasible alternative.

Georgia Power will continue to prepare semi-annual progress reports to document AP-1 groundwater conditions, results associated with additional data collection, and the progress in selecting and designing a groundwater remedy in accordance with § 257.97(a). Georgia Power will include these future semi-annual progress reports with routine groundwater monitoring and corrective action reports to meet the requirements of § 257.105(h)(12), § 257.106(h)(9), and § 257.107(h)(9), respectively.

5.0 REFERENCES

Golder, 2019. *Amended Written Closure Plan 40 CFR 257.102, Plant McDonough Ash Pond 1*, April 2019.

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TABLES

TABLE 1
Evaluation of Remedial Technologies
 Georgia Power Company – Plant McDonough-Atkinson Ash Pond 1
 Atlanta, Georgia

Corrective Measure	REGULATORY CITATION FOR CRITERIA: 40 CFR 257.96(C)(1)		
	Description	Performance	Reliability
Geochemical Approaches (in situ injection)	Use of an injection well network, or other means of introducing reagents or air into the subsurface, to provide suitable reagents for either anaerobic or aerobic attenuation of arsenic (As) and cobalt (Co). Under anaerobic conditions, As and Co would be attenuated within sparingly soluble sulfide minerals. Under aerobic conditions, soluble iron or manganese and oxygen (either via air sparging or through a chemical oxidant) would be injected to promote the formation of iron or manganese (oxy-) hydroxides for subsequent sorption of As and Co onto these mineral phases. If sufficient iron is present in groundwater, the use of air sparging alone may be considered to precipitate iron (oxy-) hydroxides for sorption. In-situ chemical oxidation (ISCO) or in-situ chemical reduction (ISCR) can be used to chemically alter the redox environment in the subsurface to affect the mobility of certain inorganic compounds, including As and Co.	The effective immobilization of As and Co has been shown under aerobic and anaerobic conditions; however, the anaerobic approach (involving the injection of an electron donor together with iron or manganese and sulfur) requires careful study and testing. While aerobic approaches are somewhat less complex, additional aquifer characterization is needed to further evaluate these options. It is currently not well understood whether molybdenum can be efficiently attenuated using in-situ redox manipulations due to slow reaction kinetics.	Reliability dependent on permeability of the subsurface and the amount and distribution of secondary iron or manganese (oxy-) hydroxides (for aerobic approach), or electron donors and soluble iron or manganese and sulfur that can be consistently distributed (for anaerobic approach). Reliable technology if injected materials can be distributed throughout the impacted aquifer. Bench- and/or pilot-scale treatability testing programs are needed to understand the biogeochemical processes that would effectively reduce migration of As and Co.
Hydraulic Containment (pump-and-treat)	Hydraulic containment refers to the use of groundwater extraction to induce a hydraulic gradient for hydraulic capture or control the migration of impacted groundwater. This approach uses extraction wells or trenches to capture groundwater, which may subsequently require above-ground treatment and permitted discharge to a receiving water feature, reinjection into the groundwater, or reuse (e.g., land application, CCR conditioning, etc.). It is applicable to a variable mix of inorganic constituents, including dissolved As and Co.	Pump and treat (P&T) is effective at providing hydraulic control, but it is unclear whether full groundwater remediation can be achieved without further understanding attenuation mechanisms at the Site. At AP-1, implementation of the corrective measure is contingent on completing additional assessment activities (i.e., high-resolution site characterization, additional pump tests, flow modeling, and capture zone analysis). This is needed to refine the constituent distribution in the subsurface to target specific zones for pumping for improved mass recovery efficiency/ effectiveness and to further evaluate the potential remedy performance.	Generally reliable for hydraulic containment, but uncertainty exists whether groundwater remediation goals can be achieved within a reasonable time frame without further understanding attenuation mechanisms.

TABLE 1
Evaluation of Remedial Technologies
 Georgia Power Company – Plant McDonough-Atkinson Ash Pond 1
 Atlanta, Georgia

Corrective Measure	REGULATORY CITATION FOR CRITERIA: 40 CFR 257.96(C)(1)		
	Description	Performance	Reliability
Monitored Natural Attenuation (MNA)	MNA relies on natural attenuation processes to achieve site-specific remediation objectives within a reasonable time frame relative to more active methods. Under certain conditions (e.g., through sorption, mineral precipitation or oxidation-reduction reactions), MNA effectively reduces the dissolved concentrations of inorganic constituents in groundwater. Attenuation mechanisms for inorganic constituents at CCR sites, including As and Co at AP-1, are either physical (e.g., dilution, dispersion, flushing, and related processes) or chemical (sorption or oxidation reduction reactions). Chemical attenuation processes include precipitation, and sorption reactions such as adsorption on the surfaces of soil minerals, absorption into the matrix of soil minerals, or partitioning into organic matter. Further, oxidation-reduction (redox) reactions, via abiotic or biotic processes, can transform the valence states of some inorganic constituents to less soluble and thus less mobile forms. For As and Co, the main attenuation processes include sorption to iron and manganese oxides (As and Co), and formation of sparingly soluble sulfide minerals (As and Co).	Physical and chemical MNA mechanisms for As and Co, including dilution, dispersion, sorption, and oxidation reduction reactions can be effective at achieving groundwater protection standards (GWPS) within a reasonable time frame. Attenuation processes for As and Co are already occurring at the site as evidenced by groundwater data from the delineation wells. Source control will improve the mass balance such that the buffer capacity of the aquifer is unlikely to be exhausted, and the attenuation processes already at work for As and Co at AP-1 will further enhance ongoing MNA.	Reliable as long as sufficient attenuation capacity is present. MNA is reliable and can either be used as a stand-alone corrective measure for groundwater impacted by dissolved As and/or Co or in combination with a second technology.
In-Situ Solidification / Stabilization	In-situ stabilization is a technique that uses mixing of the CCR with additives to solidify the material in place and reduce future dissolution of CCR compounds from the stabilized material. Additives typically include Portland cement, and the solidification is completed in-situ using large diameter augers. CCR located beneath the water table would be isolated by ISS.	Medium to high, groundwater impacts would be addressed through the processes of natural attenuation. This alternative would isolate/secure the source in a bound matrix, and over time, allow the concentrations of constituents of concern (COCs) in downgradient groundwater to decline to below applicable standards.	In-situ stabilization can be a reliable corrective measure for As and Co in groundwater. Reliability is dependent on the permeability of the subsurface and mechanics of injection. ISS is typically utilized to stabilize a waste material (i.e., within the CCR unit). Reliability outside of the waste boundary may not be as effective in treating As and Co in groundwater.
Permeable Reactive Barrier (PRB)	Permeable reactive barrier (PRB) technology typically involves the installation of a permeable subsurface wall constructed with reactive media for the removal of constituents as groundwater passes through. Either ZVI-Carbon matrix or solid carbon (bio-barrier) are likely viable for the concurrent removal of As and Co. The carbon could be composed of peat moss, mulch or another carbon source. Exact placement of the PRB would be contingent on finalization of the nature and extent characterization. PRBs can be constructed as “funnel and gate” systems, where a barrier wall directs groundwater to a smaller “treatment gate” filled with reactive media.	PRBs have been shown to effectively address As and Co in groundwater. The approach is expected to achieve GWPS for both constituents as impacted groundwater passes through the reactive barrier.	Reliable groundwater corrective measure technology, but loss of reactivity over time may require re-installation depending on the duration of the remedy. Additional data collection, including conducting a bench and/or pilot study, is needed to better characterize current attenuation mechanisms and/or select the appropriate reactive media mix for a PRB wall.

TABLE 1
Evaluation of Remedial Technologies
 Georgia Power Company – Plant McDonough-Atkinson Ash Pond 1
 Atlanta, Georgia

Corrective Measure	REGULATORY CITATION FOR CRITERIA: 40 CFR 257.96(C)(1)		
	Description	Performance	Reliability
Phyto Remediation (TreeWell®)	Phytoremediation uses trees and other plants to degrade or immobilize constituents or achieve hydraulic control without the need for an above-ground water treatment system and infrastructure. Within the context of AP-1, this corrective measure would likely use an engineered (proprietary) TreeWell® phytoremediation system along the point of compliance or downgradient edge of the impacted groundwater for hydraulic control. The system promotes root development to the targeted groundwater zone (depth), allowing for hydraulic control of impacted groundwater. In addition, immobilization of As and Co within the root zone as well as incidental uptake of dissolved As and Co with groundwater is expected to occur concurrent with hydraulic control.	Once established (typically at the end of the third growing season), a TreeWell® system is effective for providing hydraulic containment of groundwater, and potential reduction of As and Co concentrations through immobilization and/or uptake and sequestration in the tree biomass; however, the main purpose is to provide hydraulic control. Given the likely construction of a SVBW for groundwater control at AP-1, phytoremediation is not practicable. Further the potential impacts to the planned SVBW from root development makes this option infeasible.	Engineered phytoremediation is a proven technology where hydrogeologic factors are taken into account (e.g., hydraulic conductivity, flow velocity, depth to impacted groundwater zone, etc.). This is considered an active remedial approach through the use of trees as the "pumps" driving the system. Careful design will be needed to select the proper species, which will include consideration of groundwater chemistry, plant uptake of constituents, and groundwater flow modeling to evaluate the required number and placement of TreeWell® units.
Subsurface Vertical Barrier Walls	This approach involves placing a barrier to groundwater flow in the subsurface, frequently around a source area, to prevent future migration of dissolved constituents in groundwater from beneath the source to downgradient areas. In general, barrier walls are designed to provide containment; localized treatment achieved through the sorption or chemical precipitation reactions from construction of the walls are incidental to the design objective. Barrier walls can also be used in downgradient applications to limit discharge to a surface water feature or to reduce aquifer recharge from an adjacent surface water feature when groundwater extraction wells are placed near one. A variety of barrier materials can be used, including cement and/or bentonite slurries, geomembrane composite materials, or driven materials such as steel or vinyl sheet pile.	Barrier walls are a proven technology for groundwater cutoff at impoundments. Slurry walls are limited by the depth of installation, which is approximately 90 ft below ground surface. However, site-specific geologic and technology-specific considerations may limit this depth to shallower installations. Within the context of AP-1, a barrier wall might be used in conjunction with a "funnel and gate" system for a PRB rather than a stand-alone technology. As such, groundwater with As and Co above GWPS could either be directed to "treatment gates" for passive treatment (in a PRB) or migration of impacted groundwater could be minimized via barrier wall installation. Additional subsurface investigations, aquifer testing, and compatibility testing with site-specific groundwater will be needed.	Generally reliable as a barrier to groundwater flow; however, treatment of downgradient groundwater is incidental and not the primary objective.

TABLE 1
Evaluation of Remedial Technologies
 Georgia Power Company – Plant McDonough-Atkinson Ash Pond 1
 Atlanta, Georgia

Corrective Measure	REGULATORY CITATION FOR CRITERIA: 40 CFR 257.96(C)(1)		
	Ease of Implementation	Potential Impacts	Time Requirement to Begin/Complete
Geochemical Approaches (in situ injection)	Moderate. Installation of injection well network or other injection infrastructure would be required. Alternative installation approaches may be considered, such as along the downgradient edge of impacted groundwater, which would function similar to a PRB application. Potential for clogging of aquifer matrix and/or injection well infrastructure. Chemical distribution during injections (i.e., radius of influence) needs to be evaluated.	Minimal impacts are expected if remedy works as designed, based on a thorough pre-design investigation, geochemical modeling, and bench/pilot study results. Redox-altering processes have the potential to mobilize naturally-occurring constituents as an unintended consequence if not properly studied and implemented.	Installation of the injection network can be accomplished relatively quickly (1 to 2 months). However, a thorough pre-design investigation, geochemical modeling, and/or bench- and/or pilot-testing will be required to obtain design parameters prior to design and construction of the corrective measure, which may take up to 24 months. Once installed, the time required to achieve GWPS within the treatment area may be relatively quick but depends on the attenuation process kinetics of each targeted constituent. The time for complete distribution of the injected materials throughout the treatment area is also variable.
Hydraulic Containment (pump-and-treat)	Moderate. Proven approach, and supplemental installation of extraction wells/trenches is fairly straightforward. The extracted groundwater may potentially require an above-ground treatment system. A variety of sorption and precipitation approaches exist for ex-situ treatment of Co and As. Operation and maintenance (O&M) requirements are expected to include upkeep of infrastructure components (pumps, pipes, tanks, instrumentation and controls, above-ground treatment system) and handling of treatment residuals.	Moderate. The main potential impacts are related to the presence and operation of an on-site above-ground water treatment facility and related infrastructure to convey and treat extracted groundwater. Pumping activity may unintentionally alter the geochemistry within the hydraulic capture zone.	Installation of extraction wells and/or trenches can be accomplished relatively quickly (1 to 2 months). However, additional aquifer testing, system design and installation, and permit approval may be required, which may take up to 24 months. The initiation of the approach would be contingent on the start-up of the wastewater treatment infrastructure. Hydraulic containment can be achieved relatively quickly after startup of the extraction system, but uncertainty exists with respect to the time to achieve GWPS without additional data collection to better understand attenuation mechanisms for As and Co.
In-Situ Solidification / Stabilization	Easy to moderate, implementation of ISS will require a detailed design effort with bench scale testing to determine the appropriate amendment mix for a variety of overburden geologic materials. Pilot testing will also be needed to verify the ability of equipment to solidify material at depth. ISS has not been commonly used to stabilize entire ash units as part of a closure strategy.	Potential impacts of the remedy will be negligible.	In-situ stabilization of AP-1 is predicted to take a number of years to complete, depending on the availability of specialized contractors and equipment.
Monitored Natural Attenuation (MNA)	Reasonably implementable with respect to infrastructure, but moderate to complex with respect to documentation. Proven approach, but additional data are needed to show that the existing attenuation capacity is sufficient to meet site objectives within a reasonable timeframe. A monitoring well network already exists to implement future groundwater monitoring efforts.	None. MNA relies on the natural processes active in the aquifer matrix to reduce constituent concentrations without disturbing the surface or the subsurface.	The infrastructure to initiate MNA is already in place. Demonstrating attenuation mechanisms and capacity can be time-consuming and can take up to 24 months. MNA is expected to be successful within a reasonable time frame following pond closure. Engineering measures will be implemented during closure of the CCR unit to minimize potential impacts to the subsurface during closure activities and routine groundwater monitoring will be used to verify that groundwater impacts remain stable or decrease over time.

TABLE 1
Evaluation of Remedial Technologies
 Georgia Power Company – Plant McDonough-Atkinson Ash Pond 1
 Atlanta, Georgia

Corrective Measure	REGULATORY CITATION FOR CRITERIA: 40 CFR 257.96(C)(1)		
	Ease of Implementation	Potential Impacts	Time Requirement to Begin/Complete
Permeable Reactive Barrier (PRB)	Moderate to difficult. Trenching would be required to install a mix of reactive materials in the subsurface. Continuous trenching may be the most feasible construction method. Installation methods and materials are readily available. Once installed, treatment will be passive and O&M requirements are minimal if replacement of the PRB is not necessary.	Minimal impacts are expected following the construction of the remedy. However, ZVI has the potential to create anaerobic conditions downgradient of the PRB wall that may mobilize redox-sensitive naturally-occurring constituents. These conditions need to be carefully monitored. Short-term impacts during the construction of the remedy can be mitigated through appropriate planning and health and safety measures.	Installation of a PRB can be accomplished relatively quickly (6 to 12 months), depending on the final location and configuration. However, bench- and/or pilot-testing would be required to obtain design parameters prior to design and construction of the remedy, which may take up to 24 months. Once installed, the time to achieve GWPS downgradient of the PRB is anticipated to be relatively quick.
Phyto Remediation (TreeWell®)	Reasonably implementable to moderate. Engineered approach has been proven effective, and specific depth zones can be targeted. Trees are installed as "tree wells" in a large diameter boring to get the roots deep enough to intercept impacted groundwater flow paths. Area must be clear of above and below-ground structures (i.e., power lines). The system, once established (approximately three growing seasons), is a self-maintaining, sustainable remedial system that has no external energy requirements and little maintenance (i.e., efforts normally associated with landscaping).	Minimal impacts are expected. In fact, there are several positive impacts expected, including enhanced aesthetics, wildlife habitat, and limited energy consumption.	The design phase will require some groundwater modeling for optimal placement of the TreeWell® units, which may take up to 6 months. Depending on the number of required units, the installation effort is expected to last several weeks. Hydraulic capture/control is expected approximately three years after planting and system performance is expected to further improve over time.
Subsurface Vertical Barrier Walls	Moderate to difficult. Trenching will be required to fill in the various slurry mixes; alternatively, sheet pile installations can be accomplished without excavation of trenches. The application of barrier walls is limited by the depth of installation, which similar to PRBs, should be keyed into a low permeability layer such as a thick clay layer, PWR, or bedrock. Installation methods and materials are readily available.	Minimal impacts are expected following the construction of the remedy. Short-term impacts during the construction of the remedy can be mitigated through appropriate planning and health and safety measures. Changes to groundwater flow patterns due to installation of the barrier wall are expected, which can affect other aspects of groundwater corrective action.	Installation of a barrier wall can be accomplished relatively quickly (6 to 12 months), depending on the final location and configuration. However, some design phase and additional aquifer and compatibility testing will be required, which may take up to 24 months. Once installed, preventing migration of constituents dissolved in groundwater is anticipated to be relatively quick. Since this approach does not treat the downgradient area of impacted groundwater but prevents migration from a source area, it will likely have to be maintained long-term and coupled with other approaches.

TABLE 1
Evaluation of Remedial Technologies
 Georgia Power Company – Plant McDonough-Atkinson Ash Pond 1
 Atlanta, Georgia

Corrective Measure	REGULATORY CITATION FOR CRITERIA: 40 CFR 257.96(C)(1)			Retention Evaluation
	Institutional Requirements	Other Env. Or Public Health Requirements	Relative Costs	
Geochemical Approaches (in situ injection)	Deed restrictions may be necessary until in-situ treatment has achieved GWPS. A new UIC permit (for in-situ injections) would be required to implement this corrective measure. No other institutional requirements are expected at this time.	None expected at this point. Potential for mobilization of redox-sensitive constituents exists during implementation of an anerobic attenuation approach. Following installation, the remedy is passive.	Medium (depending on expanse of injection network required and injectate volume required per derived design parameters)	Retained for further analysis; can be applied to As, and Co as a sparingly-soluble mineral, or could be applied to raise the groundwater pH to promote immobilization through sorption mechanisms.
Hydraulic Containment (pump-and-treat)	Depending on the effluent management strategy, modifications to the existing NPDES permit may be required, or obtaining a new underground injection control (UIC) permit may be needed if groundwater reinjection is chosen. In addition, deed restrictions may be required as long as groundwater conditions are above regulatory standards for unrestricted use.	Above-ground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal.	Medium to high (depending on remedy duration, complexity of above-ground treatment system, and volume of water processed)	Retained for further analysis; extracted water could be routed to wastewater treatment infrastructure built for dewatering and closure of ponds at the site. Could be considered an effective measure to maintain hydraulic control along the engineered stream channel west of AP-1 or the Chattahoochee River south of AP-1.
In-Situ Solidification / Stabilization	Deed restrictions may be necessary until groundwater concentrations are below GWPS. No other institutional requirements that may limit application of this technology are expected at this time.	Changes to groundwater chemistry relative to the mobility of Appendix IV constituents following completion of ISS, where large volumes of amendments (typically Portland cement) are added to the subsurface, are unknown and would require pilot testing.	Medium, depending on permeability of aquifer	Not retained for further analysis; the application of ISS is either redundant or incompatible with the current closure in-place plan. Not retained for further analysis.
Monitored Natural Attenuation (MNA)	MNA may require the implementation of institutional controls, such as deed restrictions, to preclude potential exposure to groundwater within the footprint of impacted groundwater until GWPS are achieved.	Little to no physical disruption to remediation areas and no adverse construction-related impacts are expected on the surrounding community.	Low to medium	Retained for further analysis; may be used as a stand-alone corrective measure or in conjunction with other potential groundwater corrective measures.
Permeable Reactive Barrier (PRB)	Deed restrictions may be necessary for groundwater areas upgradient of the PRB (if not installed along the waste boundary). No other institutional requirements are expected at this time.	None expected at this point. Following installation, the remedy is passive. However, certain treatment media (such as ZVI) have the potential to mobilize naturally-occurring constituents downgradient of the PRB.	Medium to high (for installation) - minimal O&M requirements if replacement is not necessary	Not retained for further analysis; a PRB cannot treat groundwater downgradient of the constructable alignment; there is minimal space available downgradient of the impacted wells; potential for increased maintenance due to potential biofouling and mineral precipitation.

TABLE 1
Evaluation of Remedial Technologies
 Georgia Power Company – Plant McDonough-Atkinson Ash Pond 1
 Atlanta, Georgia

Corrective Measure	REGULATORY CITATION FOR CRITERIA: 40 CFR 257.96(C)(1)			Retention Evaluation
	Institutional Requirements	Other Env. Or Public Health Requirements	Relative Costs	
Phyto Remediation (TreeWell®)	Deed restrictions may be necessary for groundwater areas upgradient of the TreeWell system. No other institutional requirements are expected at this time.	None expected at this point. Following installation, the remedy is passive and does not require external energy.	Medium (for installation) - minimal O&M requirements	Not retained for further analysis, minimal space available downgradient of the impacted wells for tree plantings. TreeWell® root system would likely impact the SVBW.
Subsurface Vertical Barrier Walls	Deed restrictions may be necessary for groundwater areas downgradient of the barrier wall until remedial goals are met. No other institutional requirements are expected at this time.	If groundwater extraction associated with barrier walls is necessary, above-ground treatment components may need to be present for an extended period of time, generating residuals requiring management and disposal. Groundwater extraction is not planned as part of the AEM.	Medium to high (depending on length and depth of wall)	Not retained for further evaluation. This methodology is currently undergoing permitting as part of closure methodology and therefore a second SVBW is not being considered for groundwater corrective action.

TABLE 2
SUMMARY OF MONITORING WELL, ASSESSMENT WELL AND PIEZOMETER CONSTRUCTION DATA
 Georgia Power Company - Plant McDonough-Atkinson Ash Pond 1
 Atlanta, Georgia

Well-ID	Hydraulic Location	Screened Media	NAD 83 Northing	NAD 83 Easting	Top of Casing Elevation (feet NAVD 88)	Ground Surface Elevation (feet NAVD 88)	Total Well Depth (feet bgs)	Top of Screen Elevation (feet NAVD 88)	Bottom of Screen Elevation (feet NAVD 88)	Screen Length (feet)	Date of Installation
ASH POND 1 (AP-1) DETECTION MONITORING WELL NETWORK											
DGWA-53	Upgradient	Upper Bedrock	1393472.8	2201668.8	844.26	841.3	28.9	823.7	813.7	10	9/24/2016
DGWA-70A	Upgradient	Overburden	1390481.4	2200591.6	808.52	805.8	59.3	756.9	746.9	10	5/10/2017
DGWA-71	Upgradient	Overburden	1393963.3	2201714.8	863.84	861.2	43.8	827.8	817.8	10	2/28/2017
DGWC-37	Downgradient	Overburden	1390482.2	2200919.8	766.21	763.7	39.7	734.4	724.4	10	11/28/2012
DGWC-38	Downgradient	Overburden	1390362.7	2201148.6	757.43	754.7	25.0	740.0	730.0	10	11/29/2012
DGWC-39	Downgradient	Overburden	1390303.6	2201540.1	759.89	757.0	21.2	746.2	736.2	10	11/6/2012
DGWC-40	Downgradient	Overburden	1390625.7	2201825.9	779.06	776.2	34.9	751.7	741.7	10	11/5/2012
DGWC-67	Downgradient	Overburden	1390953.8	2200830.7	766.70	767.0	56.3	720.7	710.7	10	3/14/2017
DGWC-68A	Downgradient	Overburden	1391301.2	2200734.9	765.33	765.4	29.8	746.0	736.0	10	4/20/2017
DGWC-69	Downgradient	Overburden	1391585.0	2200657.1	763.75	764.0	24.3	749.7	739.7	10	3/16/2017
DGWC-121	Downgradient	Overburden	1390739.7	2200849.4	764.16	764.5	50.0	724.8	714.8	10	3/22/2022
ASH POND 1 (AP-1) ASSESSMENT MONITORING WELL NETWORK											
B-62	Downgradient	Upper Bedrock	1389828.1	2201811.2	760.08	760.4	39.9	730.7	720.7	10	10/4/2016
B-100	Downgradient	Overburden	1390254.8	2202242.1	777.95	775.3	44.8	740.5	730.5	10	7/8/2020
B-105D	Downgradient	Upper Bedrock	1390634.5	2201831.9	779.01	776.0	70.0	716.0	706.0	10	10/19/2020
B-112D	Downgradient	Upper Bedrock	1391564.2	2200664.1	765.58	766.1	55.0	721.4	711.4	10	3/22/2021
B-113D	Downgradient	Upper Bedrock	1391264.6	2200719.2	758.22	758.8	85.0	684.4	674.4	10	3/30/2021

TABLE 2
SUMMARY OF MONITORING WELL, ASSESSMENT WELL AND PIEZOMETER CONSTRUCTION DATA
 Georgia Power Company - Plant McDonough-Atkinson Ash Pond 1
 Atlanta, Georgia

Well-ID	Hydraulic Location	Screened Media	NAD 83 Northing	NAD 83 Easting	Top of Casing Elevation (feet NAVD 88)	Ground Surface Elevation (feet NAVD 88)	Total Well Depth (feet bgs)	Top of Screen Elevation (feet NAVD 88)	Bottom of Screen Elevation (feet NAVD 88)	Screen Length (feet)	Date of Installation
ASH POND 2 and ASH PONDS 3/4 (AP-2, 3/4) DETECTION MONITORING WELL NETWORK											
DGWA-53	Upgradient	Upper Bedrock	1393472.8	2201668.8	844.26	841.3	28.9	823.7	813.7	10	9/24/2016
DGWA-70A	Upgradient	Overburden	1390481.4	2200591.6	808.52	805.8	59.3	756.9	746.9	10	5/10/2017
DGWA-71	Upgradient	Overburden	1393963.3	2201714.8	863.84	861.2	43.8	827.8	817.8	10	2/28/2017
DGWC-2	Downgradient	Overburden/Upper Bedrock	1393958.0	2202119.5	850.88	848.3	49.0	809.6	799.6	10	10/2/2012
DGWC-4	Downgradient	Overburden	1394171.5	2202662.4	814.85	812.1	45.0	777.4	767.4	10	10/3/2012
DGWC-5	Downgradient	Overburden/Upper Bedrock	1394306.3	2202965.1	791.75	788.7	30.0	769.0	759.0	10	10/4/2012
DGWC-8	Downgradient	Overburden	1394322.2	2203882.1	826.38	824.1	49.1	785.4	775.4	10	10/10/2012
DGWC-9	Downgradient	Overburden	1394055.9	2204170.0	824.35	821.8	30.0	802.2	792.2	10	10/10/2012
DGWC-10	Downgradient	Overburden	1393818.3	2204201.1	823.55	820.9	45.4	785.9	775.9	10	10/11/2012
DGWC-11	Downgradient	Overburden	1393547.1	2204166.2	800.57	798.1	49.1	759.3	749.3	10	10/15/2012
DGWC-12	Downgradient	Overburden	1393149.4	2204128.3	773.86	771.2	25.1	756.5	746.5	10	10/15/2012
DGWC-13	Downgradient	Overburden	1392881.1	2204084.6	794.10	791.3	43.8	757.9	747.9	10	11/29/2012
DGWC-14	Downgradient	Overburden/Upper Bedrock	1392574.2	2204013.3	792.40	789.8	34.3	765.9	755.9	10	12/18/2012
DGWC-15	Downgradient	Overburden	1392544.1	2203679.0	824.50	821.5	67.1	764.8	754.8	10	11/29/2012
DGWC-17	Downgradient	Overburden	1392645.6	2203051.0	837.05	834.2	44.5	800.0	790.0	10	1/9/2013
DGWC-19	Downgradient	Overburden	1392342.6	2202601.0	825.46	822.9	39.8	793.5	783.5	10	3/12/2013
DGWC-20	Downgradient	Overburden	1392164.5	2202315.6	822.14	819.8	39.7	790.7	780.7	10	3/5/2013
DGWC-21	Downgradient	Overburden/Upper Bedrock	1392067.5	2202063.5	816.28	813.5	69.0	754.9	744.9	10	10/31/2012
DGWC-22	Downgradient	Upper Bedrock	1392126.3	2201791.9	816.59	813.7	60.0	764.0	754.0	10	10/25/2012
DGWC-23	Downgradient	Upper Bedrock	1392239.7	2201582.0	818.37	815.7	60.1	765.9	755.9	10	10/25/2012
DGWC-42	Downgradient	Overburden	1391327.8	2201870.2	804.68	802.0	50.4	762.1	752.1	10	11/12/2012
DGWC-47	Downgradient	Overburden/Upper Bedrock	1391553.8	2202610.5	797.45	794.3	28.8	775.9	765.9	10	6/23/2016
DGWC-48	Downgradient	Overburden/Upper Bedrock	1391314.6	2202290.2	788.33	785.2	30.0	765.6	755.6	10	6/22/2016

TABLE 2
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 Georgia Power Company - Plant McDonough-Atkinson Ash Pond 1
 Atlanta, Georgia

Well-ID	Hydraulic Location	Screened Media	NAD 83 Northing	NAD 83 Easting	Top of Casing Elevation (feet NAVD 88)	Ground Surface Elevation (feet NAVD 88)	Total Well Depth (feet bgs)	Top of Screen Elevation (feet NAVD 88)	Bottom of Screen Elevation (feet NAVD 88)	Screen Length (feet)	Date of Installation
ASH POND 2 and ASH PONDS 3/4 (AP-2, 3/4) ASSESSMENT MONITORING WELL NETWORK											
B-56	Downgradient	Overburden	1393957.9	2204187.8	823.59	821.0	45.0	786.4	776.4	10	10/3/2016
B-62	Downgradient	Upper Bedrock	1389828.1	2201811.2	760.08	760.4	39.9	730.7	720.7	10	10/4/2016
B-63	Downgradient	Overburden	1390999.1	2202978.1	777.10	777.3	46.0	741.8	731.8	10	10/6/2016
B-66	Downgradient	Overburden	1393858.2	2204277.5	815.90	813.3	55.3	768.3	758.3	10	11/16/2016
B-77	Downgradient	Overburden	1390948.7	2202942.0	776.86	777.1	42.0	745.1	735.1	10	9/17/2019
B-82	Downgradient	Overburden	1393750.0	2204258.1	810.07	807.5	45.0	773.0	763.0	10	9/21/2019
B-83	Downgradient	Overburden	1390735.5	2202695.6	776.98	777.1	48.6	738.5	728.5	10	9/30/2019
B-88	Downgradient	Overburden	1394401.1	2203738.3	820.07	817.0	72.0	755.0	745.0	10	11/15/2019
B-92	Downgradient	Overburden	1394392.7	2203026.7	785.08	785.3	24.6	770.7	760.7	10	12/11/2019
B-93	Downgradient	Overburden	1394348.7	2202946.7	789.07	789.2	28.9	770.3	760.3	10	12/12/2019
B-97	Downgradient	Overburden/Upper Bedrock	1394430.0	2203008.3	786.29	786.6	31.0	765.3	755.3	10	2/11/2020
B-98	Downgradient	Overburden	1394392.5	2202934.0	789.67	789.8	19.4	780.8	770.8	10	2/10/2020
B-100	Downgradient	Overburden	1390254.8	2202242.1	777.95	775.3	44.8	740.5	730.5	10	7/8/2020
B-101D	Downgradient	Overburden/Upper Bedrock	1394063.6	2204168.2	824.29	821.2	75.0	756.3	746.3	10	11/12/2020
B-102D	Downgradient	Upper Bedrock	1393828.4	2204200.4	823.42	820.6	85.0	746.2	736.2	10	11/10/2020
B-104D	Downgradient	Upper Bedrock	1391318.3	2202298.5	787.90	785.3	60.0	735.3	725.3	10	10/20/2020
B-106D	Downgradient	Upper Bedrock	1394327.1	2203869.2	826.21	823.5	80.0	754.1	744.1	10	11/13/2020
B-107D	Downgradient	Upper Bedrock	1392334.5	2202596.4	823.38	820.6	85.8	745.5	735.5	10	10/28/2020
B-108D	Downgradient	Upper Bedrock	1392156.1	2202312.5	821.13	818.4	80.0	749.4	739.4	10	10/27/2020
B-109D	Downgradient	Upper Bedrock	1393957.5	2202127.0	850.73	847.8	100.0	758.4	748.4	10	10/31/2020
B-111D	Downgradient	Upper Bedrock	1394303.4	2202956.4	791.87	789.1	85.0	714.9	704.9	10	11/3/2020
B-115D	Downgradient	Upper Bedrock	1391265.3	2202580.7	789.17	786.4	80.0	717.2	707.2	10	3/20/2021
B-120D	Downgradient	Upper Bedrock	1394047.2	2202436.4	836.42	834.0	70.0	775.0	765.0	10	3/6/2021
B-122D	Downgradient	Bedrock	1390992.8	2202975.4	777.03	777.3	85.0	707.5	697.5	10	3/24/2022

TABLE 2
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 Atlanta, Georgia

Well-ID	Hydraulic Location	Screened Media	NAD 83 Northing	NAD 83 Easting	Top of Casing Elevation (feet NAVD 88)	Ground Surface Elevation (feet NAVD 88)	Total Well Depth (feet bgs)	Top of Screen Elevation (feet NAVD 88)	Bottom of Screen Elevation (feet NAVD 88)	Screen Length (feet)	Date of Installation
ASH POND 1, ASH POND 2 AND ASH POND 3/4 SUPPLEMENTAL SAMPLING NETWORK											
B-90	Downgradient	Overburden	1394501.0	2203212.6	784.00	784.2	33.4	760.8	750.8	10	12/10/2019
B-91	Downgradient	Overburden	1394447.1	2203123.9	782.98	783.1	34.6	758.5	748.5	10	12/11/2019
B-95	Downgradient	Overburden	1394518.6	2203167.7	784.00	784.3	33.3	761.3	751.3	10	2/11/2020
B-96	Downgradient	Overburden	1394478.7	2203099.3	784.92	785.3	33.1	762.2	752.2	10	2/10/2020
B-99	Downgradient	Overburden	1394524.2	2203084.5	782.39	782.6	12.3	775.3	770.3	5	7/7/2020
B-116D	Upgradient	Upper Bedrock	1390483.7	2200611.0	807.82	805.3	90.0	726.1	716.1	10	3/8/2021
B-117D	Upgradient	Upper Bedrock	1393963.8	2201727.3	863.82	861.2	75.0	796.5	786.5	10	3/17/2021
B-118	Upgradient	Upper Bedrock	1391219.3	2200449.7	807.70	805.0	75.0	740.2	730.2	10	3/9/2021
B-119D	Upgradient	Upper Bedrock	1391236.4	2200446.6	807.15	804.5	105.0	709.8	699.8	10	3/16/2021
PIEZOMETERS											
B-3	Downgradient	Overburden/Upper Bedrock	1394045.1	2202411.5	837.78	835.0	37.0	808.3	798.3	10	10/3/2012
B-6	Downgradient	Overburden	1394419.5	2203266.5	789.47	786.5	35.4	761.5	751.5	10	10/9/2012
B-7	Downgradient	Overburden	1394374.6	2203596.1	809.16	806.1	25.2	791.3	781.3	10	10/9/2012
B-16	Downgradient	Overburden	1392595.1	2203315.4	826.47	823.6	43.7	790.2	780.2	10	12/19/2012
B-18	Downgradient	Overburden	1392521.0	2202875.5	826.56	823.9	32.6	801.5	791.5	10	1/10/2013
B-24	Downgradient	Upper Bedrock	1392479.9	2201450.0	822.11	819.3	79.1	751.0	741.0	10	10/24/2012
B-25	Downgradient	Upper Bedrock	1392813.3	2201502.7	836.54	833.5	54.8	789.1	779.1	10	10/24/2012
B-26	Downgradient	Upper Bedrock	1393105.6	2201550.4	853.60	850.6	49.3	811.7	801.7	10	10/23/2012
B-28	Downgradient	Overburden/Upper Bedrock	1391967.4	2201679.2	816.08	813.3	69.4	754.3	744.3	10	10/31/2012
B-29	Downgradient	Overburden	1391890.0	2201422.0	816.43	813.5	54.4	769.4	759.4	10	1/11/2013
B-31	Downgradient	Upper Bedrock	1392034.3	2200928.5	797.47	794.9	45.1	760.2	750.2	10	1/22/2013
B-41	Downgradient	Overburden	1390920.8	2201751.9	795.20	792.4	60.0	743.0	733.0	10	11/14/2012
B-50	Downgradient	Overburden	1391657.1	2201841.0	809.67	809.2	36.0	784.4	774.4	10	6/24/2016
B-51	Downgradient	Overburden	1390501.2	2200906.5	765.92	763.3	65.0	708.3	698.3	10	6/27/2016

TABLE 2
SUMMARY OF MONITORING WELL, ASSESSMENT WELL AND PIEZOMETER CONSTRUCTION DATA
 Georgia Power Company - Plant McDonough-Atkinson Ash Pond 1
 Atlanta, Georgia

Well-ID	Hydraulic Location	Screened Media	NAD 83 Northing	NAD 83 Easting	Top of Casing Elevation (feet NAVD 88)	Ground Surface Elevation (feet NAVD 88)	Total Well Depth (feet bgs)	Top of Screen Elevation (feet NAVD 88)	Bottom of Screen Elevation (feet NAVD 88)	Screen Length (feet)	Date of Installation
B-52	Downgradient	Overburden	1392308.3	2201314.8	822.89	820.3	50.0	781.4	771.4	10	9/28/2016
PIEZOMETERS											
B-54	Downgradient	Overburden/Upper Bedrock	1394423.5	2203140.7	785.46	782.6	34.2	758.8	748.8	10	9/26/2016
B-55	Downgradient	Overburden	1394142.6	2204147.9	825.12	822.9	52.0	781.9	771.9	10	9/22/2016
B-57	Downgradient	Upper Bedrock	1391396.3	2202736.9	789.04	786.0	50.5	746.0	736.0	10	9/24/2016
B-58	Downgradient	Overburden	1391125.7	2202426.5	788.17	785.2	45.0	750.7	740.7	10	9/23/2016
B-59	Downgradient	Overburden/Upper Bedrock	1394349.1	2203001.1	788.00	785.5	30.3	765.3	755.3	10	9/23/2016
B-60	Downgradient	Overburden	1391100.7	2202881.6	782.13	779.2	49.8	739.9	729.9	10	9/29/2016
B-61	Downgradient	Overburden	1390957.8	2202505.8	782.09	779.0	51.9	737.5	727.5	10	9/29/2016
B-64	Downgradient	Overburden	1394381.9	2203031.3	785.83	786.1	30.4	766.1	756.1	10	11/2/2016
B-65	Downgradient	Overburden/Upper Bedrock	1394381.2	2204050.8	821.95	822.3	45.4	787.9	777.9	10	11/15/2016
B-68	Downgradient	Overburden	1391298.2	2200714.2	758.68	759.0	18.0	751.0	741.0	10	3/16/2017
B-72	Downgradient	Overburden	1391242.2	2200723.9	758.85	758.1	21.9	746.6	736.6	10	4/19/2017
B-73	Downgradient	Overburden	1391352.4	2200697.5	759.46	758.9	15.8	753.5	743.5	10	4/19/2017
B-74	Downgradient	Overburden	1391279.8	2200665.3	759.44	759.0	16.5	748.2	743.2	5	4/25/2017
B-78	Downgradient	Overburden/Upper Bedrock	1394328.2	2202958.2	790.75	788.0	30.0	768.0	758.5	10	9/22/2019
B-79	Downgradient	Overburden	1394458.6	2203223.0	788.66	785.9	34.9	761.0	751.5	10	9/21/2019
B-80	Downgradient	Overburden	1394372.6	2203533.9	804.47	801.8	30.0	782.0	772.5	10	9/20/2019
B-81	Downgradient	Overburden	1394364.9	2203741.1	820.56	817.7	50.0	778.5	768.5	10	9/22/2019
B-84	Downgradient	Overburden	1390411.9	2202241.9	776.34	776.6	49.1	737.5	727.5	10	10/1/2019
B-85	Downgradient	Overburden/Upper Bedrock	1394433.4	2203134.5	782.54	782.7	34.5	758.5	748.5	10	11/18/2019
B-86	Downgradient	Overburden/Upper Bedrock	1394480.0	2203206.6	784.29	784.6	34.1	760.5	750.5	10	11/18/2019

TABLE 2
SUMMARY OF MONITORING WELL, ASSESSMENT WELL AND PIEZOMETER CONSTRUCTION DATA
 Georgia Power Company - Plant McDonough-Atkinson Ash Pond 1
 Atlanta, Georgia

Well-ID	Hydraulic Location	Screened Media	NAD 83 Northing	NAD 83 Easting	Top of Casing Elevation (feet NAVD 88)	Ground Surface Elevation (feet NAVD 88)	Total Well Depth (feet bgs)	Top of Screen Elevation (feet NAVD 88)	Bottom of Screen Elevation (feet NAVD 88)	Screen Length (feet)	Date of Installation
PIEZOMETERS											
B-87	Downgradient	Overburden	1394401.9	2203531.3	803.37	800.4	42.0	768.7	758.7	10	11/17/2019
B-89	Downgradient	Upper Bedrock	1394398.4	2204049.4	822.36	822.6	49.5	783.1	773.1	10	11/19/2019
B-94	Downgradient	Overburden	1394402.0	2203513.7	801.74	799.2	45.2	764.6	754.6	10	1/23/2020
B-103D	Downgradient	Upper Bedrock	1391543.5	2202614.4	795.96	793.8	70.0	733.8	723.8	10	10/15/2020
B-110D	Downgradient	Upper Bedrock	1391294.4	2200736.0	764.61	764.7	65.0	711.7	701.7	10	11/17/2020
B-123D	Downgradient	Bedrock	1391234.4	2202608.4	781.80	778.9	160.0	668.9	618.9	50	4/4/2022

Notes:

1. bgs = below ground surface
2. Coordinate System: North American Datum of 1983 (NAD 83) (2011) State Plane Georgia West (U.S. feet)
3. NAVD 88 indicates feet (ft) in elevation referenced to the North American Vertical Datum 1988

TABLE 3
Proposed ACM Supplementary Data Collection Tasks for January through July 2023
 Georgia Power Company – Plant McDonough-Atkinson Ash Pond 1
 Atlanta, Georgia

Proposed Activities	Applicable CMs	Applicability / Rationale	Field Component	Data Evaluation
Groundwater Sampling	ISI MNA	(i) Evaluation of attenuation mechanisms and rates and aquifer capacity for attenuation. (ii) Determine the viability of in-situ injections for remedy selection.	Collect groundwater samples from existing well network currently sampled under the assessment monitoring program as well as additional site piezometers within migration pathway.	In addition to routine App III/IV parameters; sulfide, iron, manganese, magnesium, sodium, potassium, bicarbonate alkalinity, dissolved organic carbon (DOC), and total hardness to be collected at select locations.
Soil Sampling	ISI MNA	Evaluate adsorption capacity of the aquifer and support geochemical modeling at the site	Collect aquifer solids samples in the vicinity of DGWC-40 and DGWC-68A.	Samples will be analyzed for soil chemical and mineral data and used to evaluate adsorption capacity of the aquifer and support geochemical modeling at the site
Bench Scale Testing	ISI MNA	Evaluate the effectiveness of different injection media for treatment of arsenic and cobalt.	Completed in 2022.	Evaluate Phase 2 Jar Testing using soil/sediments and groundwater from the site to evaluate effects of 'aquifer solids' on the various reactant's (e.g., potassium bicarbonate) treatment effectiveness.
Geochemical Modeling	ISI MNA	MNA as a component of Final Remedy Selection Support development of injection media for ISI	No Field Component: Phase II & III geochemical modeling and assessment for MNA evaluation of Tiered criteria.	Geochemical modeling performed to evaluate the cause of the cobalt exceedance at well DGWC-40 and the likelihood that it is due to consistently low pH in that area (<5.0), while near to and surrounding AP-1 have a higher pH (5.5 to 7.0).

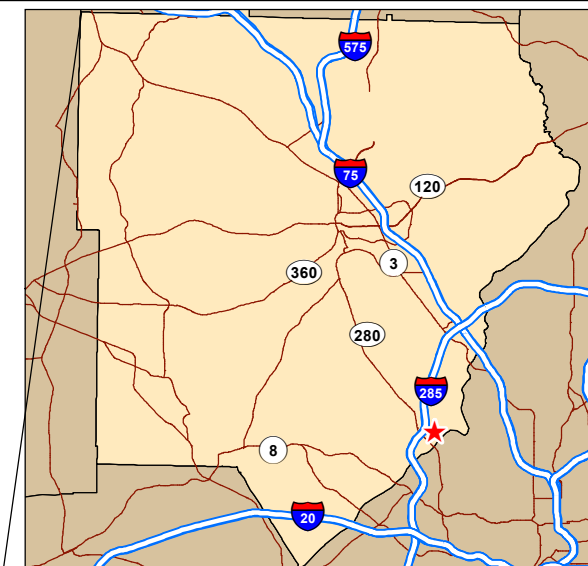
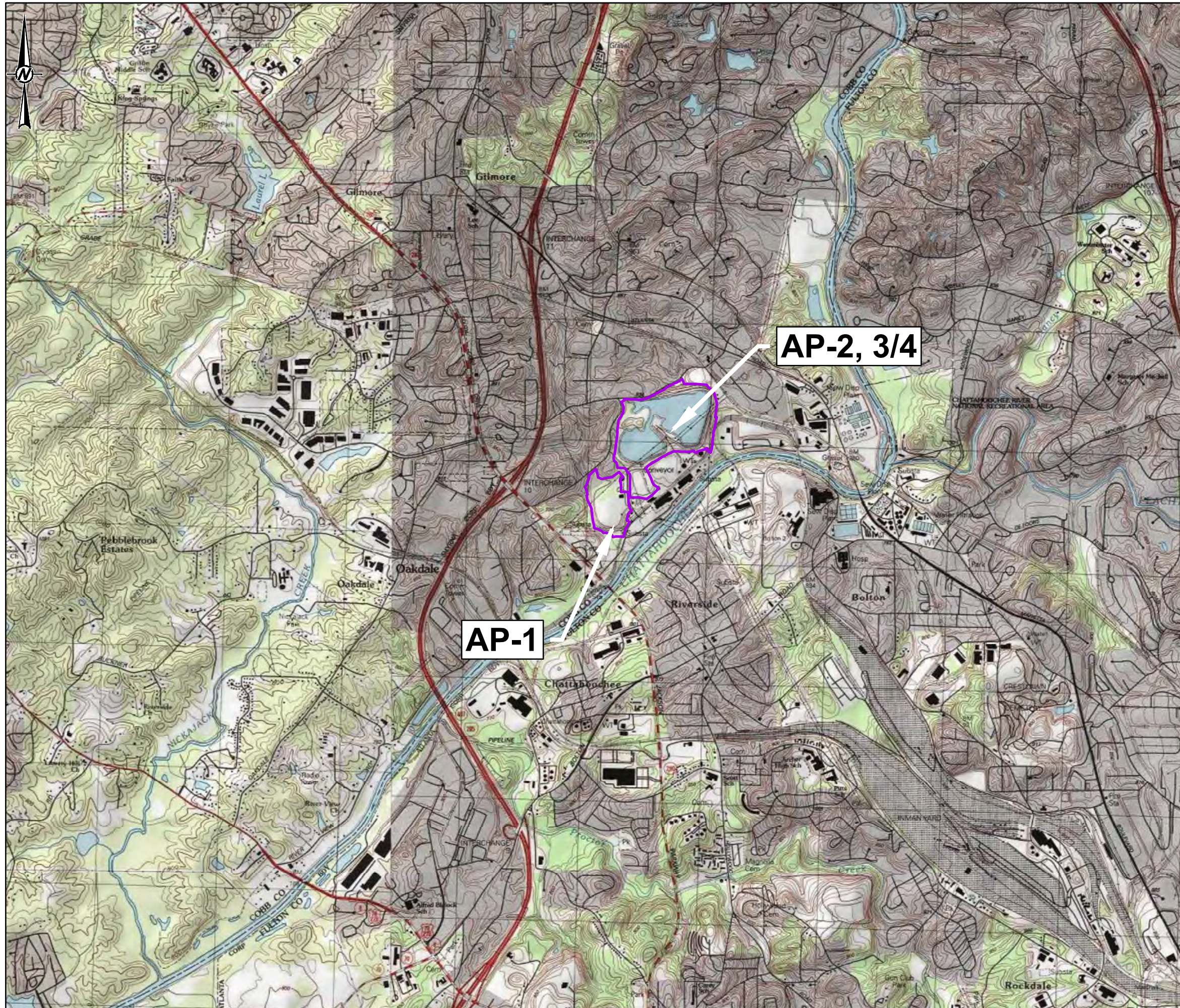
Applicable Corrective Measures Retained:

ISI - Geochemical Approaches (In-Situ Injection)

P&T - Hydraulic Containment (Pump and Treat)

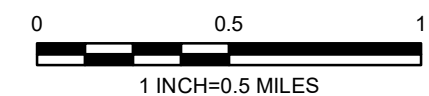
MNA - Monitored Natural Attenuation

FIGURES



REFERENCE

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CLIENT
GEORGIA POWER COMPANY
 PLANT MCDONOUGH-ATKINSON

PROJECT
 SEMI-ANNUAL REMEDY SELECTION AND DESIGN PROGRESS
 REPORT PLANT MCDONOUGH-ATKINSON ASH POND 1



TITLE
SITE LOCATION MAP

CONSULTANT	YYYY-MM-DD	2019-1-31
	PREPARED	SEB
	DESIGN	SEB
	CHECKED	DP
	REVIEWED/APPROVED	RQ

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANSIB



LEGEND

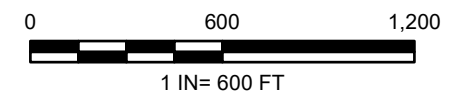
- ◆ AP-1 MONITORING WELL
- ◆ AP-2,3/4 MONITORING WELL
- ◆ UPGRADIENT WELL
- ★ ASSESSMENT MONITORING WELLS
- ◆ PIEZOMETER
- ▲ DEWATERING WELL
- ◆ SURFACE WATER MONITORING LOCATION
- STAFF GAUGE
- PROPERTY BOUNDARY
- PERMIT BOUNDARY

NOTES

1. ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.

REFERENCE

1. AERIAL IMAGE DATED NOVEMBER 2019 FROM GOOGLE EARTH AND AUGUST 31, 2022 PROVIDED BY GPC.
2. COORDINATE SYSTEM: NAD 1983 STATE PLANE GEORGIA WEST (U.S. FEET).
3. MONITORING WELL/PIEZOMETER LOCATIONS AND ELEVATIONS SURVEYED BY METRO ENGINEERING AND SURVEYING COMPANY IN AUGUST 2020 WITH ADDITIONAL SURVEY PROVIDED IN JANUARY 2021 AND MAY 2021.



CLIENT
GEORGIA POWER COMPANY
 PLANT MCDONOUGH-ATKINSON



PROJECT
 SEMI-ANNUAL REMEDY SELECTION AND DESIGN PROGRESS
 REPORT PLANT MCDONOUGH-ATKINSON ASH POND 1

**MONITORING WELL, PIEZOMETER AND SURFACE WATER
 LOCATION MAP**

CONSULTANT	YYYY-MM-DD	2022-07-11
	PREPARED	SEB
	DESIGN	DLP
	CHECKED	DP/RPK
	REVIEWED/APPROVED	RPK

Path: C:\Users\labrad\OneDrive\Documents\166849621_SCS Plant McDonough GW Cms Svcs GA - 800_Shapefiles\WMD\Remedy Selection Work Plan\Figure 2 - Monitoring Well, Piezometer and SW Map.mxd

THIS SHEET HAS BEEN MODIFIED FROM ANS.R



LEGEND

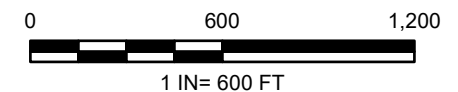
- ◆ AP-1 MONITORING WELL
- ◆ AP-2,3/4 MONITORING WELL
- ◆ UPGRADIENT WELL
- ◆ ASSESSMENT MONITORING WELLS
- ◆ PIEZOMETER
- DEWATERING WELL
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- GROUNDWATER SURFACE CONTOUR (FT-NAVD88)
- SURFACE WATER STREAM
- - - PERMIT BOUNDARY
- - - PROPERTY BOUNDARY
- EXISTING TOPOGRAPHY 10-FOOT CONTOUR
- EXISTING TOPOGRAPHY 2-FOOT CONTOUR

NOTES

1. ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE.
2. GROUNDWATER ELEVATION MEASUREMENTS OBTAINED SEPTEMBER 6, 2022 BY WSP GOLDER.
3. GROUNDWATER ELEVATIONS DISPLAYED IN FEET REFERENCED TO NORTH AMERICAN VERTICAL DATUM (FT NAVD88).
4. WELLS AND PIEZOMETERS THAT CONTAIN A "D" DESIGNATION FOLLOWING THE NUMBER ARE DEEP WELLS AND ELEVATIONS ARE NOT USED FOR CONTOURING.
5. NM = NOT MEASURED.

REFERENCE

1. AERIAL IMAGE DATED NOVEMBER 2019 FROM GOOGLE EARTH AND AUGUST 31, 2022 PROVIDED BY GPC.
2. COORDINATE SYSTEM: NAD 1983 STATE PLANE GEORGIA WEST (U.S. FEET).
3. MONITORING WELL/PIEZOMETER LOCATIONS AND ELEVATIONS SURVEYED BY METRO ENGINEERING AND SURVEYING COMPANY IN AUGUST 2020 WITH ADDITIONAL SURVEY PROVIDED IN JANUARY 2021 AND MAY 2021.



CLIENT
GEORGIA POWER COMPANY
 PLANT MCDONOUGH-ATKINSON

PROJECT
 SEMI-ANNUAL REMEDY SELECTION AND DESIGN PROGRESS
 REPORT PLANT MCDONOUGH-ATKINSON ASH POND 1

TITLE
SITE POTENTIOMETRIC MAP – SEPTEMBER 6, 2022

CONSULTANT	YYYY-MM-DD	2022-10-07
	PREPARED	SEB
	DESIGN	SEB
	CHECKED	DLP
	REVIEWED/APPROVED	RPK

PROJECT No. 166849622 Rev. 0 FIGURE 3



Path: C:\Users\labrodi\OneDrive\Documents\166849622\166849622_SCS Plant McDonough\GW Cont. SCS - 800_Shapefiles\WXD\Potentiometric Surface Maps\September 2022 Pot Map\Site\PotentiometricMap_SEB_Sep2022_VL.mxd

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANS/B



LEGEND

- ◆ AP-1 MONITORING WELL
- ◆ AP-2,3/4 MONITORING WELL
- ◆ UPGRADIENT WELL
- ◆ ASSESSMENT MONITORING WELLS
- ◆ PIEZOMETER
- ◆ SURFACE WATER MONITORING LOCATION
- 0.01 ARSENIC GWPS ISOCONCENTRATION CONTOUR
- PROPERTY BOUNDARY
- INFERRED POTENTIOMETRIC SURFACE CONTOUR (SEPT 2022)
- PERMIT BOUNDARY

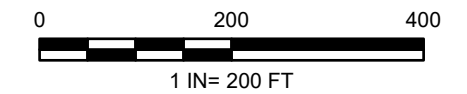
NOTES

1. ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE
2. GROUNDWATER CONCENTRATIONS IN MILLIGRAMS PER LITER (MG/L). GWPS = GROUNDWATER PROTECTION STANDARD.
3. DATA SHOWN REPRESENT THE SEPTEMBER 2022 SEMI-ANNUAL MONITORING EVENT RESULTS AS WELL AS APPLICABLE DELINEATION WELL DATA. SURFACE WATER DATA COLLECTED IN OCTOBER 2022.
4. GWPS IS EQUAL TO THE MCL.
5. DEEP WELL DATA IS NOT USED FOR ISOCONCENTRATION CONTOURING.
6. POTENTIOMETRIC SURFACE DETERMINED USING SEPTEMBER 2022 WATER LEVELS.

Analyte	Units	GWPS
Arsenic	mg/L	0.01

REFERENCE

1. AERIAL IMAGE DATED NOVEMBER 2019 FROM GOOGLE EARTH AND AUGUST 31, 2022 PROVIDED BY GPC.
2. COORDINATE SYSTEM: NAD 1983 STATE PLANE GEORGIA WEST (U.S. FEET).
3. MONITORING WELL/PIEZOMETER LOCATIONS AND ELEVATIONS SURVEYED BY METRO ENGINEERING AND SURVEYING COMPANY IN AUGUST 2020 WITH ADDITIONAL SURVEY PROVIDED IN JANUARY 2021 AND MAY 2021.



CLIENT
GEORGIA POWER COMPANY
 PLANT MCDONOUGH-ATKINSON



PROJECT
 SEMI-ANNUAL REMEDY SELECTION AND DESIGN PROGRESS
 REPORT PLANT MCDONOUGH-ATKINSON ASH POND 1

TITLE
**ARSENIC ISOCONCENTRATION CONTOUR MAP -
 SEPTEMBER 2022**

CONSULTANT	YYYY-MM-DD	2023-02-16
	PREPARED	SEB
	DESIGN	DLP
	CHECKED	RPK
	REVIEWED/APPROVED	RPK

PROJECT No.
 166849621

Rev.
 0

FIGURE
 4

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANS/B



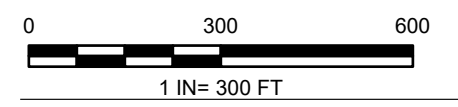
LEGEND

- ◆ AP-1 MONITORING WELL
- AP-2,3/4 MONITORING WELL
- ◆ UPGRADIENT WELL
- ★ ASSESSMENT MONITORING WELLS
- ◆ PIEZOMETER
- ◆ SURFACE WATER MONITORING LOCATION
- 0.0322 COBALT GWPS ISOCONCENTRATION
- - - COBALT GWPS ISOCONCENTRATION CONTOUR (INFERRED)
- INFERRED POTENTIOMETRIC SURFACE CONTOUR (SEPT 2022)
- - - PROPERTY BOUNDARY
- PERMIT BOUNDARY

- NOTES**
- ALL LOCATIONS AND BOUNDARIES ARE APPROXIMATE
 - GROUNDWATER CONCENTRATIONS IN MILLIGRAMS PER LITER (MG/L). GWPS = GROUNDWATER PROTECTION STANDARD. RSL = (FEDERAL REGIONAL SCREENING LEVEL)
 - DATA SHOWN REPRESENT THE SEPTEMBER 2022 SEMI-ANNUAL MONITORING EVENT RESULTS AS WELL AS APPLICABLE DELINEATION WELL DATA.
 - GWPS IS EQUAL TO SITE SPECIFIC BACKGROUND CONCENTRATION AS THERE IS NO MCL AND THE RSL IS BELOW SITE SPECIFIC BACKGROUND CONCENTRATION.
 - DEEP WELL ANALYTICAL RESULTS NOT USED FOR ISOCONCENTRATION CONTOURING.
 - POTENTIOMETRIC SURFACE DETERMINED USING SEPTEMBER 2022 WATER LEVELS.

Analyte	Units	GWPS
Cobalt	mg/L	0.0322

- REFERENCE**
- AERIAL IMAGE DATED NOVEMBER 2019 FROM GOOGLE EARTH AND AUGUST 31, 2022 PROVIDED BY GPC.
 - COORDINATE SYSTEM: NAD 1983 STATE PLANE GEORGIA WEST (U.S. FEET).
 - MONITORING WELL/PIEZOMETER LOCATIONS AND ELEVATIONS SURVEYED BY METRO ENGINEERING AND SURVEYING COMPANY IN AUGUST 2020 WITH ADDITIONAL SURVEY PROVIDED IN JANUARY 2021 AND MAY 2021.



CLIENT
GEORGIA POWER COMPANY
 PLANT MCDONOUGH-ATKINSON

PROJECT
 SEMI-ANNUAL REMEDY SELECTION AND DESIGN PROGRESS
 REPORT PLANT MCDONOUGH-ATKINSON ASH POND 1



TITLE
**COBALT ISOCONCENTRATION CONTOUR MAP -
 SEPTEMBER 2022**

CONSULTANT	YYYY-MM-DD	2023-02-15
	PREPARED	SEB
	DESIGN	DLP
	CHECKED	RPK
	REVIEWED/APPROVED	RPK

IF THIS MEASUREMENT DOES NOT MATCH WHAT IS SHOWN, THE SHEET HAS BEEN MODIFIED FROM ANS1.B

APPENDIX A

EDR GEOTECH® REPORT/ WELL SURVEY

Plant McDonough

5551 South Cobb Drive SE
Atlanta, GA 30339

Inquiry Number: 7235886.5s
January 26, 2023

The EDR GeoCheck® Report



6 Armstrong Road, 4th floor
Shelton, CT 06484
Toll Free: 800.352.0050
www.edrnet.com

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Physical Setting Source Records Searched	PSGR-1

Thank you for your business.
Please contact EDR at 1-800-352-0050
with any questions or comments.

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GEOCHECK® - PHYSICAL SETTING SOURCE REPORT

TARGET PROPERTY ADDRESS

PLANT MCDONOUGH
5551 SOUTH COBB DRIVE SE
ATLANTA, GA 30339

TARGET PROPERTY COORDINATES

Latitude (North):	33.826929 - 33° 49' 36.94"
Longitude (West):	84.477678 - 84° 28' 39.64"
Universal Tranverse Mercator:	Zone 16
UTM X (Meters):	733436.4
UTM Y (Meters):	3745634.0
Elevation:	846 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	33084-G4 NORTHWEST ATLANTA, GA
Version Date:	1997

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

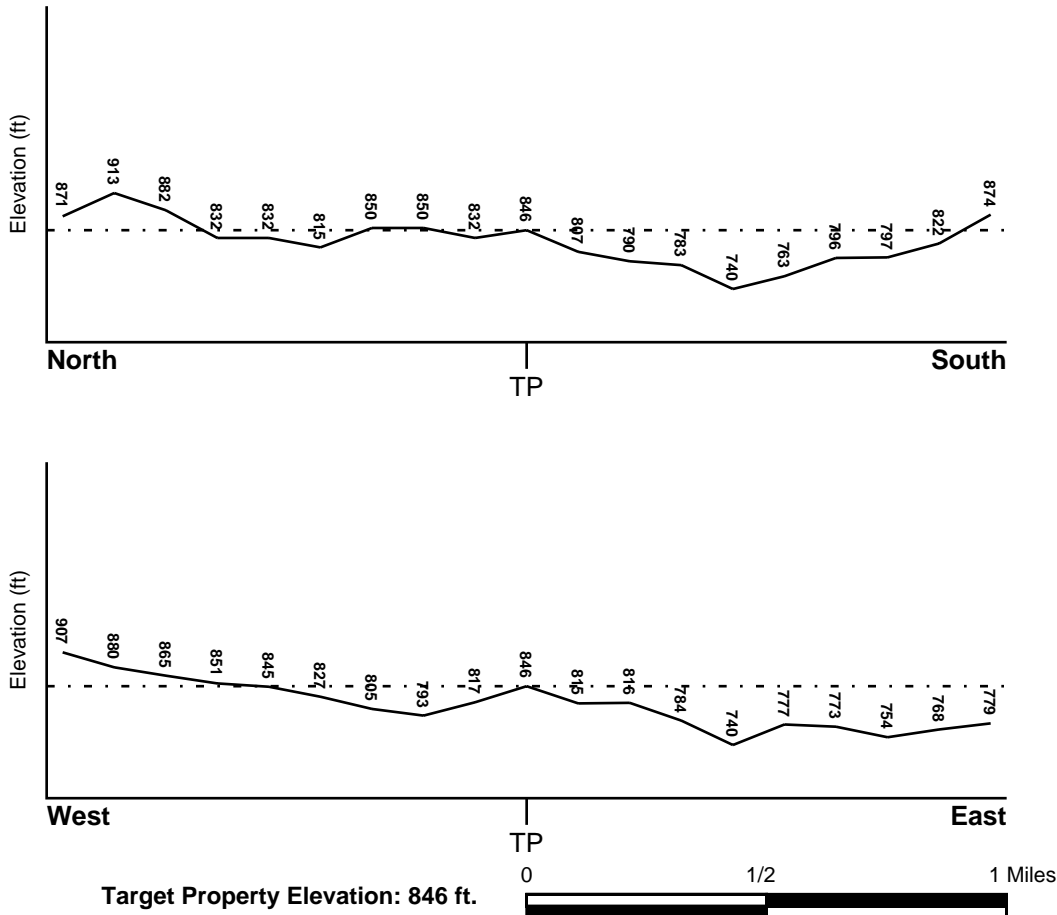
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General SSW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

<u>Flood Plain Panel at Target Property</u>	<u>FEMA Source Type</u>
13067C0228H	FEMA FIRM Flood data
<u>Additional Panels in search area:</u>	<u>FEMA Source Type</u>
13067C0207H	FEMA FIRM Flood data
13067C0226G	FEMA FIRM Flood data
13067C0227H	FEMA FIRM Flood data
13067C0209H	FEMA FIRM Flood data
13067C0229H	FEMA FIRM Flood data
13121C0229F	FEMA FIRM Flood data
13067C0236H	FEMA FIRM Flood data
13067C0217H	FEMA FIRM Flood data
13121C0237F	FEMA FIRM Flood data
13121C0236F	FEMA FIRM Flood data

NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u> NORTHWEST ATLANTA	<u>NWI Electronic Data Coverage</u> YES - refer to the Overview Map and Detail Map
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HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
1	1/2 - 1 Mile SSW	SSW

For additional site information, refer to Physical Setting Source Map Findings.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

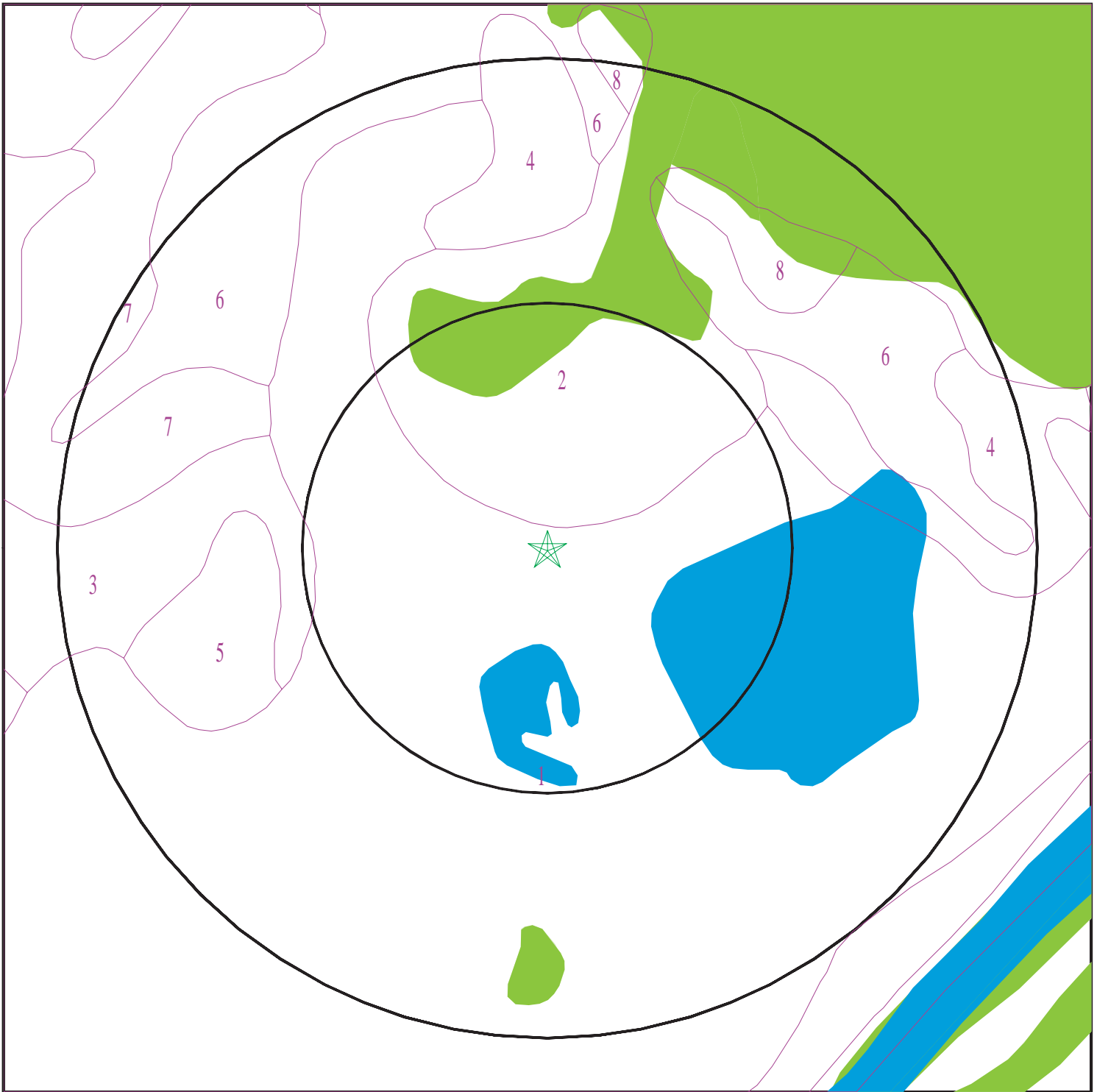
Era:	Paleozoic
System:	Pennsylvanian
Series:	Cataclastic rocks
Code:	cat (decoded above as Era, System & Series)

GEOLOGIC AGE IDENTIFICATION

Category: Metamorphic Rocks

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 7235886.5s



- ★ Target Property
- ∩ SSURGO Soil
- ∩ Water

0 1/16 1/8 1/4 Miles



SITE NAME: Plant McDonough
ADDRESS: 5551 South Cobb Drive SE
Atlanta GA 30339
LAT/LONG: 33.826929 / 84.477678

CLIENT: Golder Associates, Inc.
CONTACT: Chris Tidwell
INQUIRY #: 7235886.5s
DATE: January 26, 2023 4:20 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Urban land

Soil Surface Texture:
Hydrologic Group: Not reported

Soil Drainage Class:
Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 200 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

Soil Map ID: 2

Soil Component Name: Water

Soil Surface Texture:
Hydrologic Group: Not reported

Soil Drainage Class:
Hydric Status: Unknown

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

No Layer Information available.

Soil Map ID: 3

Soil Component Name: Madison

Soil Surface Texture: sandy clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	29 inches	35 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5
2	0 inches	5 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5
3	5 inches	29 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5
4	35 inches	66 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5

Soil Map ID: 4

Soil Component Name: Madison

Soil Surface Texture: sandy clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	5 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5
2	5 inches	29 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5
3	29 inches	35 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5
4	35 inches	66 inches	loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5

Soil Map ID: 5

Soil Component Name: Madison

Soil Surface Texture: sandy clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	29 inches	35 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5
2	0 inches	5 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5
3	5 inches	29 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5
4	35 inches	66 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5

Soil Map ID: 6

Soil Component Name: Madison

Soil Surface Texture: clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	5 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5
2	5 inches	29 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5
3	29 inches	35 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5
4	35 inches	66 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5

Soil Map ID: 7

Soil Component Name: Madison

Soil Surface Texture: sandy loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	5 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5
2	5 inches	29 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5
3	29 inches	35 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5
4	35 inches	66 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5

Soil Map ID: 8

Soil Component Name: Madison

Soil Surface Texture: sandy clay loam

Hydrologic Group: Class B - Moderate infiltration rates. Deep and moderately deep, moderately well and well drained soils with moderately coarse textures.

Soil Drainage Class: Well drained

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Hydric Status: Not hydric

Corrosion Potential - Uncoated Steel: High

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 0 inches

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	29 inches	35 inches	sandy clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5
2	0 inches	5 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5
3	5 inches	29 inches	clay	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5
4	35 inches	66 inches	sandy loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Clayey Soils.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 14 Min: 4	Max: 6 Min: 4.5

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	2.000
Federal FRDS PWS	2.000
State Database	2.000

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL USGS WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A2	USGS40000265121	1/2 - 1 Mile NNE
B4	USGS40000265094	1/2 - 1 Mile East
B7	USGS40000265087	1/2 - 1 Mile ESE
B9	USGS40000265091	1/2 - 1 Mile East
D20	USGS40000265168	1 - 2 Miles NNW
E21	USGS40000265154	1 - 2 Miles NE
F24	USGS40000265164	1 - 2 Miles NW
25	USGS40000265145	1 - 2 Miles WNW

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

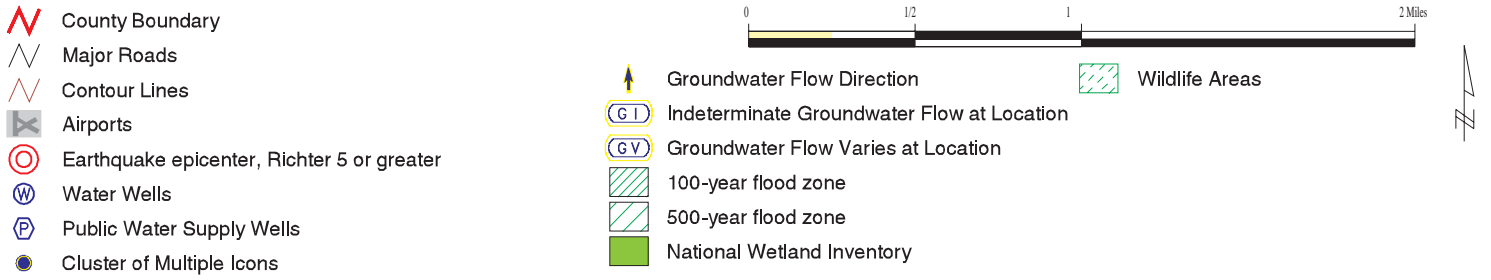
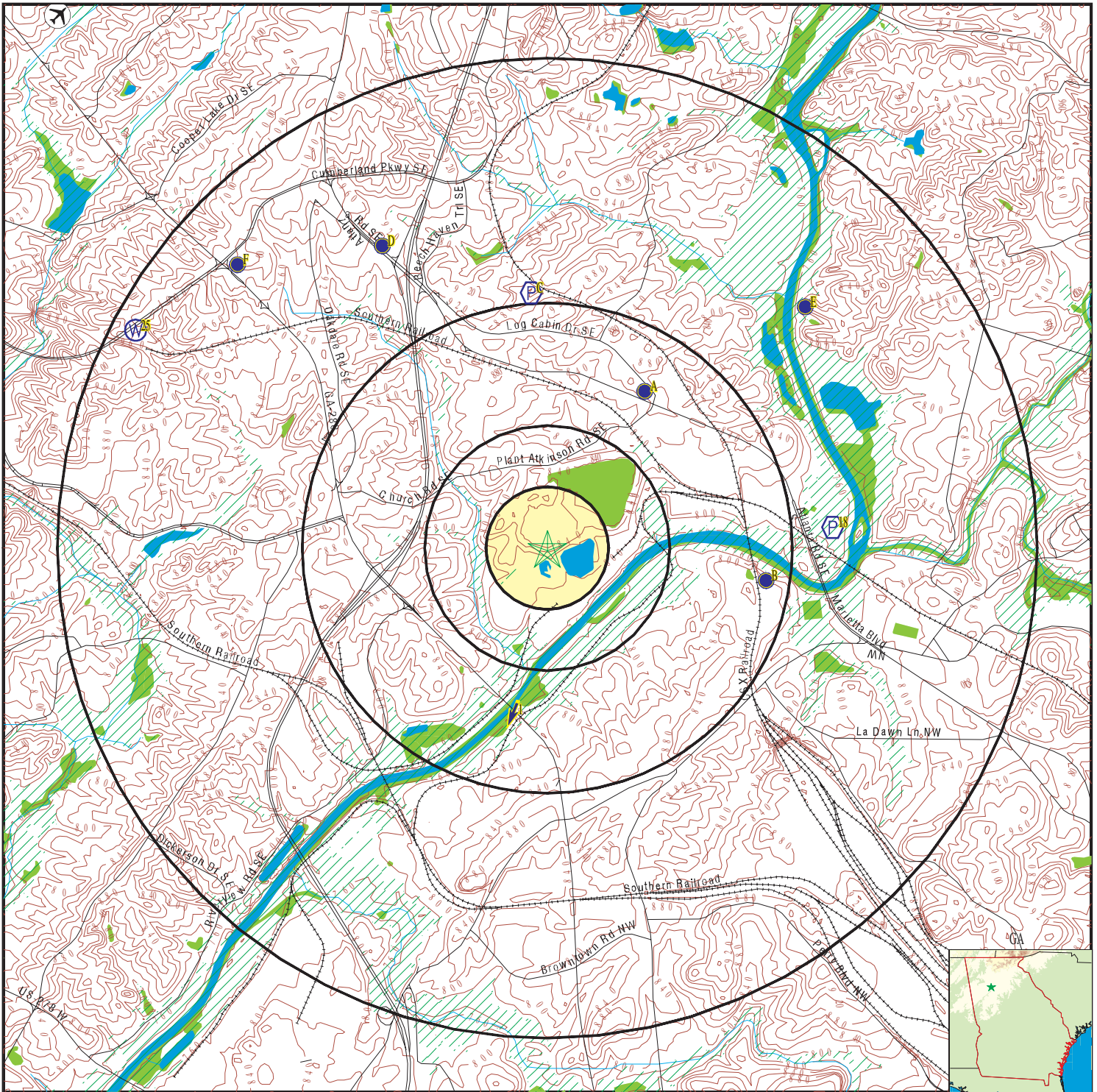
MAP ID	WELL ID	LOCATION FROM TP
C10	GA1210038	1 - 2 Miles North
C11	GA1210000	1 - 2 Miles North
C12	GA1210006	1 - 2 Miles North
C13	GA1210037	1 - 2 Miles North
C14	GA1210002	1 - 2 Miles North
C15	GA1210039	1 - 2 Miles North
C16	GA1210007	1 - 2 Miles North
C17	GA1210005	1 - 2 Miles North
18	GA1210001	1 - 2 Miles East

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION FROM TP
A3	0000002231	1/2 - 1 Mile NNE
B5	0000004659	1/2 - 1 Mile East
B6	0000004656	1/2 - 1 Mile ESE
B8	0000004658	1/2 - 1 Mile East
D19	0000002233	1 - 2 Miles NNW
E22	0000004660	1 - 2 Miles NE
F23	0000002232	1 - 2 Miles NW

PHYSICAL SETTING SOURCE MAP - 7235886.5s



SITE NAME: Plant McDonough
ADDRESS: 5551 South Cobb Drive SE
 Atlanta GA 30339
LAT/LONG: 33.826929 / 84.477678

CLIENT: Golder Associates, Inc.
CONTACT: Chris Tidwell
INQUIRY #: 7235886.5s
DATE: January 26, 2023 4:20 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

1
SSW
1/2 - 1 Mile
Lower

Site ID: 0-601138
Groundwater Flow: SSW
Shallow Water Depth: 18.82
Deep Water Depth: 19.04
Average Water Depth: Not Reported
Date: 07/1991

AQUIFLOW 18783

A2
NNE
1/2 - 1 Mile
Higher

FED USGS USGS40000265121

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	10EE02	Type:	Well
Description:	W.C. HALL	HUC:	03130002
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Units:	Not Reported
Aquifer:	Piedmont and Blue Ridge crystalline-rock aquifers		
Formation Type:	Crystalline Rocks	Aquifer Type:	Confined multiple aquifer
Construction Date:	1932	Well Depth:	79
Well Depth Units:	ft	Well Hole Depth:	79
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	49	Level reading date:	1992-06-16
Feet below surface:	29.34	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1991-10-31	Feet below surface:	29.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1991-05-23	Feet below surface:	30.74
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1990-10-29	Feet below surface:	31.71
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1990-05-30	Feet below surface:	29.21
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1989-10-27	Feet below surface:	32.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1988-11-28	Feet below surface:	34.10
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1988-06-29	Feet below surface:	33.15
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1987-10-26	Feet below surface:	32.99
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1986-11-26	Feet below surface:	32.68
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1986-07-28	Feet below surface:	32.00
Feet to sea level:	Not Reported	Note:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Level reading date:	1985-05-31	Feet below surface:	34.34
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1984-05-31	Feet below surface:	26.94
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1983-11-01	Feet below surface:	30.92
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1983-05-31	Feet below surface:	29.60
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1982-10-26	Feet below surface:	32.40
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1982-05-25	Feet below surface:	31.89
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1981-10-22	Feet below surface:	32.63
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1981-05-21	Feet below surface:	31.09
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1980-11-13	Feet below surface:	30.18
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1980-05-29	Feet below surface:	27.89
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1979-10-25	Feet below surface:	30.81
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1979-05-23	Feet below surface:	31.09
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-12-07	Feet below surface:	32.31
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-10-18	Feet below surface:	31.81
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-05-25	Feet below surface:	29.87
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-04-21	Feet below surface:	30.19
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-03-31	Feet below surface:	30.37
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-03-01	Feet below surface:	30.77
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-01-30	Feet below surface:	31.28
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-12-28	Feet below surface:	31.52
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-12-01	Feet below surface:	31.40
Feet to sea level:	Not Reported	Note:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Level reading date:	1977-10-27	Feet below surface:	31.33
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-09-30	Feet below surface:	31.11
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-08-25	Feet below surface:	30.78
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-07-27	Feet below surface:	30.36
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-06-28	Feet below surface:	29.72
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-05-26	Feet below surface:	29.18
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-05-02	Feet below surface:	29.45
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-03-28	Feet below surface:	30.20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-02-23	Feet below surface:	30.32
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-01-26	Feet below surface:	30.19
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1976-12-21	Feet below surface:	32.74
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1976-10-14	Feet below surface:	29.20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1976-06-03	Feet below surface:	26.68
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1975-11-14	Feet below surface:	28.43
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1974-10-18	Feet below surface:	29.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1974-05-15	Feet below surface:	26.50
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-03-24	Feet below surface:	34
Feet to sea level:	Not Reported	Note:	Not Reported

**A3
NNE
1/2 - 1 Mile
Higher**

GA WELLS 000002231

County code:	067	Well num:	10EE02
Remarks:	W.C. HALL	Lat:	335010
Lon:	0842815	Latlon datum:	NAD27
Alt:	858.00	Alt datum:	NGVD29
Depth:	79	Depth to casing:	40

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Casing dia:	6	Casing matl:	Not Reported
Depth to top:	40	Depth to bot:	85
Opening type:	X	Constr date:	1932
Discharge:	Not Reported	Prim use:	U
Aquifer code:	320CRSL	Edr id:	000002231

B4
East
1/2 - 1 Mile
Lower

FED USGS USGS40000265094

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	10EE26	Type:	Well
Description:	SONOCO PRODUCTS	HUC:	03130002
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19660301
Well Depth:	500	Well Depth Units:	ft
Well Hole Depth:	500	Well Hole Depth Units:	ft

B5
East
1/2 - 1 Mile
Lower

GA WELLS 000004659

County code:	121	Well num:	10EE26
Remarks:	SONOCO PRODUCTS	Lat:	334933
Lon:	0842745	Latlon datum:	NAD27
Alt:	900.00	Alt datum:	NGVD29
Depth:	500	Depth to casing:	23.00
Casing dia:	8.00	Casing matl:	S
Depth to top:	23.00	Depth to bot:	500.00
Opening type:	X	Constr date:	196603
Discharge:	30.00	Prim use:	C
Aquifer code:	Not Reported	Edr id:	000004659

B6
ESE
1/2 - 1 Mile
Lower

GA WELLS 000004656

County code:	121	Well num:	10EE27
Remarks:	SONOCO PRODUCTS	Lat:	334926
Lon:	0842745	Latlon datum:	NAD27
Alt:	900.00	Alt datum:	NGVD29
Depth:	500	Depth to casing:	23.00
Casing dia:	Not Reported	Casing matl:	S
Depth to top:	23.00	Depth to bot:	500.00
Opening type:	X	Constr date:	196604
Discharge:	32.00	Prim use:	C
Aquifer code:	Not Reported	Edr id:	000004656

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

B7
ESE
1/2 - 1 Mile
Lower

FED USGS USGS40000265087

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	10EE27	Type:	Well
Description:	SONOCO PRODUCTS	HUC:	03130002
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19660401
Well Depth:	500	Well Depth Units:	ft
Well Hole Depth:	500	Well Hole Depth Units:	ft

B8
East
1/2 - 1 Mile
Lower

GA WELLS 0000004658

County code:	121	Well num:	10EE25
Remarks:	SONOCO PRODUCTS	Lat:	334930
Lon:	0842742	Latlon datum:	NAD27
Alt:	900.00	Alt datum:	NGVD29
Depth:	400	Depth to casing:	33.00
Casing dia:	10.00	Casing matl:	S
Depth to top:	33.00	Depth to bot:	400.00
Opening type:	X	Constr date:	195801
Discharge:	144.00	Prim use:	C
Aquifer code:	Not Reported	Edr id:	0000004658

B9
East
1/2 - 1 Mile
Lower

FED USGS USGS40000265091

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	10EE25	Type:	Well
Description:	SONOCO PRODUCTS	HUC:	03130002
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19580101
Well Depth:	400	Well Depth Units:	ft
Well Hole Depth:	400	Well Hole Depth Units:	ft

C10
North
1 - 2 Miles
Lower

FRDS PWS GA1210038

Epa region:	04	State:	GA
Pwsid:	GA1210038		
Pwsname:	ATLANTA-FULTON CO WATER RES COMMISSION		
Cityserved:	Not Reported	Stateserved:	GA

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Zipsserved:	Not Reported	Fipscounty:	13121
Status:	Active	Retpopsrvd:	0
Pwssvconn:	2	Psource longname:	Surface_water
Pwstype:	CWS	Owner:	Local_Govt
Contact:	CREWS, KATHY	Contactorgname:	CREWS, KATHY
Contactphone:	678-942-2791	Contactaddress1:	9750 SPRUILL RD.
Contactaddress2:	Not Reported	Contactcity:	ALPHARETTA
Contactstate:	GA	Contactzip:	30022
Pwsactivitycode:	A		
Pwsid:	GA1210038	Facid:	1034
Facname:	ATLANTA-FULTON CO WATER PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	disinfection	Trtprocess:	gaseous chlorination, post
Factypecode:	TP		
Pwsid:	GA1210038	Facid:	1034
Facname:	ATLANTA-FULTON CO WATER PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	corrosion control	Trtprocess:	ph adjustment, post
Factypecode:	TP		
Pwsid:	GA1210038	Facid:	1034
Facname:	ATLANTA-FULTON CO WATER PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	particulate removal	Trtprocess:	filtration, rapid sand
Factypecode:	TP		
Pwsid:	GA1210038	Facid:	1034
Facname:	ATLANTA-FULTON CO WATER PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	disinfection	Trtprocess:	gaseous chlorination, pre
Factypecode:	TP		
Pwsid:	GA1210038	Facid:	1034
Facname:	ATLANTA-FULTON CO WATER PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	particulate removal	Trtprocess:	ph adjustment, pre
Factypecode:	TP		
Pwsid:	GA1210038	Facid:	1034
Facname:	ATLANTA-FULTON CO WATER PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	particulate removal	Trtprocess:	rapid mix
Factypecode:	TP		
Pwsid:	GA1210038	Facid:	1034
Facname:	ATLANTA-FULTON CO WATER PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	particulate removal	Trtprocess:	coagulation
Factypecode:	TP		
Pwsid:	GA1210038	Facid:	1034
Facname:	ATLANTA-FULTON CO WATER PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	particulate removal	Trtprocess:	flocculation
Factypecode:	TP		
Pwsid:	GA1210038	Facid:	1034
Facname:	ATLANTA-FULTON CO WATER PLANT		
Factype:	Treatment_plant	Facactivitycode:	A
Trtobjective:	particulate removal	Trtprocess:	sedimentation

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Factypecode:	TP		
PWS ID:	GA1210038	PWS name:	ATLANTA-FULTON WATER RES COMM
Address:	9750 SPRUILL ROAD	Care of:	FULTON CO. WATER RESOURCES CM
City:	ALPHARETTA	State:	GA
Zip:	30022	Owner:	ATLANTA-FULTON WATER RES COMM
Source code:	Surface water	Population:	25
PWS ID:	GA1210038	PWS type:	Not Reported
PWS name:	Not Reported	PWS address:	Not Reported
PWS city:	Not Reported	PWS state:	Not Reported
PWS zip:	Not Reported	County:	FULTON
Source:	Surface water	Treatment Objective:	DISINFECTION
Process:	GASEOUS CHLORINATION, POST		
Population:	0		
PWS ID:	GA1210038	Activity status:	Active
Date system activated:	Not Reported	Date system deactivated:	Not Reported
Retail population:	00000025	System name:	ATLANTA-FULTON WATER RES COMM
System address:	ATLANTA-FULTON WATER RES COMM	System city:	ALPHARETTA
System address:	9750 SPRUILL ROAD	System zip:	30201
System state:	GA		
Population served:	Under 101 Persons	Treatment:	Treated
Latitude:	340431	Longitude:	0841739
Latitude:	335031	Longitude:	0842844
State:	GA	Latitude degrees:	33
Latitude minutes:	50	Latitude seconds:	31.0000
Longitude degrees:	84	Longitude minutes:	28
Longitude seconds:	44.0000		

**C11
North
1 - 2 Miles
Lower**

FRDS PWS GA1210000

Epa region:	04	State:	GA
Pwsid:	GA1210000	Pwsname:	ALPHARETTA
Cityserved:	Not Reported	Stateserved:	GA
Zipsserved:	Not Reported	Fipscounty:	13121
Status:	Closed	Retpopsrvd:	11700
Pwssvconn:	3392	Psource longname:	Purch_surface_water
Pwstype:	CWS	Owner:	Local_Govt
Contact:	CHATHAM, EARL	Contactorgname:	Not Reported
Contactphone:	678-297-6200	Contactaddress1:	1790 HEMBREE ROAD
Contactaddress2:	Not Reported	Contactcity:	ALPHARETTA
Contactstate:	GA	Contactzip:	30004
Pwsactivitycode:	I		
PWS ID:	GA1210000	PWS name:	ALPHARETTA
Address:	1790 HEMBREE ROAD	Care of:	CITY OF ALPHARETTA
City:	ALPHARETTA	State:	GA
Zip:	30004	Owner:	ALPHARETTA
Source code:	Purchases surface water	Population:	8060
PWS ID:	GA1210000	PWS type:	Not Reported
PWS name:	Not Reported	PWS address:	Not Reported
PWS city:	Not Reported	PWS state:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

PWS zip:	Not Reported	PWS ID:	GA1210000
Activity status:	Active	Date system activated:	Not Reported
Date system deactivated:	Not Reported	Retail population:	00006539
System name:	ALPHARETTA	System address:	CITY OF ALPHARETTA
System address:	TWO SOUTH MAIN STREET	System city:	ALPHARETTA
System state:	GA	System zip:	30201
Population served:	5,001 - 10,000 Persons	Treatment:	Treated
Latitude:	335031	Longitude:	0842844
Violation id:	10098	Orig code:	S
State:	GA	Violation Year:	1995
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	52	Violation name:	Follow-up Or Routine LCR Tap M/R
Rule code:	350	Rule name:	LCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/1995
Cmp edt:	Not Reported		
Violation id:	20303	Orig code:	S
State:	GA	Violation Year:	2003
Contamination code:	3100	Contamination Name:	Coliform (TCR)
Violation code:	24	Violation name:	Monitoring, Routine Minor (TCR)
Rule code:	110	Rule name:	TCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	04/01/2003
Cmp edt:	04/30/2003		
Violation id:	20404	Orig code:	S
State:	GA	Violation Year:	1998
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	52	Violation name:	Follow-up Or Routine LCR Tap M/R
Rule code:	350	Rule name:	LCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/1998
Cmp edt:	Not Reported		
Violation id:	20505	Orig code:	S
State:	GA	Violation Year:	2004
Contamination code:	3100	Contamination Name:	Coliform (TCR)
Violation code:	23	Violation name:	Monitoring, Routine Major (TCR)
Rule code:	110	Rule name:	TCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2004
Cmp edt:	10/31/2004		
Violation id:	20605	Orig code:	S
State:	GA	Violation Year:	2004
Contamination code:	3100	Contamination Name:	Coliform (TCR)
Violation code:	23	Violation name:	Monitoring, Routine Major (TCR)
Rule code:	110	Rule name:	TCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	11/01/2004
Cmp edt:	11/30/2004		
Violation id:	20705	Orig code:	S
State:	GA	Violation Year:	2004
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	52	Violation name:	Follow-up Or Routine LCR Tap M/R
Rule code:	350	Rule name:	LCR
Violation measur:	Not Reported	Unit of measure:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

State mcl:	Not Reported	Cmp bdt:	10/01/2004
Cmp edt:	Not Reported		
Violation id:	20805	Orig code:	S
State:	GA	Violation Year:	2005
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2005
Cmp edt:	Not Reported		
Violation ID:	20303	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	05/29/2003
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	20303	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	05/29/2003
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	20404	Orig Code:	S
Enforcemnt FY:	2002	Enforcement Action:	09/25/2002
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	20404	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	06/28/2004
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	20404	Orig Code:	S
Enforcemnt FY:	2002	Enforcement Action:	02/03/2002
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	20505	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	12/03/2004
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	20505	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	01/25/2005
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	20505	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	12/03/2004
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	20605	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	12/07/2004
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	20605	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	12/07/2004
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	20605	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	01/25/2005
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	20705	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	01/27/2005

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	20705	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	05/05/2005
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	20705	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	05/26/2005
Enforcement Detail:	St Other	Enforcement Category:	Informal
Violation ID:	20705	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	01/27/2005
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	20805	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	08/24/2005
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	20805	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	07/01/2005
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Resolving

**C12
North
1 - 2 Miles
Lower**

FRDS PWS GA1210006

Epa region:	04	State:	GA
Pwsid:	GA1210006	Pwsname:	HAPEVILLE
Cityserved:	Not Reported	Stateserved:	GA
Zipsserved:	Not Reported	Fipscounty:	13121
Status:	Active	Retpopsrvd:	5385
Pwssvconn:	2071	Psource longname:	Purch_surface_water
Pwstype:	CWS	Owner:	Local_Govt
Contact:	MARTIN, C C	Contactorgname:	MARTIN, C C
Contactphone:	404-669-2100	Contactaddress1:	POB 82311
Contactaddress2:	Not Reported	Contactcity:	HAPEVILLE
Contactstate:	GA	Contactzip:	30354-2311
Pwsactivitycode:	A		
PWS ID:	GA1210006	PWS name:	HAPEVILLE
Address:	3560 PERKINS STREET	Care of:	CITY OF HAPEVILLE
City:	HAPEVILLE	State:	GA
Zip:	30354	Owner:	HAPEVILLE
Source code:	Purchases surface water	Population:	5385
PWS ID:	GA1210006	PWS type:	Not Reported
PWS name:	Not Reported	PWS address:	Not Reported
PWS city:	Not Reported	PWS state:	Not Reported
PWS zip:	Not Reported	PWS name:	HAPEVILLE
PWS type code:	C	Retail population served:	5385
Contact:	MARTIN, C C	Contact address:	POB 82311
Contact address:	HAPEVILLE	Contact city:	GA
Contact state:	30	Contact zip:	404-669-21
Contact telephone:	Not Reported		
PWS ID:	GA1210006	Activity status:	Active
Date system activated:	Not Reported	Date system deactivated:	Not Reported
Retail population:	00005483	System name:	HAPEVILLE
System address:	CITY OF HAPEVILLE	System address:	POB 82311

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

System city:	HAPEVILLE	System state:	GA
System zip:	303542311		
Population served:	5,001 - 10,000 Persons	Treatment:	Treated
Latitude:	335031	Longitude:	0842844
Violation id:	10101	Orig code:	S
State:	GA	Violation Year:	2000
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2000
Cmp edt:	Not Reported		
Violation id:	10402	Orig code:	S
State:	GA	Violation Year:	2001
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2001
Cmp edt:	Not Reported		
Violation id:	10603	Orig code:	S
State:	GA	Violation Year:	2002
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2002
Cmp edt:	Not Reported		
Violation id:	10704	Orig code:	S
State:	GA	Violation Year:	2003
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2003
Cmp edt:	Not Reported		
Violation id:	10805	Orig code:	S
State:	GA	Violation Year:	2004
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2004
Cmp edt:	Not Reported		
Violation id:	10907	Orig code:	S
State:	GA	Violation Year:	2006
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2006
Cmp edt:	Not Reported		
Violation id:	11008	Orig code:	S

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

State:	GA	Violation Year:	2007
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2007
Cmp edt:	Not Reported		
Violation id:	11209	Orig code:	S
State:	GA	Violation Year:	2009
Contamination code:	3100	Contamination Name:	Coliform (TCR)
Violation code:	22	Violation name:	MCL, Monthly (TCR)
Rule code:	110	Rule name:	TCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	05/01/2009
Cmp edt:	05/31/2009		
Violation id:	11612	Orig code:	S
State:	GA	Violation Year:	2011
Contamination code:	3100	Contamination Name:	Coliform (TCR)
Violation code:	22	Violation name:	MCL, Monthly (TCR)
Rule code:	110	Rule name:	TCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	11/01/2011
Cmp edt:	11/30/2011		
Violation id:	11613	Orig code:	S
State:	GA	Violation Year:	2012
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2012
Cmp edt:	Not Reported		
Violation ID:	10101	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	07/02/2001
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Resolving
Violation ID:	10101	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	08/31/2001
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	10402	Orig Code:	S
Enforcemnt FY:	2002	Enforcement Action:	07/18/2002
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	10402	Orig Code:	S
Enforcemnt FY:	2002	Enforcement Action:	07/02/2002
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	10603	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	08/18/2003
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	10603	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	08/11/2003
Enforcement Detail:	State CCR Follow-up Notice		
Enforcement Category:	Informal		
Violation ID:	10704	Orig Code:	S

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Enforcemnt FY:	2004	Enforcement Action:	07/01/2004
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Resolving
Violation ID:	10704	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	07/07/2004
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	10805	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	08/01/2005
Enforcement Detail:	State CCR Follow-up Notice		
Enforcement Category:	Informal		
Violation ID:	10805	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	07/01/2005
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Resolving
Violation ID:	10805	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	08/09/2005
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	10907	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	09/01/2007
Enforcement Detail:	State CCR Follow-up Notice		
Enforcement Category:	Informal		
Violation ID:	10907	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	09/11/2007
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	11008	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	08/12/2008
Enforcement Detail:	State CCR Follow-up Notice		
Enforcement Category:	Informal		
Violation ID:	11008	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	07/22/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	11209	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	06/03/2009
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	11209	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	07/02/2009
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	11209	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	06/03/2009
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	11612	Orig Code:	S
Enforcemnt FY:	2012	Enforcement Action:	01/30/2012
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	11612	Orig Code:	S
Enforcemnt FY:	2012	Enforcement Action:	02/08/2012
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	11612	Orig Code:	S
Enforcemnt FY:	2012	Enforcement Action:	01/30/2012

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	11613	Orig Code:	S
Enforcemnt FY:	2012	Enforcement Action:	07/11/2012
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
PWS name:	HAPEVILLE	Population served:	5385
PWS type code:	C	Violation ID:	10101
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2001 0:00:00	Compliance end date:	8/31/2001 0:00:00
Enforcement date:	7/2/2001 0:00:00	Enforcement action:	State Intentional no-action
Violation measurement:	Not Reported		
PWS name:	HAPEVILLE	Population served:	5385
PWS type code:	C	Violation ID:	10101
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2001 0:00:00	Compliance end date:	8/31/2001 0:00:00
Enforcement date:	8/31/2001 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		
PWS name:	HAPEVILLE	Population served:	5385
PWS type code:	C	Violation ID:	10402
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2002 0:00:00	Compliance end date:	7/18/2002 0:00:00
Enforcement date:	7/18/2002 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		
PWS name:	HAPEVILLE	Population served:	5385
PWS type code:	C	Violation ID:	10402
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2002 0:00:00	Compliance end date:	7/18/2002 0:00:00
Enforcement date:	7/2/2002 0:00:00	Enforcement action:	State Violation/Reminder Notice
Violation measurement:	Not Reported		
PWS name:	HAPEVILLE	Population served:	5385
PWS type code:	C	Violation ID:	10603
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2003 0:00:00	Compliance end date:	8/18/2003 0:00:00
Enforcement date:	8/11/2003 0:00:00	Enforcement action:	SII
Violation measurement:	Not Reported		
PWS name:	HAPEVILLE	Population served:	5385
PWS type code:	C	Violation ID:	10603
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2003 0:00:00	Compliance end date:	8/18/2003 0:00:00
Enforcement date:	8/18/2003 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		
PWS name:	HAPEVILLE	Population served:	5385
PWS type code:	C	Violation ID:	10704
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2004 0:00:00	Compliance end date:	7/7/2004 0:00:00
Enforcement date:	7/1/2004 0:00:00	Enforcement action:	State Intentional no-action
Violation measurement:	Not Reported		
PWS name:	HAPEVILLE	Population served:	5385
PWS type code:	C	Violation ID:	10704
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2004 0:00:00	Compliance end date:	7/7/2004 0:00:00
Enforcement date:	7/7/2004 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

PWS name:	HAPEVILLE	Population served:	5385
PWS type code:	C	Violation ID:	10805
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2005 0:00:00	Compliance end date:	8/9/2005 0:00:00
Enforcement date:	7/1/2005 0:00:00	Enforcement action:	State Intentional no-action
Violation measurement:	Not Reported		
PWS name:	HAPEVILLE	Population served:	5385
PWS type code:	C	Violation ID:	10805
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2005 0:00:00	Compliance end date:	8/9/2005 0:00:00
Enforcement date:	8/1/2005 0:00:00	Enforcement action:	SII
Violation measurement:	Not Reported		
PWS name:	HAPEVILLE	Population served:	5385
PWS type code:	C	Violation ID:	10805
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2005 0:00:00	Compliance end date:	8/9/2005 0:00:00
Enforcement date:	8/9/2005 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		
PWS name:	HAPEVILLE	Population served:	5385
PWS type code:	C	Violation ID:	10907
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2007 0:00:00	Compliance end date:	9/11/2007 0:00:00
Enforcement date:	9/1/2007 0:00:00	Enforcement action:	SII
Violation measurement:	Not Reported		
PWS name:	HAPEVILLE	Population served:	5385
PWS type code:	C	Violation ID:	10907
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2007 0:00:00	Compliance end date:	9/11/2007 0:00:00
Enforcement date:	9/11/2007 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		
PWS name:	HAPEVILLE	Population served:	5385
PWS type code:	C	Violation ID:	11008
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2008 0:00:00	Compliance end date:	7/22/2008 0:00:00
Enforcement date:	7/22/2008 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		
PWS name:	HAPEVILLE	Population served:	5385
PWS type code:	C	Violation ID:	11008
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2008 0:00:00	Compliance end date:	7/22/2008 0:00:00
Enforcement date:	8/12/2008 0:00:00	Enforcement action:	SII
Violation measurement:	Not Reported		

C13
North
1 - 2 Miles
Lower

FRDS PWS GA1210037

Epa region:	04	State:	GA
Pwsid:	GA1210037	Pwsname:	PROVIDENCE PARK
Cityserved:	Not Reported	Stateserved:	GA
Zipsserved:	Not Reported	Fipscounty:	13121
Status:	Closed	Retpopsrvd:	400
Pwssvconn:	1	Psource longname:	Groundwater
Pwstype:	TNCWS	Owner:	Local_Govt

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Contact:	CULBRETH, JOHN	Contactorgname:	CULBRETH, JOHN
Contactphone:	404-730-6200	Contactaddress1:	141 PRIOR ST., SW SUITE 8054
Contactaddress2:	Not Reported	Contactcity:	ATLANTA
Contactstate:	GA	Contactzip:	30303
Pwsactivitycode:	I		
Pwsid:	GA1210037	Facid:	1033
Facname:	WELL #1 PLANT	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP
PWS ID:	GA1210037	PWS type:	Not Reported
PWS name:	Not Reported	PWS address:	Not Reported
PWS city:	Not Reported	PWS state:	Not Reported
PWS zip:	Not Reported	PWS ID:	GA1210037
Activity status:	Active	Date system activated:	Not Reported
Date system deactivated:	Not Reported	Retail population:	00000400
System name:	PROVIDENCE PARK	System address:	PROVIDENCE PARK
System address:	13440 PROVIDENCE ROAD	System city:	ALPHARETTA
System state:	GA	System zip:	30201
Population served:	101 - 500 Persons	Treatment:	Treated
Latitude:	334456	Longitude:	0842317
Latitude:	335031	Longitude:	0842844
Violation id:	20203	Orig code:	S
State:	GA	Violation Year:	2003
Contamination code:	3100	Contamination Name:	Coliform (TCR)
Violation code:	23	Violation name:	Monitoring, Routine Major (TCR)
Rule code:	110	Rule name:	TCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	01/01/2003
Cmp edt:	03/31/2003		
Violation id:	20306	Orig code:	S
State:	GA	Violation Year:	2005
Contamination code:	1040	Contamination Name:	Nitrate
Violation code:	03	Violation name:	Monitoring, Regular
Rule code:	331	Rule name:	Nitrates
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	01/01/2005
Cmp edt:	12/31/2005		
Violation id:	20407	Orig code:	S
State:	GA	Violation Year:	2006
Contamination code:	3100	Contamination Name:	Coliform (TCR)
Violation code:	23	Violation name:	Monitoring, Routine Major (TCR)
Rule code:	110	Rule name:	TCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2006
Cmp edt:	12/31/2006		
Violation ID:	20203	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	04/16/2003
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	20203	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	04/16/2003
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Violation ID:	20306	Orig Code:	S
Enforcemnt FY:	2006	Enforcement Action:	02/21/2006
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	20306	Orig Code:	S
Enforcemnt FY:	2006	Enforcement Action:	06/08/2006
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	20306	Orig Code:	S
Enforcemnt FY:	2006	Enforcement Action:	08/15/2006
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	20306	Orig Code:	S
Enforcemnt FY:	2006	Enforcement Action:	02/21/2006
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	20407	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	01/19/2007
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	20407	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	01/19/2007
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal

**C14
North
1 - 2 Miles
Lower**

FRDS PWS GA1210002

Epa region:	04	State:	GA
Pwsid:	GA1210002	Pwsname:	COLLEGE PARK
Cityserved:	Not Reported	Stateserved:	GA
Zipsserved:	Not Reported	Fipscounty:	13121
Status:	Active	Retpopsrvd:	20382
Pwssvconn:	2620	Psource longname:	Purch_surface_water
Pwstype:	CWS	Owner:	Local_Govt
Contact:	LEE, PHIL	Contactorgname:	LEE, PHIL
Contactphone:	404-669-3757	Contactaddress1:	1886 W HARVARD AVE.
Contactaddress2:	Not Reported	Contactcity:	COLLEGE PARK
Contactstate:	GA	Contactzip:	30337
Pwsactivitycode:	A		
PWS ID:	GA1210002	PWS name:	COLLEGE PARK
Address:	1886 WEST HARVARD AVE.	Care of:	CITY OF COLLEGE PARK
City:	COLLEGE PARK	State:	GA
Zip:	30337	Owner:	COLLEGE PARK
Source code:	Purchases surface water	Population:	20645
PWS ID:	GA1210002	PWS type:	Not Reported
PWS name:	Not Reported	PWS address:	Not Reported
PWS city:	Not Reported	PWS state:	Not Reported
PWS zip:	Not Reported	PWS name:	COLLEGE PARK
PWS type code:	C	Retail population served:	20382
Contact:	HOWARD, JR., JESSIE	Contact address:	POB 87137
Contact address:	COLLEGE PARK	Contact city:	GA
Contact state:	30	Contact zip:	404-669-37
Contact telephone:	Not Reported		
PWS ID:	GA1210002	Activity status:	Active

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

<p>Date system activated: Not Reported Retail population: 00020457 System address: CITY OF COLLEGE PARK System city: COLLEGE PARK System zip: 30337</p> <p>Population served: 10,001 - 50,000 Persons</p> <p>Latitude: 335031</p> <p>Violation id: 10301 State: GA Contamination code: 7000 Violation code: 71 Rule code: 420 Violation measur: Not Reported State mcl: Not Reported Cmp edt: Not Reported</p> <p>Violation id: 11407 State: GA Contamination code: 5000 Violation code: 52 Rule code: 350 Violation measur: Not Reported State mcl: Not Reported Cmp edt: Not Reported</p> <p>Violation ID: 10301 Enforcemnt FY: 2001 Enforcement Detail: St Intentional no-action</p> <p>Violation ID: 10301 Enforcemnt FY: 2001 Enforcement Detail: St Compliance achieved</p> <p>Violation ID: 11407 Enforcemnt FY: 2007 Enforcement Detail: St Violation/Reminder Notice Enforcement Category: Informal</p> <p>Violation ID: 11407 Enforcemnt FY: 2010 Enforcement Detail: St Compliance achieved</p> <p>Violation ID: 11407 Enforcemnt FY: 2007 Enforcement Detail: St Public Notif requested</p> <p>PWS name: COLLEGE PARK PWS type code: C Contaminant: 7000 Compliance start date: 7/1/2001 0:00:00 Enforcement date: 7/2/2001 0:00:00 Violation measurement: Not Reported</p> <p>PWS name: COLLEGE PARK PWS type code: C Contaminant: 7000 Compliance start date: 7/1/2001 0:00:00 Enforcement date: 8/10/2001 0:00:00 Violation measurement: Not Reported</p>	<p>Date system deactivated: Not Reported System name: COLLEGE PARK System address: 1886 WEST HARVARD AVE. System state: GA</p> <p>Treatment: Treated</p> <p>Longitude: 0842844</p> <p>Orig code: S Violation Year: 2001 Contamination Name: Consumer Confidence Rule Violation name: CCR Complete Failure to Report Rule name: CCR Unit of measure: Not Reported Cmp bdt: 07/01/2001</p> <p>Orig code: S Violation Year: 2006 Contamination Name: Lead and Copper Rule Violation name: Follow-up Or Routine LCR Tap M/R Rule name: LCR Unit of measure: Not Reported Cmp bdt: 10/01/2006</p> <p>Orig Code: S Enforcement Action: 07/02/2001 Enforcement Category: Resolving</p> <p>Orig Code: S Enforcement Action: 08/10/2001 Enforcement Category: Resolving</p> <p>Orig Code: S Enforcement Action: 03/02/2007</p> <p>Orig Code: S Enforcement Action: 09/14/2010 Enforcement Category: Resolving</p> <p>Orig Code: S Enforcement Action: 03/02/2007 Enforcement Category: Informal</p> <p>Population served: 20382 Violation ID: 10301 Violation type: 71 Compliance end date: 8/10/2001 0:00:00 Enforcement action: State Intentional no-action</p> <p>Population served: 20382 Violation ID: 10301 Violation type: 71 Compliance end date: 8/10/2001 0:00:00 Enforcement action: State Compliance Achieved</p>
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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

PWS name:	COLLEGE PARK	Population served:	20382
PWS type code:	C	Violation ID:	11407
Contaminant:	LEAD & COPPER RULE	Violation type:	Follow-up and Routine Tap Sampling
Compliance start date:	10/1/2006 0:00:00	Compliance end date:	12/31/2025 0:00:00
Enforcement date:	3/2/2007 0:00:00	Enforcement action:	State Violation/Reminder Notice
Violation measurement:	Not Reported		

PWS name:	COLLEGE PARK	Population served:	20382
PWS type code:	C	Violation ID:	11407
Contaminant:	LEAD & COPPER RULE	Violation type:	Follow-up and Routine Tap Sampling
Compliance start date:	10/1/2006 0:00:00	Compliance end date:	12/31/2025 0:00:00
Enforcement date:	3/2/2007 0:00:00	Enforcement action:	State Public Notif Requested
Violation measurement:	Not Reported		

**C15
North
1 - 2 Miles
Lower**

FRDS PWS GA1210039

Epa region:	04	State:	GA
Pwsid:	GA1210039	Pwsname:	CHAMPIONS CLUB OF ATLANTA
Cityserved:	Not Reported	Stateserved:	GA
Zipsserved:	Not Reported	Fipscounty:	13121
Status:	Closed	Retpopsrvd:	255
Pwssvconn:	2	Psource longname:	Groundwater
Pwstype:	NTNCWS	Owner:	Private
Contact:	MELNIK, STEVE	Contactorgname:	Not Reported
Contactphone:	904-356-1000	Contactaddress1:	111 RIVERSIDE AVE., SUITE 330
Contactaddress2:	Not Reported	Contactcity:	JACKSONVILLE
Contactstate:	FL	Contactzip:	33202
Pwsactivitycode:	I		

Pwsid:	GA1210039	Facid:	1035
Facname:	WELL #1 PLANT	Factype:	Treatment_plant
Facactivitycode:	I	Trtobjective:	disinfection
Trtprocess:	hypochlorination, post	Factypecode:	TP

PWS ID:	GA1210039	PWS type:	Not Reported
PWS name:	Not Reported	PWS address:	Not Reported
PWS city:	Not Reported	PWS state:	Not Reported
PWS zip:	Not Reported	PWS ID:	GA1210039
Activity status:	Active	Date system activated:	Not Reported
Date system deactivated:	Not Reported	Retail population:	00000025
System name:	CHAMPIONS CLUB-HOPEWELL DOWNS		
System address:	CHAMPIONS CLUB-HOPEWELL DOWNS		
System address:	15135 HOPEWELL ROAD	System city:	ALPHARETTA
System state:	GA	System zip:	30201

Population served:	101 - 500 Persons	Treatment:	Treated
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Latitude:	340431	Longitude:	0841739
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Latitude:	335031	Longitude:	0842844
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PWS currently has or had major violation(s) or enforcement:Yes

Violation ID:	9200001	Violation source ID:	Not Reported
PWS telephone:	Not Reported	Contaminant:	COLIFORM (TCR)
Violation type:	Monitoring, Routine Major (TCR)		
Violation start date:	010192	Violation end date:	033192
Violation period (months):	003	Violation awareness date:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Major violator:	Yes	Maximum contaminant level:	Not Reported
Number of required samples:	Not Reported	Number of samples taken:	Not Reported
Analysis method:	Not Reported	Analysis result:	Not Reported

PWS currently has or had major violation(s) or enforcement: Yes

Violation ID:	9200002	Violation source ID:	Not Reported
PWS telephone:	Not Reported	Contaminant:	COLIFORM (TCR)
Violation type:	Monitoring, Routine Major (TCR)		
Violation start date:	040192	Violation end date:	063092
Violation period (months):	003	Violation awareness date:	Not Reported
Major violator:	Yes	Maximum contaminant level:	Not Reported
Number of required samples:	Not Reported	Number of samples taken:	Not Reported
Analysis method:	Not Reported	Analysis result:	Not Reported

**C16
North
1 - 2 Miles
Lower**

FRDS PWS GA1210007

Epa region:	04	State:	GA
Pwsid:	GA1210007	Pwsname:	MOUNTAIN PARK
Cityserved:	Not Reported	Stateserved:	GA
Zipserved:	Not Reported	Fipscounty:	13121
Status:	Active	Retpopsrvd:	798
Pwssvconn:	307	Psourcelongname:	Purch_surface_water
Pwstype:	CWS	Owner:	Local_Govt
Contact:	SCHMIDT, BILL	Contactorgname:	SCHMIDT, BILL
Contactphone:	770-993-4231	Contactaddress1:	118 LAKE SHORE DRIVE
Contactaddress2:	Not Reported	Contactcity:	MOUNTAIN PARK
Contactstate:	GA	Contactzip:	30075
Pwsactivitycode:	A		
PWS ID:	GA1210007	PWS name:	MOUNTAIN PARK
Address:	100 MOUNTAIN PARK ROAD	Care of:	CITY OF MOUNTAIN PARK
City:	ROSWELL	State:	GA
Zip:	30075	Owner:	MOUNTAIN PARK
Source code:	Purchases surface water	Population:	679
PWS ID:	GA1210007	PWS type:	Not Reported
PWS name:	Not Reported	PWS address:	Not Reported
PWS city:	Not Reported	PWS state:	Not Reported
PWS zip:	Not Reported	PWS name:	MOUNTAIN PARK
PWS type code:	C	Retail population served:	798
Contact:	SCHMIDT, BILL	Contact address:	118 LAKE SHORE DRIVE
Contact address:	MOUNTAIN PARK	Contact city:	GA
Contact state:	30	Contact zip:	770-993-42
Contact telephone:	Not Reported		
PWS ID:	GA1210007	Activity status:	Active
Date system activated:	Not Reported	Date system deactivated:	Not Reported
Retail population:	0000679	System name:	MOUNTAIN PARK
System address:	CITY OF MOUNTAIN PARK	System address:	100 MOUNTAIN PARK ROAD
System city:	ROSWELL	System state:	GA
System zip:	30075		
Population served:	501 - 1,000 Persons	Treatment:	Treated
Latitude:	335031	Longitude:	0842844
Violation id:	1005	Orig code:	S

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

State:	GA	Violation Year:	2004
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2004
Cmp edt:	Not Reported		
Violation id:	1107	Orig code:	S
State:	GA	Violation Year:	2006
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2006
Cmp edt:	Not Reported		
Violation id:	1408	Orig code:	S
State:	GA	Violation Year:	2007
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2007
Cmp edt:	Not Reported		
Violation id:	1613	Orig code:	S
State:	GA	Violation Year:	2012
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2012
Cmp edt:	Not Reported		
Violation id:	1614	Orig code:	S
State:	GA	Violation Year:	2013
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2013
Cmp edt:	Not Reported		
Violation id:	201	Orig code:	S
State:	GA	Violation Year:	2000
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2000
Cmp edt:	Not Reported		
Violation id:	302	Orig code:	S
State:	GA	Violation Year:	2001
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2001
Cmp edt:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Violation id:	603	Orig code:	S
State:	GA	Violation Year:	2002
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2002
Cmp edt:	Not Reported		
Violation id:	804	Orig code:	S
State:	GA	Violation Year:	2003
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2003
Cmp edt:	Not Reported		
Violation id:	905	Orig code:	S
State:	GA	Violation Year:	2005
Contamination code:	3100	Contamination Name:	Coliform (TCR)
Violation code:	26	Violation name:	Monitoring, Repeat Minor (TCR)
Rule code:	110	Rule name:	TCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	06/01/2005
Cmp edt:	06/30/2005		
Violation ID:	1005	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	08/29/2005
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	1005	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	08/01/2005
Enforcement Detail:	State CCR Follow-up Notice		
Enforcement Category:	Informal		
Violation ID:	1107	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	09/10/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	1107	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	10/05/2007
Enforcement Detail:	State CCR Follow-up Notice		
Enforcement Category:	Informal		
Violation ID:	1107	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	09/01/2007
Enforcement Detail:	State CCR Follow-up Notice		
Enforcement Category:	Informal		
Violation ID:	1408	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	08/12/2008
Enforcement Detail:	State CCR Follow-up Notice		
Enforcement Category:	Informal		
Violation ID:	1408	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	09/10/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	1613	Orig Code:	S
Enforcemnt FY:	2012	Enforcement Action:	08/27/2012
Enforcement Detail:	State CCR Follow-up Notice		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Enforcement Category:	Informal		
Violation ID:	1613	Orig Code:	S
Enforcemnt FY:	2013	Enforcement Action:	10/18/2012
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	1614	Orig Code:	S
Enforcemnt FY:	2013	Enforcement Action:	08/27/2013
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	1614	Orig Code:	S
Enforcemnt FY:	2013	Enforcement Action:	07/02/2013
Enforcement Detail:	State CCR Follow-up Notice		
Enforcement Category:	Informal		
Violation ID:	201	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	07/02/2001
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Resolving
Violation ID:	201	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/07/2001
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	302	Orig Code:	S
Enforcemnt FY:	2002	Enforcement Action:	07/23/2002
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	302	Orig Code:	S
Enforcemnt FY:	2002	Enforcement Action:	08/08/2002
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	603	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	08/11/2003
Enforcement Detail:	State CCR Follow-up Notice		
Enforcement Category:	Informal		
Violation ID:	603	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	08/19/2003
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	804	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	09/08/2004
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	804	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	08/20/2004
Enforcement Detail:	State CCR Follow-up Notice		
Enforcement Category:	Informal		
Violation ID:	905	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	07/21/2005
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	905	Orig Code:	S
Enforcemnt FY:	2005	Enforcement Action:	07/21/2005
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
PWS name:	MOUNTAIN PARK	Population served:	798
PWS type code:	C	Violation ID:	1005
Contaminant:	7000	Violation type:	71

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Compliance start date:	7/1/2005 0:00:00	Compliance end date:	8/29/2005 0:00:00
Enforcement date:	8/1/2005 0:00:00	Enforcement action:	SII
Violation measurement:	Not Reported		
PWS name:	MOUNTAIN PARK	Population served:	798
PWS type code:	C	Violation ID:	1005
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2005 0:00:00	Compliance end date:	8/29/2005 0:00:00
Enforcement date:	8/29/2005 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		
PWS name:	MOUNTAIN PARK	Population served:	798
PWS type code:	C	Violation ID:	1107
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2007 0:00:00	Compliance end date:	9/10/2008 0:00:00
Enforcement date:	10/5/2007 0:00:00	Enforcement action:	SII
Violation measurement:	Not Reported		
PWS name:	MOUNTAIN PARK	Population served:	798
PWS type code:	C	Violation ID:	1107
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2007 0:00:00	Compliance end date:	9/10/2008 0:00:00
Enforcement date:	9/1/2007 0:00:00	Enforcement action:	SII
Violation measurement:	Not Reported		
PWS name:	MOUNTAIN PARK	Population served:	798
PWS type code:	C	Violation ID:	1107
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2007 0:00:00	Compliance end date:	9/10/2008 0:00:00
Enforcement date:	9/10/2008 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		
PWS name:	MOUNTAIN PARK	Population served:	798
PWS type code:	C	Violation ID:	1408
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2008 0:00:00	Compliance end date:	9/10/2008 0:00:00
Enforcement date:	8/12/2008 0:00:00	Enforcement action:	SII
Violation measurement:	Not Reported		
PWS name:	MOUNTAIN PARK	Population served:	798
PWS type code:	C	Violation ID:	1408
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2008 0:00:00	Compliance end date:	9/10/2008 0:00:00
Enforcement date:	9/10/2008 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		
PWS name:	MOUNTAIN PARK	Population served:	798
PWS type code:	C	Violation ID:	201
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2001 0:00:00	Compliance end date:	9/7/2001 0:00:00
Enforcement date:	7/2/2001 0:00:00	Enforcement action:	State Intentional no-action
Violation measurement:	Not Reported		
PWS name:	MOUNTAIN PARK	Population served:	798
PWS type code:	C	Violation ID:	201
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2001 0:00:00	Compliance end date:	9/7/2001 0:00:00
Enforcement date:	9/7/2001 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		
PWS name:	MOUNTAIN PARK	Population served:	798
PWS type code:	C	Violation ID:	302

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

<p>Contaminant: 7000 Compliance start date: 7/1/2002 0:00:00 Enforcement date: 7/23/2002 0:00:00 Violation measurement: Not Reported</p>	<p>Violation type: 71 Compliance end date: 8/8/2002 0:00:00 Enforcement action: State Violation/Reminder Notice</p>
<p>PWS name: MOUNTAIN PARK PWS type code: C Contaminant: 7000 Compliance start date: 7/1/2002 0:00:00 Enforcement date: 8/8/2002 0:00:00 Violation measurement: Not Reported</p>	<p>Population served: 798 Violation ID: 302 Violation type: 71 Compliance end date: 8/8/2002 0:00:00 Enforcement action: State Compliance Achieved</p>
<p>PWS name: MOUNTAIN PARK PWS type code: C Contaminant: 7000 Compliance start date: 7/1/2003 0:00:00 Enforcement date: 8/11/2003 0:00:00 Violation measurement: Not Reported</p>	<p>Population served: 798 Violation ID: 603 Violation type: 71 Compliance end date: 8/19/2003 0:00:00 Enforcement action: SII</p>
<p>PWS name: MOUNTAIN PARK PWS type code: C Contaminant: 7000 Compliance start date: 7/1/2003 0:00:00 Enforcement date: 8/19/2003 0:00:00 Violation measurement: Not Reported</p>	<p>Population served: 798 Violation ID: 603 Violation type: 71 Compliance end date: 8/19/2003 0:00:00 Enforcement action: State Compliance Achieved</p>
<p>PWS name: MOUNTAIN PARK PWS type code: C Contaminant: 7000 Compliance start date: 7/1/2004 0:00:00 Enforcement date: 8/20/2004 0:00:00 Violation measurement: Not Reported</p>	<p>Population served: 798 Violation ID: 804 Violation type: 71 Compliance end date: 9/8/2004 0:00:00 Enforcement action: SII</p>
<p>PWS name: MOUNTAIN PARK PWS type code: C Contaminant: 7000 Compliance start date: 7/1/2004 0:00:00 Enforcement date: 9/8/2004 0:00:00 Violation measurement: Not Reported</p>	<p>Population served: 798 Violation ID: 804 Violation type: 71 Compliance end date: 9/8/2004 0:00:00 Enforcement action: State Compliance Achieved</p>
<p>PWS name: MOUNTAIN PARK PWS type code: C Contaminant: COLIFORM (TCR) Compliance start date: 6/1/2005 0:00:00 Enforcement date: 7/21/2005 0:00:00 Violation measurement: Not Reported</p>	<p>Population served: 798 Violation ID: 905 Violation type: Monitoring, Repeat Minor (TCR) Compliance end date: 6/30/2005 0:00:00 Enforcement action: State Violation/Reminder Notice</p>
<p>PWS name: MOUNTAIN PARK PWS type code: C Contaminant: COLIFORM (TCR) Compliance start date: 6/1/2005 0:00:00 Enforcement date: 7/21/2005 0:00:00 Violation measurement: Not Reported</p>	<p>Population served: 798 Violation ID: 905 Violation type: Monitoring, Repeat Minor (TCR) Compliance end date: 6/30/2005 0:00:00 Enforcement action: State Public Notif Requested</p>

**C17
 North
 1 - 2 Miles
 Lower**

FRDS PWS GA1210005

Epa region: 04	State: GA
Pwsid: GA1210005	Pwsname: NORTH FULTON COUNTY

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Cityserved:	Not Reported	Stateserved:	GA
Zipsserved:	Not Reported	Fipscounty:	13121
Status:	Active	Retpopsrvd:	172533
Pwssvconn:	70291	Psource longname:	Purch_surface_water
Pwstype:	CWS	Owner:	Local_Govt
Contact:	PERSON, PATRICK	Contactorgname:	PERSON, PATRICK
Contactphone:	404-612-9429	Contactaddress1:	1030 MARIETTA HWY
Contactaddress2:	Not Reported	Contactcity:	ROSWELL
Contactstate:	GA	Contactzip:	30075
Pwsactivitycode:	A		
PWS ID:	GA1210005	PWS name:	NORTH FULTON COUNTY
Address:	141 PRYOR ST. SW SUITE 6001	City:	ATLANTA
Care of:	DEPT. OF PUBLIC WORKS	Zip:	30303
State:	GA	Source code:	Purchases surface water
Owner:	NORTH FULTON COUNTY		
Population:	106600		
PWS ID:	GA1210005	PWS type:	Not Reported
PWS name:	Not Reported	PWS address:	Not Reported
PWS city:	Not Reported	PWS state:	Not Reported
PWS zip:	Not Reported	PWS name:	NORTH FULTON COUNTY
PWS type code:	C	Retail population served:	172533
Contact:	BAH, MARIE	Contact address:	1030 MARIETTA HWY.
Contact address:	ROSWELL	Contact city:	GA
Contact state:	30	Contact zip:	404-612-02
Contact telephone:	Not Reported		
PWS ID:	GA1210005	Activity status:	Active
Date system activated:	Not Reported	Date system deactivated:	Not Reported
Retail population:	00060000	System name:	NORTH FULTON COUNTY
System address:	NORTH FULTON WATER SYSTEM	System address:	1030 MARIETTA HIGHWAY
System city:	ROSWELL	System state:	GA
System zip:	300754732		
Population served:	50,001 - 75,000 Persons	Treatment:	Treated
Latitude:	335031	Longitude:	0842844
Latitude:	335031	Longitude:	0842844
Latitude:	335031	Longitude:	0842844
Latitude:	335031	Longitude:	0842844
Violation id:	10102	Orig code:	S
State:	GA	Violation Year:	2002
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2002
Cmp edt:	Not Reported		
Violation id:	10304	Orig code:	S
State:	GA	Violation Year:	2002
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	52	Violation name:	Follow-up Or Routine LCR Tap M/R
Rule code:	350	Rule name:	LCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2002
Cmp edt:	Not Reported		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Violation id:	10404	Orig code:	S
State:	GA	Violation Year:	2004
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2004
Cmp edt:	Not Reported		
Violation id:	10606	Orig code:	S
State:	GA	Violation Year:	2006
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2006
Cmp edt:	Not Reported		
Violation id:	10808	Orig code:	S
State:	GA	Violation Year:	2008
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2008
Cmp edt:	Not Reported		
Violation ID:	10102	Orig Code:	S
Enforcemnt FY:	2002	Enforcement Action:	07/18/2002
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	10102	Orig Code:	S
Enforcemnt FY:	2002	Enforcement Action:	07/23/2002
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	10304	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	02/03/2003
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	10304	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	09/22/2003
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	10404	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	07/02/2004
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	10404	Orig Code:	S
Enforcemnt FY:	2004	Enforcement Action:	07/01/2004
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Resolving
Violation ID:	10606	Orig Code:	S
Enforcemnt FY:	2006	Enforcement Action:	07/21/2006
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	10606	Orig Code:	S
Enforcemnt FY:	2006	Enforcement Action:	07/21/2006
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Resolving
Violation ID:	10808	Orig Code:	S

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Enforcemnt FY:	2008	Enforcement Action:	08/12/2008
Enforcement Detail:	State CCR Follow-up Notice		
Enforcement Category:	Informal		
Violation ID:	10808	Orig Code:	S
Enforcemnt FY:	2008	Enforcement Action:	08/14/2008
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
PWS name:	NORTH FULTON COUNTY	Population served:	172533
PWS type code:	C	Violation ID:	10102
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2002 0:00:00	Compliance end date:	7/18/2002 0:00:00
Enforcement date:	7/18/2002 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		
PWS name:	NORTH FULTON COUNTY	Population served:	172533
PWS type code:	C	Violation ID:	10102
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2002 0:00:00	Compliance end date:	7/18/2002 0:00:00
Enforcement date:	7/23/2002 0:00:00	Enforcement action:	State Violation/Reminder Notice
Violation measurement:	Not Reported		
PWS name:	NORTH FULTON COUNTY	Population served:	172533
PWS type code:	C	Violation ID:	10304
Contaminant:	LEAD & COPPER RULE	Violation type:	Follow-up and Routine Tap Sampling
Compliance start date:	10/1/2002 0:00:00	Compliance end date:	9/22/2003 0:00:00
Enforcement date:	2/3/2003 0:00:00	Enforcement action:	State Violation/Reminder Notice
Violation measurement:	Not Reported		
PWS name:	NORTH FULTON COUNTY	Population served:	172533
PWS type code:	C	Violation ID:	10304
Contaminant:	LEAD & COPPER RULE	Violation type:	Follow-up and Routine Tap Sampling
Compliance start date:	10/1/2002 0:00:00	Compliance end date:	9/22/2003 0:00:00
Enforcement date:	9/22/2003 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		
PWS name:	NORTH FULTON COUNTY	Population served:	172533
PWS type code:	C	Violation ID:	10404
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2004 0:00:00	Compliance end date:	7/2/2004 0:00:00
Enforcement date:	7/1/2004 0:00:00	Enforcement action:	State Intentional no-action
Violation measurement:	Not Reported		
PWS name:	NORTH FULTON COUNTY	Population served:	172533
PWS type code:	C	Violation ID:	10404
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2004 0:00:00	Compliance end date:	7/2/2004 0:00:00
Enforcement date:	7/2/2004 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		
PWS name:	NORTH FULTON COUNTY	Population served:	172533
PWS type code:	C	Violation ID:	10606
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2006 0:00:00	Compliance end date:	7/21/2006 0:00:00
Enforcement date:	7/21/2006 0:00:00	Enforcement action:	State Intentional no-action
Violation measurement:	Not Reported		
PWS name:	NORTH FULTON COUNTY	Population served:	172533
PWS type code:	C	Violation ID:	10606
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2006 0:00:00	Compliance end date:	7/21/2006 0:00:00
Enforcement date:	7/21/2006 0:00:00	Enforcement action:	State Compliance Achieved

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Violation measurement: Not Reported

PWS name: NORTH FULTON COUNTY
 PWS type code: C
 Contaminant: 7000
 Compliance start date: 7/1/2008 0:00:00
 Enforcement date: 8/12/2008 0:00:00
 Violation measurement: Not Reported

Population served: 172533
 Violation ID: 10808
 Violation type: 71
 Compliance end date: 8/14/2008 0:00:00
 Enforcement action: SII

PWS name: NORTH FULTON COUNTY
 PWS type code: C
 Contaminant: 7000
 Compliance start date: 7/1/2008 0:00:00
 Enforcement date: 8/14/2008 0:00:00
 Violation measurement: Not Reported

Population served: 172533
 Violation ID: 10808
 Violation type: 71
 Compliance end date: 8/14/2008 0:00:00
 Enforcement action: State Compliance Achieved

**18
 East
 1 - 2 Miles
 Lower**

FRDS PWS GA1210001

Epa region: 04
 Pwsid: GA1210001
 Cityserved: Not Reported
 Zipserved: Not Reported
 Status: Active
 Pwssvconn: 240780
 Pwstype: CWS
 Contact: PARKER, RICHARD
 Contactphone: 404-235-2058
 Contactaddress2: Not Reported
 Contactstate: GA
 Pwsactivitycode: A

State: GA
 Pwsname: ATLANTA
 Stateserved: GA
 Fipscounty: 13089
 Retpopsrvd: 650000
 Psource longname: Surface_water
 Owner: Local_Govt
 Contactorgname: PARKER, RICHARD
 Contactaddress1: 651 14TH STREET, NW
 Contactcity: ATLANTA
 Contactzip: 30318

Pwsid: GA1210001
 Facname: HEMPHILL PLANT
 Facactivitycode: A
 Trtprocess: gaseous chlorination, pre

Facid: 1027
 Factype: Treatment_plant
 Trtobjective: disinfection
 Factypecode: TP

Pwsid: GA1210001
 Facname: HEMPHILL PLANT
 Facactivitycode: A
 Trtprocess: rapid mix

Facid: 1027
 Factype: Treatment_plant
 Trtobjective: particulate removal
 Factypecode: TP

Pwsid: GA1210001
 Facname: HEMPHILL PLANT
 Facactivitycode: A
 Trtprocess: ph adjustment, pre

Facid: 1027
 Factype: Treatment_plant
 Trtobjective: particulate removal
 Factypecode: TP

Pwsid: GA1210001
 Facname: HEMPHILL PLANT
 Facactivitycode: A
 Trtprocess: coagulation

Facid: 1027
 Factype: Treatment_plant
 Trtobjective: particulate removal
 Factypecode: TP

Pwsid: GA1210001
 Facname: HEMPHILL PLANT
 Facactivitycode: A
 Trtprocess: flocculation

Facid: 1027
 Factype: Treatment_plant
 Trtobjective: particulate removal
 Factypecode: TP

Pwsid: GA1210001
 Facname: HEMPHILL PLANT

Facid: 1027
 Factype: Treatment_plant

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Facactivitycode:	A	Trtobjective:	particulate removal
Trtprocess:	sedimentation	Factypecode:	TP
Pwsid:	GA1210001	Facid:	1027
Facname:	HEMPHILL PLANT	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	particulate removal
Trtprocess:	filtration, rapid sand	Factypecode:	TP
Pwsid:	GA1210001	Facid:	1027
Facname:	HEMPHILL PLANT	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment, post	Factypecode:	TP
Pwsid:	GA1210001	Facid:	1027
Facname:	HEMPHILL PLANT	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	gaseous chlorination, post		
Factypecode:	TP		
Pwsid:	GA1210001	Facid:	2816
Facname:	CHATTAHOOCHEE PLANT	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection
Trtprocess:	gaseous chlorination, pre	Factypecode:	TP
Pwsid:	GA1210001	Facid:	2816
Facname:	CHATTAHOOCHEE PLANT	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	particulate removal
Trtprocess:	rapid mix	Factypecode:	TP
Pwsid:	GA1210001	Facid:	2816
Facname:	CHATTAHOOCHEE PLANT	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	particulate removal
Trtprocess:	ph adjustment, pre	Factypecode:	TP
Pwsid:	GA1210001	Facid:	2816
Facname:	CHATTAHOOCHEE PLANT	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	particulate removal
Trtprocess:	coagulation	Factypecode:	TP
Pwsid:	GA1210001	Facid:	2816
Facname:	CHATTAHOOCHEE PLANT	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	particulate removal
Trtprocess:	flocculation	Factypecode:	TP
Pwsid:	GA1210001	Facid:	2816
Facname:	CHATTAHOOCHEE PLANT	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	particulate removal
Trtprocess:	sedimentation	Factypecode:	TP
Pwsid:	GA1210001	Facid:	2816
Facname:	CHATTAHOOCHEE PLANT	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	particulate removal
Trtprocess:	filtration, rapid sand	Factypecode:	TP
Pwsid:	GA1210001	Facid:	2816
Facname:	CHATTAHOOCHEE PLANT	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	corrosion control
Trtprocess:	ph adjustment, post	Factypecode:	TP
Pwsid:	GA1210001	Facid:	2816
Facname:	CHATTAHOOCHEE PLANT	Factype:	Treatment_plant
Facactivitycode:	A	Trtobjective:	disinfection

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Trtprocess: gaseous chlorination, post
 Facticecode: TP

PWS ID:	GA1210001	PWS name:	ATLANTA
Address:	2528 CHATTAHOOCHEE CIR., NW		
Care of:	ATLANTA WATER DEPARTMENT	City:	ATLANTA
State:	GA	Zip:	30318
Owner:	ATLANTA	Source code:	Surface water
Population:	649836		

PWS ID:	GA1210001	PWS type:	Not Reported
PWS name:	Not Reported	PWS address:	Not Reported
PWS city:	Not Reported	PWS state:	Not Reported
PWS zip:	Not Reported	PWS name:	ATLANTA
PWS type code:	C	Retail population served:	650000
Contact:	HEBERD, CHRISTOPHER	Contact address:	651 14TH STREET
Contact address:	ATLANTA	Contact city:	GA
Contact state:	30	Contact zip:	404-602-44
Contact telephone:	Not Reported		

County:	FULTON	Source:	Surface water
Treatment Objective:	CORROSION CONTROL	Process:	PH ADJUSTMENT, POST
Population:	650000		

County:	FULTON	Source:	Surface water
Treatment Objective:	DISINFECTION	Process:	GASEOUS CHLORINATION, POST
Population:	650000		

County:	FULTON	Source:	Surface water
Treatment Objective:	DISINFECTION	Process:	GASEOUS CHLORINATION, PRE
Population:	650000		

County:	FULTON	Source:	Surface water
Treatment Objective:	PARTICULATE REMOVAL	Process:	COAGULATION
Population:	650000		

County:	FULTON	Source:	Surface water
Treatment Objective:	PARTICULATE REMOVAL	Process:	FILTRATION, RAPID SAND
Population:	650000		

County:	FULTON	Source:	Surface water
Treatment Objective:	PARTICULATE REMOVAL	Process:	FLOCCULATION
Population:	650000		

County:	FULTON	Source:	Surface water
Treatment Objective:	PARTICULATE REMOVAL	Process:	RAPID MIX
Population:	650000		

County:	FULTON	Source:	Surface water
Treatment Objective:	PARTICULATE REMOVAL	Process:	SEDIMENTATION
Population:	650000		

County:	FULTON	Source:	Surface water
Treatment Objective:	PARTICULATE REMOVAL	Process:	PH ADJUSTMENT, PRE
Population:	650000		

PWS ID:	GA1210001	Activity status:	Active
Date system activated:	Not Reported	Date system deactivated:	Not Reported
Retail population:	00649836	System name:	ATLANTA
System address:	ATLANTA WATER BUREAU	System address:	2541 CHATTAHOOCHEE CIRCLE, NW
System city:	ATLANTA	System state:	GA
System zip:	30318		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Population served:	over 100,000 Persons	Treatment:	Treated
Latitude:	334941	Longitude:	0842727
State:	GA	Latitude degrees:	33
Latitude minutes:	49	Latitude seconds:	41.0000
Longitude degrees:	84	Longitude minutes:	27
Longitude seconds:	27.0000		
Violation id:	10097	Orig code:	S
State:	GA	Violation Year:	1997
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	52	Violation name:	Follow-up Or Routine LCR Tap M/R
Rule code:	350	Rule name:	LCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/1997
Cmp edt:	Not Reported		
Violation id:	10502	Orig code:	S
State:	GA	Violation Year:	2002
Contamination code:	0300	Contamination Name:	IESWTR
Violation code:	38		
Violation name:	Monitoring, Turbidity (Enhanced SWTR)		
Rule code:	122	Rule name:	LT1 ESWTR
Violation measur:	0	Unit of measure:	Not Reported
State mcl:	0	Cmp bdt:	01/01/2002
Cmp edt:	01/31/2002		
Violation id:	11303	Orig code:	S
State:	GA	Violation Year:	2000
Contamination code:	5000	Contamination Name:	Lead and Copper Rule
Violation code:	52	Violation name:	Follow-up Or Routine LCR Tap M/R
Rule code:	350	Rule name:	LCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	10/01/2000
Cmp edt:	Not Reported		
Violation id:	11406	Orig code:	S
State:	GA	Violation Year:	2005
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2005
Cmp edt:	Not Reported		
Violation id:	11607	Orig code:	S
State:	GA	Violation Year:	2006
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2006
Cmp edt:	Not Reported		
Violation id:	11909	Orig code:	S
State:	GA	Violation Year:	2008
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2008

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Cmp edt:	Not Reported		
Violation id:	12511	Orig code:	S
State:	GA	Violation Year:	2010
Contamination code:	7000	Contamination Name:	Consumer Confidence Rule
Violation code:	71	Violation name:	CCR Complete Failure to Report
Rule code:	420	Rule name:	CCR
Violation measur:	Not Reported	Unit of measure:	Not Reported
State mcl:	Not Reported	Cmp bdt:	07/01/2010
Cmp edt:	Not Reported		
Violation id:	12616	Orig code:	S
State:	GA	Violation Year:	2013
Contamination code:	2950	Contamination Name:	TTHM
Violation code:	02	Violation name:	MCL, Average
Rule code:	220	Rule name:	St2 DBP
Violation measur:	0.081	Unit of measure:	MG/L
State mcl:	0.08	Cmp bdt:	04/01/2013
Cmp edt:	06/30/2013		
Violation id:	12617	Orig code:	S
State:	GA	Violation Year:	2014
Contamination code:	2950	Contamination Name:	TTHM
Violation code:	02	Violation name:	MCL, Average
Rule code:	220	Rule name:	St2 DBP
Violation measur:	0.082	Unit of measure:	MG/L
State mcl:	0.08	Cmp bdt:	01/01/2014
Cmp edt:	03/31/2014		
Violation ID:	10502	Orig Code:	S
Enforcemnt FY:	2002	Enforcement Action:	02/28/2002
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	10502	Orig Code:	S
Enforcemnt FY:	2002	Enforcement Action:	07/09/2002
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	10502	Orig Code:	S
Enforcemnt FY:	2002	Enforcement Action:	07/09/2002
Enforcement Detail:	St Public Notif received	Enforcement Category:	Informal
Violation ID:	10502	Orig Code:	S
Enforcemnt FY:	2003	Enforcement Action:	05/06/2003
Enforcement Detail:	St BCA signed	Enforcement Category:	Formal
Violation ID:	10502	Orig Code:	S
Enforcemnt FY:	2002	Enforcement Action:	02/28/2002
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
Violation ID:	11303	Orig Code:	S
Enforcemnt FY:	2001	Enforcement Action:	09/03/2001
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	11406	Orig Code:	S
Enforcemnt FY:	2006	Enforcement Action:	08/15/2006
Enforcement Detail:	State CCR Follow-up Notice		
Enforcement Category:	Informal		
Violation ID:	11406	Orig Code:	S
Enforcemnt FY:	2006	Enforcement Action:	07/24/2006
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Violation ID:	11406	Orig Code:	S
Enforcemnt FY:	2006	Enforcement Action:	07/24/2006
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Resolving
Violation ID:	11607	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	07/09/2007
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	11607	Orig Code:	S
Enforcemnt FY:	2007	Enforcement Action:	07/12/2007
Enforcement Detail:	St Intentional no-action	Enforcement Category:	Resolving
Violation ID:	11909	Orig Code:	S
Enforcemnt FY:	2009	Enforcement Action:	07/07/2009
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	12511	Orig Code:	S
Enforcemnt FY:	2012	Enforcement Action:	10/05/2011
Enforcement Detail:	St Compliance achieved	Enforcement Category:	Resolving
Violation ID:	12616	Orig Code:	S
Enforcemnt FY:	2013	Enforcement Action:	05/23/2013
Enforcement Detail:	St Public Notif requested	Enforcement Category:	Informal
Violation ID:	12616	Orig Code:	S
Enforcemnt FY:	2013	Enforcement Action:	05/23/2013
Enforcement Detail:	St Violation/Reminder Notice		
Enforcement Category:	Informal		
PWS name:	ATLANTA	Population served:	650000
PWS type code:	C	Violation ID:	10502
Contaminant:	0300	Violation type:	38
Compliance start date:	1/1/2002 0:00:00	Compliance end date:	1/31/2002 0:00:00
Enforcement date:	2/28/2002 0:00:00	Enforcement action:	State Violation/Reminder Notice
Violation measurement:	0		
PWS name:	ATLANTA	Population served:	650000
PWS type code:	C	Violation ID:	10502
Contaminant:	0300	Violation type:	38
Compliance start date:	1/1/2002 0:00:00	Compliance end date:	1/31/2002 0:00:00
Enforcement date:	2/28/2002 0:00:00	Enforcement action:	State Public Notif Requested
Violation measurement:	0		
PWS name:	ATLANTA	Population served:	650000
PWS type code:	C	Violation ID:	10502
Contaminant:	0300	Violation type:	38
Compliance start date:	1/1/2002 0:00:00	Compliance end date:	1/31/2002 0:00:00
Enforcement date:	5/6/2003 0:00:00	Enforcement action:	State BCA Signed
Violation measurement:	0		
PWS name:	ATLANTA	Population served:	650000
PWS type code:	C	Violation ID:	10502
Contaminant:	0300	Violation type:	38
Compliance start date:	1/1/2002 0:00:00	Compliance end date:	1/31/2002 0:00:00
Enforcement date:	7/9/2002 0:00:00	Enforcement action:	State Public Notif Received
Violation measurement:	0		
PWS name:	ATLANTA	Population served:	650000
PWS type code:	C	Violation ID:	10502
Contaminant:	0300	Violation type:	38
Compliance start date:	1/1/2002 0:00:00	Compliance end date:	1/31/2002 0:00:00
Enforcement date:	7/9/2002 0:00:00	Enforcement action:	State Compliance Achieved

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Violation measurement:	0		
PWS name:	ATLANTA	Population served:	650000
PWS type code:	C	Violation ID:	11303
Contaminant:	LEAD & COPPER RULE	Violation type:	Follow-up and Routine Tap Sampling
Compliance start date:	10/1/2000 0:00:00	Compliance end date:	9/3/2001 0:00:00
Enforcement date:	9/3/2001 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		
PWS name:	ATLANTA	Population served:	650000
PWS type code:	C	Violation ID:	11406
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2006 0:00:00	Compliance end date:	7/24/2006 0:00:00
Enforcement date:	7/24/2006 0:00:00	Enforcement action:	State Intentional no-action
Violation measurement:	Not Reported		
PWS name:	ATLANTA	Population served:	650000
PWS type code:	C	Violation ID:	11406
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2006 0:00:00	Compliance end date:	7/24/2006 0:00:00
Enforcement date:	7/24/2006 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		
PWS name:	ATLANTA	Population served:	650000
PWS type code:	C	Violation ID:	11406
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2006 0:00:00	Compliance end date:	7/24/2006 0:00:00
Enforcement date:	8/15/2006 0:00:00	Enforcement action:	SII
Violation measurement:	Not Reported		
PWS name:	ATLANTA	Population served:	650000
PWS type code:	C	Violation ID:	11607
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2007 0:00:00	Compliance end date:	7/9/2007 0:00:00
Enforcement date:	7/12/2007 0:00:00	Enforcement action:	State Intentional no-action
Violation measurement:	Not Reported		
PWS name:	ATLANTA	Population served:	650000
PWS type code:	C	Violation ID:	11607
Contaminant:	7000	Violation type:	71
Compliance start date:	7/1/2007 0:00:00	Compliance end date:	7/9/2007 0:00:00
Enforcement date:	7/9/2007 0:00:00	Enforcement action:	State Compliance Achieved
Violation measurement:	Not Reported		

**D19
NNW
1 - 2 Miles
Higher**

GA WELLS 000002233

County code:	067
Remarks:	BP GAS STN S ATLANTA ROAD
Lon:	0842922
Alt:	930
Depth:	39
Casing dia:	2
Depth to top:	29
Opening type:	P
Discharge:	Not Reported
Aquifer code:	110SPRL

Well num:	10EE39
Lat:	335041
Latlon datum:	NAD27
Alt datum:	NGVD29
Depth to casing:	29
Casing matl:	P
Depth to bot:	39
Constr date:	19900724
Prim use:	U
Edr id:	000002233

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

D20
NNW
1 - 2 Miles
Higher

FED USGS USGS40000265168

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	10EE39	Type:	Well
Description:	BP GAS STN S ATLANTA ROAD	HUC:	03130001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Piedmont and Blue Ridge crystalline-rock aquifers		
Formation Type:	Saprolite	Aquifer Type:	Unconfined single aquifer
Construction Date:	19900724	Well Depth:	39
Well Depth Units:	ft	Well Hole Depth:	39.5
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	1	Level reading date:	1995-06-27
Feet below surface:	29.62	Feet to sea level:	Not Reported
Note:	Not Reported		

E21
NE
1 - 2 Miles
Lower

FED USGS USGS40000265154

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	10EE29	Type:	Well
Description:	RICHARD L. AECK	HUC:	03130001
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	19721101
Well Depth:	430	Well Depth Units:	ft
Well Hole Depth:	430	Well Hole Depth Units:	ft

E22
NE
1 - 2 Miles
Lower

GA WELLS 0000004660

County code:	121	Well num:	10EE29
Remarks:	RICHARD L. AECK	Lat:	335028
Lon:	0842734	Latlon datum:	NAD27
Alt:	850.00	Alt datum:	NGVD29
Depth:	430	Depth to casing:	50.00
Casing dia:	6.00	Casing matl:	S
Depth to top:	50.00	Depth to bot:	430.00
Opening type:	X	Constr date:	197211
Discharge:	100.00	Prim use:	H
Aquifer code:	Not Reported	Edr id:	0000004660

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
 Direction
 Distance
 Elevation

Database EDR ID Number

F23
NW
1 - 2 Miles
Higher

GA WELLS 000002232

County code:	067	Well num:	10EE04
Remarks:	COOK, D.W.	Lat:	335037
Lon:	0842959	Latlon datum:	NAD27
Alt:	1020	Alt datum:	NGVD29
Depth:	109	Depth to casing:	40
Casing dia:	6	Casing matl:	Not Reported
Depth to top:	40	Depth to bot:	109
Opening type:	X	Constr date:	1941
Discharge:	Not Reported	Prim use:	H
Aquifer code:	320CRSL	Edr id:	000002232

F24
NW
1 - 2 Miles
Higher

FED USGS USGS40000265164

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	10EE04	Type:	Well
Description:	COOK, D.W.	HUC:	03130002
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Piedmont and Blue Ridge crystalline-rock aquifers		
Formation Type:	Crystalline Rocks	Aquifer Type:	Confined multiple aquifer
Construction Date:	1941	Well Depth:	109
Well Depth Units:	ft	Well Hole Depth:	109
Well Hole Depth Units:	ft		

Ground water levels,Number of Measurements:	40	Level reading date:	1987-10-26
Feet below surface:	59.19	Feet to sea level:	Not Reported
Note:	Not Reported		
Level reading date:	1986-07-28	Feet below surface:	72.92
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1985-05-31	Feet below surface:	56.03
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1984-05-31	Feet below surface:	51.34
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1983-11-01	Feet below surface:	55.29
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1983-05-31	Feet below surface:	53.16
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1982-10-26	Feet below surface:	58.36
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1982-05-25	Feet below surface:	58.47
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1981-10-22	Feet below surface:	59.23

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1981-05-21	Feet below surface:	55.67
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1980-11-13	Feet below surface:	53.71
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1980-05-29	Feet below surface:	52.66
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1979-10-25	Feet below surface:	55.06
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1979-05-23	Feet below surface:	53.91
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-12-07	Feet below surface:	56.54
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-10-18	Feet below surface:	56.24
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-05-25	Feet below surface:	52.85
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-04-21	Feet below surface:	52.58
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-03-31	Feet below surface:	53.44
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-03-01	Feet below surface:	52.98
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1978-01-30	Feet below surface:	56.05
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-12-28	Feet below surface:	56.87
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-12-01	Feet below surface:	57.61
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-10-27	Feet below surface:	57.15
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-09-30	Feet below surface:	57.84
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-08-26	Feet below surface:	54.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-07-27	Feet below surface:	56.65
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-06-28	Feet below surface:	56.00
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-05-26	Feet below surface:	55.57
Feet to sea level:	Not Reported	Note:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Level reading date:	1977-05-02	Feet below surface:	55.60
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-03-28	Feet below surface:	56.39
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-02-23	Feet below surface:	57.05
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1977-01-26	Feet below surface:	56.54
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1976-10-21	Feet below surface:	54.20
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1976-10-14	Feet below surface:	54.25
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1976-06-03	Feet below surface:	52.03
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1975-11-14	Feet below surface:	53.24
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1975-05-15	Feet below surface:	51.10
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1974-10-18	Feet below surface:	54.03
Feet to sea level:	Not Reported	Note:	Not Reported
Level reading date:	1943-04-02	Feet below surface:	55
Feet to sea level:	Not Reported	Note:	Not Reported

25
WNW
1 - 2 Miles
Higher

FED USGS USGS40000265145

Organization ID:	USGS-GA	Organization Name:	USGS Georgia Water Science Center
Monitor Location:	09EE08	Type:	Well
Description:	Josephine Harris	HUC:	03130002
Drainage Area:	Not Reported	Drainage Area Units:	Not Reported
Contrib Drainage Area:	Not Reported	Contrib Drainage Area Unts:	Not Reported
Aquifer:	Not Reported	Formation Type:	Not Reported
Aquifer Type:	Not Reported	Construction Date:	1935
Well Depth:	72	Well Depth Units:	ft
Well Hole Depth:	Not Reported	Well Hole Depth Units:	Not Reported

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

AREA RADON INFORMATION

Federal EPA Radon Zone for COBB County: 1

- Note: Zone 1 indoor average level > 4 pCi/L.
 : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.
 : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for Zip Code: 30080

Number of sites tested: 3

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.067 pCi/L	100%	0%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	3.300 pCi/L	67%	33%	0%

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data was obtained from the Federal Emergency Management Agency (FEMA). It depicts 100-year and 500-year flood zones as defined by FEMA. It includes the National Flood Hazard Layer (NFHL) which incorporates Flood Insurance Rate Map (FIRM) data and Q3 data from FEMA in areas not covered by NFHL.

Source: FEMA

Telephone: 877-336-2627

Date of Government Version: 2003, 2015

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002, 2005, 2010 and 2015 from the U.S. Fish and Wildlife Service.

State Wetlands Data: Wetlands Inventory

Source: Georgia GIS Clearinghouse

Telephone: 706-542-1581

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Service (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Service, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

OTHER STATE DATABASE INFORMATION

A listing of Private Water Well locations

Georgia Department of Public Health

Telephone: (404) 657-2700

A listing of Private Water Well locations

Georgia Public Supply Wells

Source: Georgia Department of Community Affairs

Telephone: 404-894-0127

USGS Georgia Water Wells

Source: USGS, Georgia District Office

Telephone: 770-903-9100

DNR Managed Lands

Source: Department of Natural Resources

Telephone: 706-557-3032

This dataset provides 1:24,000-scale data depicting boundaries of land parcels making up the public lands managed by the Georgia Department of Natural Resources (GDNR). It includes polygon representations of State Parks, State Historic Parks, State Conservation Parks, State Historic Sites, Wildlife Management Areas, Public Fishing Areas, Fish Hatcheries, Natural Areas and other specially-designated areas. The data were collected and located by the Georgia Department of Natural Resources. Boundaries were digitized from survey plats or other information.

RADON

Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

OTHER

Airport Landing Facilities: Private and public use landing facilities
Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater
Source: Department of Commerce, National Oceanic and Atmospheric Administration

Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary faultlines, prepared in 1975 by the United State Geological Survey

STREET AND ADDRESS INFORMATION

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From: [Moore, Mary](#)
To: roseline.hartz@wsp.com
Subject: RE: General Contact Email
Date: Tuesday, January 31, 2023 12:09:58 PM

CAUTION: External email. Please do not click on links/attachments unless you know the content is genuine and safe.

We have no records of approved water wells within a 2-mile area of Plant McDonough Atkinson, 5551 South Cobb Drive, Smyrna.

Best regards,

Mary Moore
Customer Service Representative
Center for Environmental Health
Cobb & Douglas Public Health
1738 County Services Parkway SW, 2nd Floor
Marietta, GA 30008-4012
Phone: 770-438-5116
Fax: 770-431-7410
Front Desk: 770-435-7815
Email: mary.moore@dph.ga.gov

We're committed to making sure you receive the best service possible.
[Please click to complete a brief survey about your most recent Environmental Health experience.](#)



Healthier lives. Healthier community.
<http://www.cobbanddouglaspublichealth.com>

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From: Crow, Valerie <Valerie.Crow@dph.ga.gov>
Sent: Friday, January 27, 2023 3:00 PM
Subject: General Contact Email

Chris,

FYI:

CDPH General Contact_072922 : Entry # 91205	show empty fields
Your Email	
roseline.hartz@wsp.com	
Name	
Roseline hartz	
Phone Number	
(646) 370-9515	
How can we help you?	

I am looking for information regarding any wells that would be located within 2 miles of Plant McDonough at 5551 S Cobb Dr, Smyrna, GA 30080. Please give me a call or send me an email with any information if possible. Thank you!

APPENDIX B

SEN'S SLOPE/MANN KENDALL TREND ANALYSES

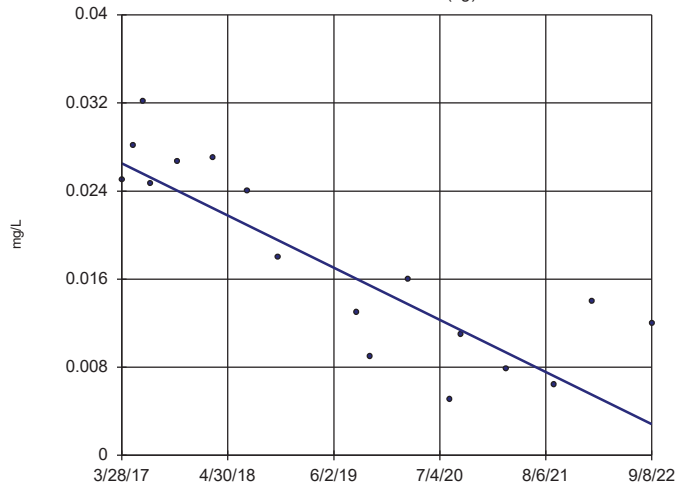
Appendix IV Trend Test - Confidence Interval Exceedances - All Results

Plant McDonough Client: Southern Company Data: McDonough AP Printed 11/15/2022, 4:52 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Arsenic (mg/L)	DGWA-53 (bg)	0	2	63	No	17	58.82	n/a	n/a	0.01	NP
Arsenic (mg/L)	DGWA-70A (bg)	0	-31	-63	No	17	82.35	n/a	n/a	0.01	NP
Arsenic (mg/L)	DGWA-71 (bg)	0	24	58	No	16	81.25	n/a	n/a	0.01	NP
Arsenic (mg/L)	DGWC-69	0.003451	60	74	No	19	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	DGWA-53 (bg)	-0.004341	-86	-63	Yes	17	0	n/a	n/a	0.01	NP
Cobalt (mg/L)	DGWA-70A (bg)	0	29	63	No	17	52.94	n/a	n/a	0.01	NP
Cobalt (mg/L)	DGWA-71 (bg)	0	45	58	No	16	68.75	n/a	n/a	0.01	NP
Cobalt (mg/L)	DGWC-40	0.001513	45	63	No	17	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	DGWA-53 (bg)	-0.00174	-31	-63	No	17	0	n/a	n/a	0.01	NP
Molybdenum (mg/L)	DGWA-70A (bg)	0	0	63	No	17	100	n/a	n/a	0.01	NP
Molybdenum (mg/L)	DGWA-71 (bg)	0	15	58	No	16	93.75	n/a	n/a	0.01	NP
Molybdenum (mg/L)	DGWC-68A	-0.004125	-34	-63	No	17	0	n/a	n/a	0.01	NP

Sen's Slope Estimator

DGWA-53 (bg)



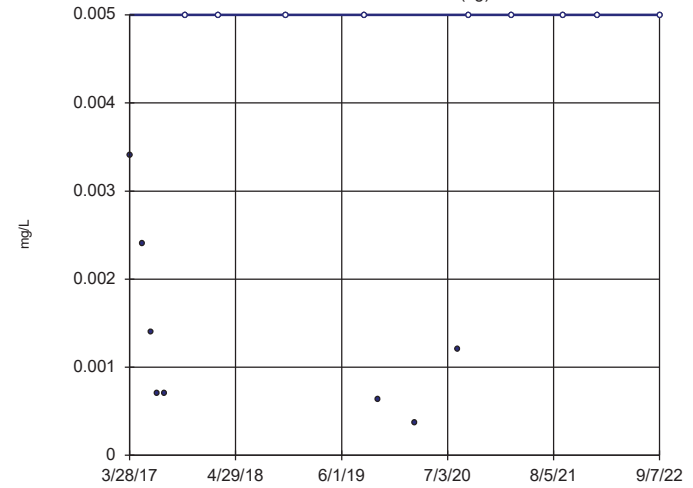
n = 17
 Slope = -0.004341 units per year.
 Mann-Kendall statistic = -86
 critical = -63
 Decreasing trend significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cobalt Analysis Run 11/15/2022 4:51 PM View: A4 Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Hollow symbols indicate censored values.

Sen's Slope Estimator

DGWA-70A (bg)

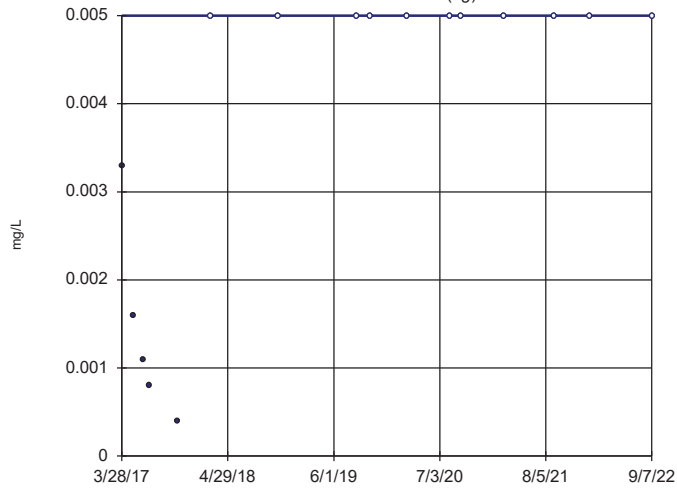


n = 17
 Slope = 0 units per year.
 Mann-Kendall statistic = 29
 critical = 63
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cobalt Analysis Run 11/15/2022 4:51 PM View: A4 Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWA-71 (bg)

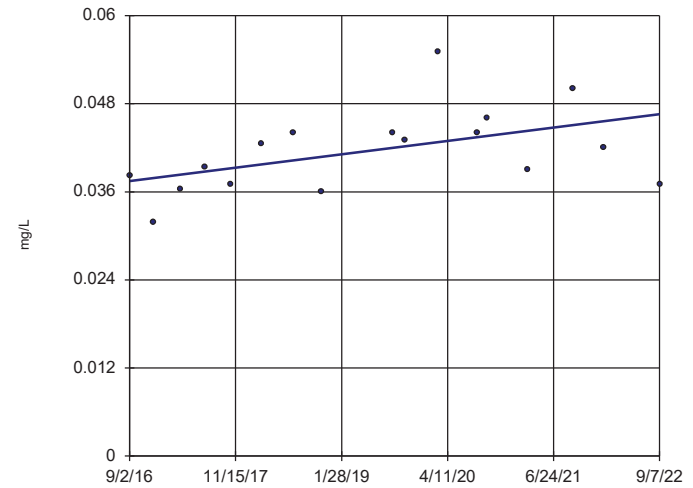


n = 16
 Slope = 0 units per year.
 Mann-Kendall statistic = 45
 critical = 58
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cobalt Analysis Run 11/15/2022 4:51 PM View: A4 Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWC-40

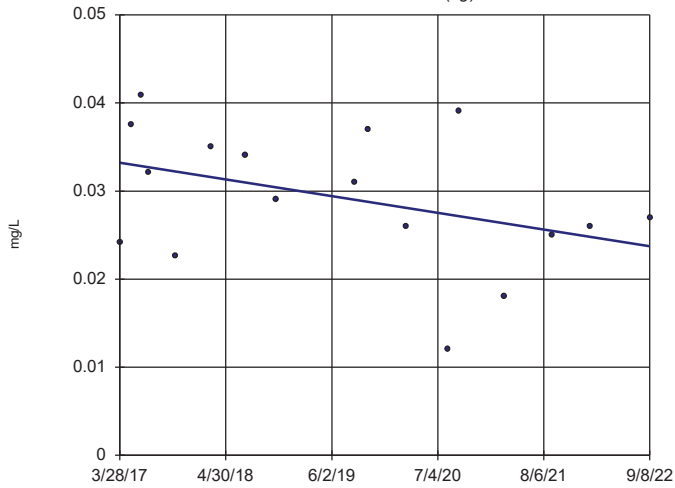


n = 17
 Slope = 0.001513 units per year.
 Mann-Kendall statistic = 45
 critical = 63
 Trend not significant at 99% confidence level (α = 0.005 per tail).

Constituent: Cobalt Analysis Run 11/15/2022 4:51 PM View: A4 Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWA-53 (bg)



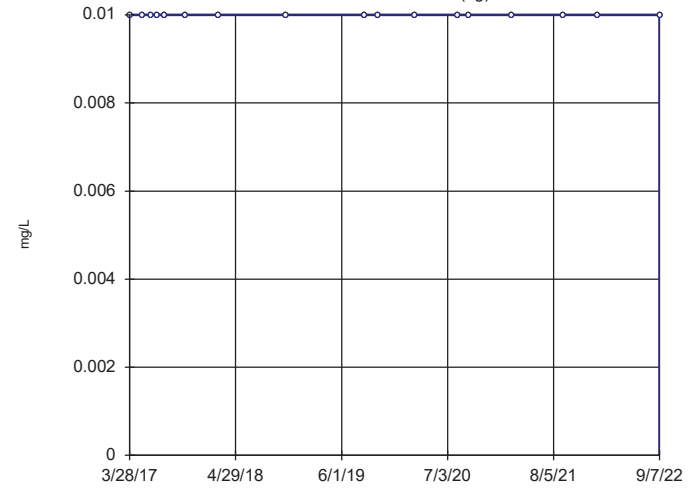
n = 17
 Slope = -0.00174
 units per year.
 Mann-Kendall
 statistic = -31
 critical = -63
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Molybdenum Analysis Run 11/15/2022 4:51 PM View: A4 Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Hollow symbols indicate censored values.

Sen's Slope Estimator

DGWA-70A (bg)



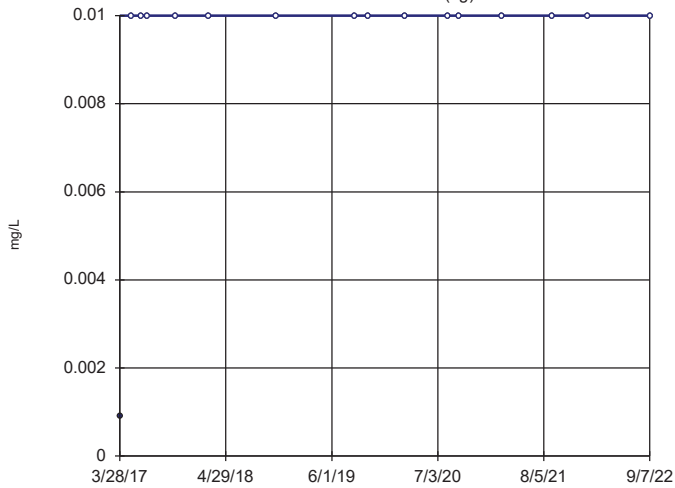
n = 17
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = 0
 critical = 63
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Molybdenum Analysis Run 11/15/2022 4:51 PM View: A4 Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Hollow symbols indicate censored values.

Sen's Slope Estimator

DGWA-71 (bg)

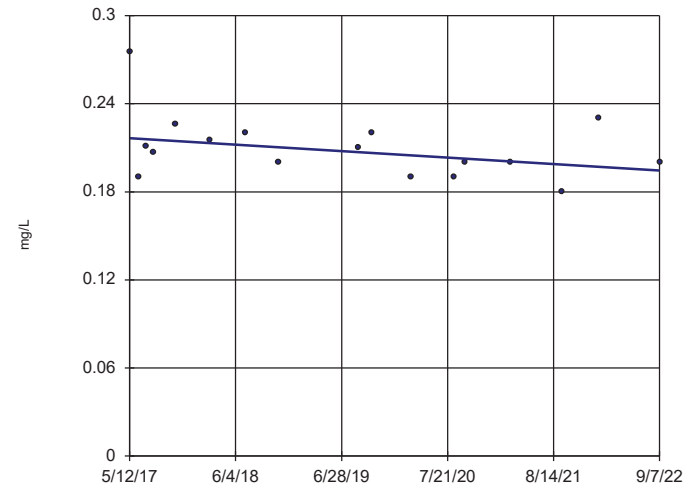


n = 16
 Slope = 0
 units per year.
 Mann-Kendall
 statistic = 15
 critical = 58
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Molybdenum Analysis Run 11/15/2022 4:51 PM View: A4 Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

Sen's Slope Estimator

DGWC-68A



n = 17
 Slope = -0.004125
 units per year.
 Mann-Kendall
 statistic = -34
 critical = -63
 Trend not sig-
 nificant at 99%
 confidence level
 ($\alpha = 0.005$ per
 tail).

Constituent: Molybdenum Analysis Run 11/15/2022 4:51 PM View: A4 Trend Test
 Plant McDonough Client: Southern Company Data: McDonough AP

APPENDIX C

TERRA SYSTEMS, INC. TREATABILITY STUDY REPORT

October 21, 2022

Todd Rees, PhD, PE
Senior Program Leader



GOLDER
MEMBER OF WSP

Golder Associates Inc.
Amherst, MA., Montrose, CO.

TERRA SYSTEMS, INC. DRAFT REPORT FOR GOLDR/WSP FOR COAL COMBUSTION RESIDUE AT PLANT MCDONOUGH ATKINSON ASH POND 1, 2, 3, AND 4 PHASE II TREATABILITY STUDY VERSION 1

1.0 INTRODUCTION

Coal combustion residue landfill may generate acidic conditions which allow metals such as arsenic (As), beryllium (Be), cobalt (Co), lithium (Li), molybdenum (Mo), and selenium (Se) to accumulate to levels above regulatory limits. This bench-scale treatability evaluated neutralization/precipitation with potassium bicarbonate, sodium bicarbonate, ferrous oxide, and ferrous sulfide solution for three groundwaters and soils from Georgia Power Company (Georgia Power) Plant McDonough-Atkinson Ash Pond 1 (AP-1) which has arsenic and molybdenum in two groundwaters (DGWC-69 and DGWC-68A) and cobalt in DGWC-40. Plant McDonough-Atkinson Ash Pond 2, Ash Pond 3 and Ash Pond 4 (AP-2 and 3/4) has arsenic, beryllium, cobalt, lithium, and selenium in two groundwaters (DGWC-48 and DGWC-20). The treatability test from AP-2 and 3/4 used only groundwater. The Georgia Groundwater Protection Standards (GA GWPS) are 0.010 mg/L for arsenic, 0.0040 mg/L for beryllium, 0.032 mg/L for cobalt, 0.10 mg/L for lithium, 0.10 mg/L for molybdenum, and 0.050 mg/L for selenium.

2.0 BENCH-SCALE STUDY SCOPE

The objective of the bench-scale study is to evaluate the appropriate in situ remediation technology for several metals including arsenic, cobalt, beryllium, lithium, molybdenum, and selenium:

- Identify the feasibility of in-situ remediation.
- Determine the design parameters including reagent dosage and demand.

The bench-scale treatability study investigated four reagents: potassium bicarbonate, sodium bicarbonate, iron oxide, and Redox Solutions ferrous sulfide solution (Ferroblack H).

2.1 Reagent Selection

The bench-scale treatability study assumes that one of the following technologies can be used for in-situ remediation of the metals:

- elevated pH precipitation
- oxidation with iron oxide
- reduction with a ferrous sulfide solution

All reagents used for the bench-scale test were commercially available products. The reagent usages and their dosages could be adjusted according to the results of the activities and

observations during the execution of the bench-scale treatability study. The following provides more detail on each of the reagents proposed for the bench-scale treatability testing:

- Potassium Bicarbonate (KHCO_3): Potassium bicarbonate can increase the pH up to about 8.2 SU. Three loadings of LC Carlsen potassium bicarbonate were evaluated in the tests to determine the precipitation of arsenic and molybdenum in two groundwaters and associated soils from Plant AP-1 (DGWC-69 and DGWC-68A); three loadings of potassium bicarbonate to address cobalt from one groundwater and associated soil in Plant AP-1 DGWC-40; and three loadings of potassium bicarbonate to address arsenic, beryllium, and cobalt in groundwater from Plant AP 234 (DGWC-48 and DGWC-20).
- Sodium Bicarbonate (NaHCO_3): Sodium bicarbonate can increase the pH up to about 8.3 SU. Three loadings of Genesis sodium bicarbonate were evaluated in the tests to determine the precipitation of arsenic and molybdenum in two groundwaters and associated soils from Plant AP-1 (DGWC-69 and DGWC-68A); three loadings of sodium bicarbonate to address cobalt from one groundwater and associated soil in Plant AP-1 DGWC-40; and three loadings of sodium bicarbonate to address arsenic, beryllium, and cobalt in groundwater from Plant AP 234 (DGWC-48 and DGWC-20).
- Ferric oxide. Ferric oxide (Fe_2O_3) is insoluble in water and has a pH of 6-8. Three loadings of Sigma Aldrich ferric oxide (<5 μm , 96%) were evaluated for the precipitation of arsenic and molybdenum in two groundwaters and associated soils from Plant AP-1 (DGWC-69 and DGWC-68A); three loadings of ferric oxide to address cobalt from one groundwater and associated soil in Plant AP-1 DGWC-40; and three loadings of ferric oxide to address arsenic, beryllium, and cobalt in groundwater from Plant AP 234 (DGWC-48 and DGWC-20).
- Ferrobblack H (FeB). Ferrous sulfide (FeS) is insoluble in water and has a pH of 9.5-12.5. Three loadings of Redox Solutions Ferrobblack H ferrous sulfide solution were evaluated for the precipitation of arsenic and molybdenum in two groundwaters and associated soils from Plant AP-1 (DGWC-69 and DGWC-68A); three loadings of FeB to address cobalt from one groundwater and associated soil in Plant AP-1 DGWC-40; and three loadings of FeB to address arsenic, beryllium, and cobalt in groundwater from Plant AP 2 and 3/4 (DGWC-48 and DGWC-20).

2.2 Bench-scale Groundwater and Soil Collection

Groundwater samples were collected from the five locations (Plant AP-1 DGWC-69, DGWC-68A, and DGWC-40 and Plant AP234 DGWC-48 and DGWC-20). Soil samples were collected from Plant AP-1 DGWC-69, DGWC-68A, and DGWC-40. With 1 L reaction vessels for each treatment, about 3-5 gallons of each of the five groundwaters were required. The samples were delivered to the TSI under a chain of custody. Groundwater samples from AP-2 and 3/4 DGWC-20 and DGWC-48, AP-1 DGWC-68A, DGWC-69, and DGWC-40 were delivered to TSI on 6/24/22 and stored in refrigerators. The 14.4 kg soil sample from AP-1 DGWC-69 was received on 6/28/22. The 14.6-14.8 kg soil samples from AP-1 DGWC-68A and DGWC-40 were initially lost by Federal Express. They were recovered by Terra Systems, Inc. (TSI) on 7/7/22.

2.3 Baseline characterization

At the beginning of the bench-scale treatability test, the baseline characterization was performed to verify contaminant concentrations in the samples. The groundwater samples were homogenized to the extent possible. The homogenized groundwater samples were analyzed for total cobalt, arsenic, molybdenum, beryllium, lithium, selenium, iron, potassium, manganese, magnesium, and sodium (metals chosen based upon site characteristics); dissolved arsenic, beryllium, cobalt, molybdenum, lithium, and selenium (based upon site characteristics); dissolved organic carbon (DOC), and sulfate, by the Eurofins Lancaster Laboratories Environmental (ELLE) and for pH, ORP, dissolved oxygen (DO), bicarbonate alkalinity, total hardness, ferrous iron, and sulfide by TSI using calibrated meters and Hach procedures.

2.4 Titration Tests

Alkaline titrations were conducted to determine the potassium bicarbonate and sodium bicarbonate testing dosages. An alkaline titration test was completed to determine the pH resulting from 0, 1, 2, 5, and 10 g/L additions of potassium bicarbonate and sodium bicarbonate reagent dosages. The aqueous total suspended solids (TSS) were determined by weighing the 0.2 μm nylon filter before filtering the samples and after filtration and drying in a 105 °C oven. The weight of the TSS collected was divided by the volume of groundwater that passed through the filters.

2.5 Reagent Screening

The purpose of this step was to select the most appropriate reagent for each of the nine groundwater samples.

The reagent dosages were determined from the baseline characterization and titration. For each sample, a total of 13 reactors were set up for each site.

AP-1 (Arsenic and Molybdenum) DGWC-69 and DGWC-68A with 713-812 g groundwater and 417-580 g soil

- Control
- Potassium Bicarbonate: 3 dosages (2, 5, and 10 g/L)
- Sodium Bicarbonate: 3 dosages (2, 5, and 10 g/L)
- Ferric Oxide: 3 Dosages (0.5, 1.0, and 2.0 g/L)
- Ferroblack H: 3 Dosages (10, 20, and 30 g/L)

Plant AP-1 (Cobalt) DGWC-40 with 580 g soil and 705-781 g groundwater

- Control
- Potassium Bicarbonate: 3 dosages (2, 5, and 10 g/L)
- Sodium Bicarbonate: 3 dosages (2, 5, and 10 g/L)
- Ferric Oxide: 3 Dosages (0.5, 1.0, and 2.0 g/L)
- Ferroblack H: 3 Dosages (10, 20, and 30 g/L)

Plant AP-2 and 3/4 (Arsenic, Beryllium, Cobalt, Lithium, and Selenium) DGWC-49 and DGWC-20 with only 1,032 to 1,069 g groundwater

- Control
- Potassium Bicarbonate: 3 dosages (2, 5, and 10 g/L)
- Sodium Bicarbonate: 3 dosages (2, 5, and 10 g/L)
- Ferric Oxide: 3 Dosages (0.5, 1.0, and 2.0 g/L)

- Ferroblack H: 3 Dosages (10, 20, and 30 g/L)

All containers were mixed and turned periodically for seven days. Groundwater samples (the supernatants in the reactors) were analyzed for:

- total arsenic, beryllium, cobalt, molybdenum, and selenium (based upon contaminants of concern for each site);
- total iron, potassium, manganese, magnesium, and sodium
- dissolved arsenic, beryllium, cobalt, molybdenum, and selenium (based upon contaminants of concern for each site). The aqueous samples were filtered through 0.2 μm nylon filters and the filtrates were divided into bottles for DOC and metals.
- dissolved organic carbon (DOC)
- sulfate

ELLE conducted the metals, DOC, and sulfate analyses. The pH, ORP, dissolved oxygen (DO), bicarbonate alkalinity, total hardness, ferrous iron, and sulfide were conducted by TSI using calibrated meters and Hach procedures. The estimated sample volumes for the initial characterization, and screening tests are shown in Table 1. The volumes were adjusted to account for required dilutions and volumes of water available.

3.0 PLANT AP-1

3.1 Plant AP-1 Initial Characterization Results

Table 2 has the initial characterization results of the field parameters, Hach tests, metals, DOC, and sulfate results for the three groundwater samples in AP-1.

3.1.1 AP-1 DGWC-69. The groundwater pH was 7.4 with a moderate bicarbonate alkalinity of 60 mg/L CaCO_3 . There was a positive ORP (244 mV) and moderate dissolved oxygen (6.1 mg/L). The TSS was 6.6 mg/L with a hardness 60 mg/L, 0.08 mg/L ferrous iron, and 0.01 mg/L sulfide. With 100 g soil and 150 g of the AP1 DGWC-69 groundwater (40% soil, 60% groundwater), the pH increased from 7.3 to 7.5 SU with 1 g/L sodium bicarbonate and increased to 8.1 with 10 g/L. The pH of 100 g soil and 150 g groundwater increased from 6.3 to 7.3 SU with 1 g/L potassium bicarbonate and to 8.0 with 10 g/L. This groundwater has low 10 mg/L sulfate and 0.59 mg/L DOC. Total arsenic was 0.026 mg/L and dissolved arsenic was 0.052 mg/L; both exceeded the GA GWPS. There is not a clear explanation as to why the dissolved arsenic was higher than the total arsenic. Total and dissolved molybdenum was detected 0.0053 to 0.0055 mg/L and were below the GA GWPS. The groundwater contained <0.2 mg/L total iron, 2.6 mg/L total magnesium, 0.0036 mg/L total manganese, 2.4 mg/L potassium, and 9.7 mg/L sodium. The soil pH was 6.7 with a density of 1.56 g/cm³, field holding capacity of 0.15 g/g, and soil dry weight of 93.0%. The soil contained 3.1 mg/kg total arsenic, 0.68 mg/kg total molybdenum, 9,600 mg/kg total iron, 3,000 mg/kg total magnesium, 250 mg/kg total manganese, 3,900 mg/kg potassium, 96 mg/kg sodium, and a moisture content of 19.7%.

3.1.2 AP-1 DGWC-68A. The groundwater pH was 6.8 with a moderate bicarbonate alkalinity of 180 mg/L CaCO_3 . There was a positive ORP (215 mV) and moderate dissolved oxygen (3.0 mg/L). The TSS was 0 mg/L with a hardness 240 mg/L, 0.01 mg/L ferrous iron, and no sulfide. The pH of 100 g soil and 150 g groundwater increased from 6.8 to 7.5 1U with 1 g/L sodium bicarbonate and increased to 7.8 with 10 g/L. The pH increased from 6.7 to 7.1 SU with 1 g/L potassium bicarbonate and to 7.6 with 10 g/L. This groundwater has moderate 40 mg/L sulfate and 0.71 mg/L DOC. Total arsenic was not detected and dissolved arsenic was 0.014 mg/L; above the

GA GWPS. Molybdenum concentrations were relatively high with 0.20 mg/L total and 0.20 mg/L dissolved; both exceeded the GA GWPS of 0.10 mg/L. The groundwater contained 0.029 mg/L total iron, 18 mg/L total magnesium, 0.072 mg/L total manganese, 3.8 mg/L potassium, and 9.6 mg/L sodium. The soil pH was 7.2 with a density of 1.58 g/cm³, field holding capacity of 0.29 g/g, and soil dry weight of 88.3%. The soil contained 1.0 mg/kg total arsenic, 7.4 mg/kg total molybdenum, 35,000 mg/kg total iron, 11,000 mg/kg total magnesium, 530 mg/kg total manganese, 12,000 mg/kg potassium, 110 mg/kg sodium, and a moisture content of 12.9%.

3.1.3 AP-1 DGWC-40. The initial groundwater pH was 5.3 SU with a bicarbonate alkalinity of 20 mg/L CaCO₃. There was a positive ORP (240 mV) and moderate dissolved oxygen (4.2 mg/L). The TSS was 4.3 mg/L with a hardness of 20 mg/L, 0.03 mg/L ferrous iron, and 0.01 mg/L sulfide. The pH of 100 g soil and 150 g groundwater increased from 5.2 to 6.4 SU with 1 g/L sodium bicarbonate and increased to 7.4 with 10 g/L. The pH of 100 g soil and 150 g groundwater increased from 4.4 to 5.8 SU with 1 g/L potassium bicarbonate and to 7.3 with 10 g/L. This groundwater has moderate 230 mg/L sulfate and no detectable DOC. Total cobalt was detected at 0.040 mg/L and dissolved cobalt at 0.039 mg/L; both were slightly above the GA GWPS of 0.032 mg/L. The groundwater contained <0.020 mg/L total iron, 19 mg/L total magnesium, 3.3 mg/L total manganese, 5.8 mg/L potassium, and 19 mg/L sodium. The soil pH was 5.6 with a density of 1.69 g/cm³, field holding capacity of 0.23 g/g, and soil dry weight of 84.5%. The soil contained 13 mg/kg total cobalt, 49,000 mg/kg total iron, 9,500 mg/kg total magnesium, 460 mg/kg total manganese, 13,000 mg/kg potassium, 40 mg/kg sodium, and a moisture content of 14.9%.

3.2 Plant AP-1 Testing Results

3.2.1 Well DGWC-69 Summary. Table 3 has the field parameters and ELLE results for the DGWC-69 groundwater. The control treatment received 417 g soil and 798 g groundwater. Potassium bicarbonate or sodium bicarbonate solutions were prepared with between 796 and 812 g groundwater and 1.6 to 8.0 g of buffer. The 580 g soil were added to the bottles and bottles filled with between 749 to 812 g of the solutions. The bicarbonate concentrations ranged from 2.0 to 9.8 g/L. The ferric oxide was added directly to the bottles and concentrations ranged from 0.5, 0.9, and 2.0 g/L. The Ferrobblack H treatments received 8.0 to 22.5 g of the ferrous sulfide suspension resulting in 10.6, 20.3, and 30.1 g/L solutions.

On Day 7, the control pH was 6.5. With 2 g/L potassium bicarbonate, the pH increased to 7.2 and the highest dosage of 10 g/L potassium buffers had a pH of 7.7 on Day 7. On Day 7, the pH for the sodium bicarbonate treatments ranged from 7.4 to 8.0, from 6.4 to 6.7 for the iron oxide, and from 8.0 to 9.6 for the Ferrobblack H treatments. The ORPs were positive and ranged from 48 to 198 mV. DO ranged from 1.9 to 6.9 mg/L with lower DO of 1.9 to .46 mg/L in the Ferrobblack H treatments. Bicarbonate alkalinity was moderate in the control (80 mg/L as CaCO₃) and increased with bicarbonate additions to a maximum of 5,200 mg/L as CaCO₃. The hardness ranged from 60 to 460 mg/L as CaCO₃. Ferrous iron ranged from 0.65 to 3.35 with levels above 1.0 mg/L in the 2 g/L KHCO₃, 5 g/L KHCO₃, 10 g/L KHCO₃, 5 g/L NaHCO₃, 10 g/L FeB, 20 g/L FeB, and 30 g/L FeB. Sulfide was low (0.01 to 0.20 mg/L).

Sulfate ranged from 12 to 30 mg/L. Little DOC was detected (2 to 7.7 mg/L); the higher dosages of buffer had the most, 6.8 and 7.7 mg/L. Total arsenic ranged from 0.0042 to 0.084 mg/L with the following treatments below the GA GWPS of 0.010 mg/L: Control, 0.5 g/L Fe₂O₃, 1.0 g/L Fe₂O₃, and 2 g/L Fe₂O₃. Dissolved arsenic ranged from 0.0040 to 0.088 mg/L with the following treatments below the GA GWSP: Control, 0.5 g/L Fe₂O₃, 1.0 g/L Fe₂O₃, 2 g/L Fe₂O₃, and 10 g/L FeB. Total molybdenum ranged from 0.018 to 0.17 mg/L; all were below the GA GWPS

except the 20 and 30 g/L FeB treatments. Dissolved molybdenum ranged from 0.019 to 1.8 mg/L with dissolved molybdenum below the GA GWPS in all treatments except the 20 and 30 g/L FeB treatments. Total iron increased in all treatments; possibly as it leached from the soil. Total magnesium increased with the higher magnesium concentrations in the KHCO_3 and NaHCO_3 treatments. Total manganese increased in all treatments. Potassium increased with the increasing loadings of potassium bicarbonate and were slightly elevated in the other treatments. Sodium ranged from 19 to 2,200 mg/L with the highest levels in the NaHCO_3 treatments.

The Control, 0.5 g/L Fe_2O_3 , 1.0 g/L Fe_2O_3 , 2.0 g/L Fe_2O_3 , and the 10 g/L FeB treatments showed significant reductions in dissolved arsenic with all of these treatments reducing dissolved arsenic below the GA GWPS. The dissolved molybdenum concentrations were below the GA GWPS for molybdenum of 0.10 mg/L for all treatments except the 20 and 30 g/L FeB. The higher loadings of FeB may have created a reducing environment where molybdenum leached from the soil.

3.2.2 Well DGWC-68A Summary. Table 4 has the field parameters and ELLE results for DGWC-68A groundwater. The control treatment received 580 g soil and 738 g groundwater. Potassium bicarbonate or sodium bicarbonate solutions were prepared with between 792 and 798 g groundwater and 1.6 to 8.0 g of buffer. The 580 g soil were added to the bottles and bottles filled with between 722 to 789 g of the solutions. The bicarbonate concentrations ranged from 2.0 to 10 g/L. The ferric oxide was added directly to the bottles and concentrations ranged from 0.5, 1.1, and 2.0 g/L. The Ferrobblack H treatments received 8.0 to 22.5 g of the ferrous sulfide suspension resulting in 10.3, 20.6, and 28.3 g/L solutions.

On Day 7, the control pH was 6.6. With 2 g/L potassium bicarbonate, the pH increased to 6.9 and the highest dosage of 10 g/L potassium buffers had a pH of 7.1 on Day 7. On Day 7, the pH for the sodium bicarbonate treatments was 7.1 in all three loadings, from 6.6 to 6.7 for the iron oxide, and from 7.0 to 8.7 for the Ferrobblack H treatments. The ORPS were positive and ranged from 5 to 288 mV with the Ferrobblack H treatments being lower. DO ranged from 2.1 to 6.3 mg/L with lower DO of 2.1 to 2.7 mg/L in the Ferrobblack H treatments. Bicarbonate alkalinity was moderate in the control (180 mg/L as CaCO_3) and increased with bicarbonate additions to a maximum of 4,200 mg/L as CaCO_3 . The hardness ranged from 200 to 710 mg/L as CaCO_3 . Ferrous iron ranged from 0.65 to 4.0 with levels above 1.0 mg/L in the 5 g/L KHCO_3 , 10 g/L KHCO_3 , 2 g/L NaHCO_3 , 5 g/L NaHCO_3 , 10 g/L FeB, 20 g/L FeB, and 30 g/L FeB. Sulfide was low (0 to 0.19 mg/L).

Sulfate ranged from 31 to 44 mg/L. Little DOC was detected (1.6 to 11 mg/L); the higher dosage of FeB had the most, 11 mg/L. Total arsenic ranged from 0.00094 to 0.0064 mg/L with all treatments below the GA GWPS of 0.010 mg/L. Dissolved arsenic ranged from 0.0024 to 0.072 mg/L with the following treatments below the GA GWSP: Control, 5 g/L KHCO_3 , and 2 g/L NaHCO_3 . Why the dissolved arsenic is higher than total arsenic is unclear. Total molybdenum ranged from 0.28 to 1.1 mg/L; only the 20 g/L FeB was below the GA GWPS. Dissolved molybdenum ranged from 0.28 to 1.2 mg/L with no treatments below the GA GWPS. Dissolved molybdenum increased from the initial characterization sample presumably as molybdenum dissolved from the soil. The lowest dissolved molybdenum concentrations were in the ferric oxide treatments (0.28 to 0.41 mg/L). Total iron increased in all treatments; possibly as it leached from the soil. Total magnesium increased except in the Control and 0.5 g/L to 2 g/L Fe_2O_3 treatments. Total manganese increased in all treatments. Potassium increased with the increasing loadings of potassium bicarbonate and were slightly elevated in the other treatments. Sodium ranged from 19 to 2,200 mg/L with the highest levels in the NaHCO_3 treatments.

The Control, 5 g/L KHCO_3 , and 2 g/L NaHCO_3 treatments showed significant reductions in dissolved arsenic with these treatments reducing dissolved arsenic below the GA GWPS. None of treatments reduced dissolved molybdenum below the GA GWPS with the ferric oxide treatments showing the lowest levels.

3.2.3 Well DGWC-40 Summary. Table 5 has the field parameters and ELLE results for the DGWC-40 groundwater. The control treatment received 580 g soil and 780 g groundwater. Potassium bicarbonate or sodium bicarbonate solutions were prepared with between 792 and 798 g groundwater and 1.6 to 8.0 g of buffer. The 580 g soil were added to the bottles and bottles filled with between 705 to 781 g of the solutions. The bicarbonate concentrations ranged from 2.0 to 10 g/L. The ferric oxide was added directly to the bottles and concentrations ranged from 0.5, 1.0, and 2.1 g/L. The Ferrobblack H treatments received 7.5 to 22.5 g of the ferrous sulfide suspension resulting in 9.6, 20.8, and 30.6 g/L solutions.

On Day 7, the control pH was 5.5. With 2 g/L potassium bicarbonate, the pH increased to 6.3 and the highest dosage of 10 g/L potassium buffers had a pH of 7.0 on Day 7. On Day 7, the pH for the sodium bicarbonate treatments ranged from 6.5 to 7.2 in all three loadings, from 5.5 to 6.3 for the iron oxide, and from 6.1 to 6.6 for the Ferrobblack H treatments. The ORPS were positive and ranged from 5 to 245 mV with the Ferrobblack H treatments being lower. DO ranged from 2.7 to 6.6 mg/L with lower DO of 2.7 to 3.1 mg/L in the Ferrobblack H treatments. Bicarbonate alkalinity was low in the control (20 mg/L as CaCO_3) and increased with bicarbonate additions to a maximum of 420 mg/L as CaCO_3 . The hardness ranged from <20 to 420 mg/L as CaCO_3 . Ferrous iron ranged from 0.05 to 6.6 with levels above 1.0 mg/L in the 5 g/L NaHCO_3 , 10 g/L NaHCO_3 , 0.5 g/L Fe_2O_3 , 1.0 g/L Fe_2O_3 , 10 g/L FeB, and 20 g/L FeB treatments. Sulfide was low (0.01 to 0.18 mg/L).

Sulfate ranged from 200 to 260 mg/L. Little DOC was detected (1.4 to 3.6 mg/L). Total cobalt ranged from 0.0033 to 0.085 mg/L with the following treatments below the GA GWPS of 0.032 mg/L: 2 g/L NaHCO_3 , 5 g/L NaHCO_3 , 10 g/L NaHCO_3 , 20 g/L FeB, and 30 g/L FeB. Dissolved cobalt ranged from 0.0022 to 0.082 mg/L with the following treatments below the GA GWPS: 2 g/L KHCO_3 , 5 g/L KHCO_3 , 10 g/L KHCO_3 , 2 g/L NaHCO_3 , 5 g/L NaHCO_3 , 10 g/L NaHCO_3 , 10 g/L FeB, 20 g/L FeB, and 30 g/L FeB. Total iron increased in all treatments; possibly as it leached from the soil. Total magnesium increased except in the Control, 2 g/L NaHCO_3 , 0.5 g/L Fe_2O_3 , 1.0 g/L Fe_2O_3 , and 2 g/L Fe_2O_3 treatments. Total manganese increased in all treatments except the NaHCO_3 treatments. Potassium increased with the increasing loadings of potassium bicarbonate and were slightly elevated in the other treatments. Sodium ranged from 19 to 2,200 mg/L with the highest levels in the NaHCO_3 treatments.

The 2 g/L KHCO_3 , 5 g/L KHCO_3 , 10 g/L KHCO_3 , 2 g/L NaHCO_3 , 5 g/L NaHCO_3 , 10 g/L NaHCO_3 , 10 g/L FeB, 20 g/L FeB, and 30 g/L FeB treatments showed significant reductions in dissolved cobalt with these treatments reducing dissolved cobalt below the GA GWPS.

3.3 AP-1 Conclusions

Table 6 summarizes the percent removals from the initial characterization samples or the Control Day 0 for the dissolved metals of concern across the various groundwaters. Compounds highlighted in green were reduced to below the GA GWPS by the treatments.

Arsenic. In the AP-1 DGWC-69 groundwater and soil, the control, all ferric oxide treatments, and the 10 g/L FeB treatments reduced dissolved arsenic to below the GA GWPS but not the sodium or potassium bicarbonate and high Ferroblack treatments. The AP-1 DGWC-68A treatments with dissolved arsenic below the GA GWPS were Control, 5 g/L KHCO₃, 2 g/L NaHCO₃, and 20 g/L FeB.

Cobalt. The GA GWPS for cobalt is 0.032 mg/L. All of the potassium and sodium bicarbonate treatments plus the Ferroblack treatments reduced dissolved Co in the AP-1 DGWC-40 groundwater and soil to below the GA GWPS.

Molybdenum. All of the treatments, including the control, were below the GA GWPS for molybdenum in the DGWC-69 groundwater treatments. None of the treatments reduced dissolved molybdenum below the GA GWPS in DGWC-68A. The ferric oxide treatments had the lowest dissolved molybdenum levels of 0.28 to 0.41 mg/L.

Overall Conclusions. The control, 0.5 to 10 g/L ferric oxide, and 10 g/L reduced dissolved arsenic to below the GA GWPS in the DGWC-69 soil groundwater. The control, 5 g/L KHCO₃, 2 g/L NaHCO₃, and 20 g/L Ferroblack reduced arsenic in the DGWC-68A soil and groundwater below the GA GWPS. All the bicarbonate and Ferroblack treatments reduced dissolved cobalt in the AP-1 DGWC-40 groundwater to below the GA GWPS. The dissolved molybdenum in the DGWC-69 soil and groundwater were below the GA GWPS in all treatments. None of the treatments met the molybdenum GA GWPS in the AP-1 DGWC-68A soil and groundwater treatments although the ferric oxide reduced dissolved molybdenum the most. There was no single treatment that met the GWPS for dissolved arsenic and molybdenum in the DGWC-69 and DGWC-68A groundwater and soils and for cobalt in the DGWC-40.

4.0 PLANT AP-2 and 3/4

4.1 Plant AP-2 and 3/4 Initial Characterization Results

Table 7 has the initial characterization results of the field parameters, Hach tests, metals, DOC, and sulfate results for the two groundwater samples in AP-2 and 3/4.

4.1.1 Well DGWC-48. The control treatment received 1,056 g groundwater. Potassium bicarbonate or sodium bicarbonate solutions were prepared with between 1,047 and 1,059 g groundwater and 2.1 to 10.5 g of buffer. The bicarbonate concentrations ranged from 2.0 to 9.9 g/L. The ferric oxide was added directly to the bottles and concentrations ranged from 0.5, 1.0, and 2.0 g/L. The Ferroblack H treatments received 10.5 to 31.5 g of the ferrous sulfide suspension resulting in 9.9, 19.7, and 29.5 g/L solutions.

The pH ranged from 4.2 to 4.8 with only 20 mg/L bicarbonate alkalinity as CaCO₃. There was a positive ORP (265 mV) and moderate dissolved oxygen (4.1 mg/L). The TSS was 5.6 mg/L with a hardness <20 mg/L, 0.56 mg/L ferrous iron, and no sulfide. The pH increased from 4.2 to 7.5 SU with 1 g/L sodium bicarbonate and increased to 7.9 with 10 g/L. The pH increased from 4.3 to 6.6 SU with 1 g/L potassium bicarbonate and to 8.3 with 10 g/L. This groundwater has high 300 mg/L sulfate and <0.5 mg/L DOC. Total arsenic was non-detect and dissolved arsenic was 0.035 mg/L. Total and dissolved Beryllium were 0.0031 mg/L which were below the GA GWPS. Total cobalt was found at 0.040 mg/L and dissolved cobalt at 0.042 mg/L above the GA GWPS of 0.032 mg/L. Lithium was not detected (<0.011 mg/L). No selenium was detected. Lithium and selenium were not monitored in the subsequent testing. The groundwater contained <0.020 mg/L total iron, 19 mg/L total magnesium, 3.3 mg/L total manganese, 5.8 mg/L potassium, and 19 mg/L sodium.

4.1.2 Well DGWC-20. The control treatment received 1,064 g groundwater. Potassium bicarbonate or sodium bicarbonate solutions were prepared with between 1,054 and 1,058 g groundwater and 2.1 to 10.5 g of buffer. The bicarbonate concentrations ranged from 2.0 to 9.9 g/L. The ferric oxide was added directly to the bottles and concentrations ranged from 0.5, 1.0, and 2.0 g/L. The Ferroblack H treatments received 10.5 to 31.5 g of the ferrous sulfide suspension resulting in 9.9, 19.8, and 29.6 g/L solutions.

The pH ranged from 4.5 to 6.3 with little bicarbonate alkalinity of 20 mg/L CaCO₃. There was a positive ORP (232 mV) and moderate dissolved oxygen (3.8 mg/L). The TSS was 3.0 mg/L with 20 mg/L hardness, 0.06 mg/L ferrous iron, and no sulfide. The pH increased from 5.5 to 6.9 SU with 1 g/L sodium bicarbonate and increased to 8.0 with 10 g/L. The pH increased from 4.5 to 6.8 SU with 1 g/L potassium bicarbonate and to 7.9 with 10 g/L. This groundwater has moderate 560 mg/L sulfate and 3.4 mg/L DOC. Total arsenic was 0.022 mg/L and dissolved arsenic was <0.16 mg/L. Total beryllium was detected at 0.0082 mg/L and dissolved beryllium at <0.010 mg/L; both exceed the GA GWPS of 0.0040. Total cobalt was detected at 1.2 mg/L and dissolved cobalt at 1.0 mg/L, both exceed the GA GWPS of 0.032 mg/L. Total and dissolved lithium and selenium were not detected. Lithium and selenium were not monitored in the subsequent testing. The groundwater was slightly hard with 0.039 mg/L total iron, 27 mg/L total magnesium, 41 mg/L total manganese, 15 mg/L potassium, and 22 mg/L sodium.

4.2 Plant AP-2 and 3/4 Testing Results

4.2.1 Well DGWC-48 Summary. Table 8 has the field parameters and ELLE results for this groundwater. On Day 0, the control pH was 5.0 and increased to 7.2 for the lowest 2 g/L loading of potassium bicarbonate and to 7.4 for the lowest 2 g/L loading of sodium bicarbonate. The highest dosage of buffers had pHs of 7.9-8.0 on Day 7. The pH in the Fe₂O₃ treatments on Day 7 ranged 4.8 to 5.1 SU and increased to between 7.0 to 10.7 for the FeB treatments. The ORPS on Day 7 were positive except for the 30 g/L FeB and ranged from -58 to 289 mV. DO ranged from 2.2 to 5.5 mg/L. The total suspended solids ranged from 0 to 86 mg/L with >10 mg/L TSS found in the 5 g/L KHCO₃, 1.0 g/L Fe₂O₃, 2.0 g/L Fe₂O₃, 10 g/L FeB, and 30 g/L FeB. Bicarbonate alkalinity was low in the control, Fe₂O₃, and FeB treatments (<20-80 mg/L CaCO₃) and increased with bicarbonate additions. The hardness ranged from 20 to 232 mg/L with higher readings at the higher buffer loadings. Only the control, 10 g/L sodium bicarbonate, and the FeB treatments had more than 0.15 mg/L ferrous iron. Sulfide was low (0.01 to 0.10 mg/L).

Sulfate ranged from 310 to 340 mg/L. Little DOC was detected (0.56 to 19 mg/L); the highest dosage of buffer had the most, 6.3 and 19 mg/L. Total arsenic were not detected except in the treatments with 10 g/L KHCO₃, 5 g/L NaHCO₃, 1.0 g/L Fe₂O₃, 2.0 g/L Fe₂O₃, and the 30 g/L FeB. Total As was below the GA GWPS. Dissolved As were above the GA GWPS except in the 2 g/L NaHCO₃, 2 g/L Fe₂O₃, 10 g/L FeB, and 20 g/L FeB treatments. It is not clear why dissolved arsenic would be higher than total arsenic. Total beryllium ranged from 0.0050 to 0.0072 mg/L; all samples were above the GA GWPS of 0.004 mg/L except the 10 g/L KHCO₃, 5 g/L NaHCO₃, 1- g/L NaHCO₃, and all three of the FeB treatments. Dissolved beryllium ranged from <0.00012 to 0.0081 mg/L with 2-10 g/L potassium bicarbonate, 5-10 g/L sodium bicarbonate, and the 10 to 30 g/L FeB treatments below the GA GWPS. Total cobalt was moderate ranging from 0.031 to 0.34 mg/L with only the 30 g/L FeB treatment below the GA GWPS. Dissolved cobalt ranged from 0.00022 to 0.36 mg/L with the 10-30 g/L FeB below the GA GWPS. Total iron ranged from 0.027 to 110 g/L (2 g/L Fe₂O₃). Total magnesium did not change much ranging from 1.3 to 16 mg/L. Total manganese ranged from 0.38 to 14 mg/L and was reduced by >50% only in the 10 g/L

NaHCO₃ treatment. Potassium and sodium increased with the increasing loadings of potassium and sodium bicarbonate.

The only treatments that reduced dissolved arsenic to below the GA GWPS were the 2 g/L NaHCO₃, 2.0 g/L Fe₂O₃, 10 g/L FeB, and 20 g/L FeB. The 2-10 g/L of the potassium bicarbonate, 5-10 g/L sodium bicarbonate, and 10, 20, and 30 g/L FeB treatments reduced dissolved beryllium to below the GA GWPS. Only the 10, 20, and 30 g/L FeB treatments resulted in decreases in dissolved cobalt to below the GA GWPS.

4.2.2 Well DGWC-20 Summary. Table 9 has the field parameters and ELLE results for this groundwater.

The control pH at Day 0 was 3.9 SU and increased to 7.1 for the lowest loading of potassium bicarbonate and to 7.0 for the lowest loading of sodium bicarbonate. The highest dosage of buffers had pHs of 7.7 on Day 7. The ORPS were positive and ranged from 78 to 410 mV with the lowest ORP in the 30 g/L FeB treatment. DO ranged from 2.6 to 6.3 mg/L. The total suspended solids ranged from 0.8 to 520 mg/L. The treatments with 10 g/L KHCO₃, 10 g/L NaHCO₃, 2 g/L Fe₂O₃, 10 g/L FeB, and 30 g/L FeB had elevated TSS above 10 mg/L. Bicarbonate alkalinity was low in the control and increased with bicarbonate additions. The hardness ranged from <20 to 350 mg/L. Little ferrous iron was detected (0.03 to 0.12 mg/L). Sulfide was low (<0.01 to 0.01 mg/L).

Sulfate ranged from 470 to 580 mg/L. Little DOC was detected; the highest dosage of KHCO₃ buffer had the most, 6.8 mg/L. Total arsenic ranged from 0.0015 to 0.025 mg/L with the 5 g/L NaHCO₃ and 10, 20, and 30 g/L FeB treatment having total arsenic below the GA GWPS. Dissolved arsenic ranged from 0.0014 to 0.044 mg/L with the 2 and 5 g/L KHCO₃, 2, 5, and 10 g/L NaHCO₃, and the 10, 20, and 30 g/L FeB treatments having dissolved arsenic below the GA GWPS. Total beryllium ranged from 0.00057 to 0.013 mg/L; the 5 g/L NaHCO₃ and 10, 20, and 30 g/L FeB treatments were below the GA GWPS. Dissolved beryllium ranged from 0.00023 to 0.0091 mg/L with all KHCO₃, NaHCO₃, and FeB treatments below the GA GWPS. Total cobalt ranged from 0.12 to 1.2 mg/L but none of the treatments reached the GA GWPS. Dissolved cobalt ranged from <0.00012 to 1.1 mg/L and only the 20 and 30 g/L FeB treatments reached the GA GWPS. Total iron increased in many treatments especially for the Fe₂O₃ and FeB treatments. Total magnesium ranged from 3.3 to 26.0 mg/L with the FeB treatments having the least magnesium. Total manganese ranged from 4.2 to 45 mg/L. Potassium and sodium increased with the increasing loadings of potassium and sodium bicarbonate.,

The 2-10 g/L of potassium bicarbonate, 2-10 g/L sodium bicarbonate, and 10-30 g/L FeB treatments reduced dissolved arsenic and dissolved beryllium to the GA GWPS. Only the 20 and 30 g/L FeB reduced the dissolved cobalt to below the GA GWPS.

4.3 AP-2 and 3/4 Conclusions

Table 10 summarizes the percent removals from the initial characterization samples or the Control Day 0 for the dissolved metals of concern across the various treatments and groundwaters. Compounds highlighted in green were reduced to below the GA GWPS by the treatments.

Arsenic. The following treatments reduced dissolved arsenic in AP-2 and 3/4 well DGWC-48 to below the GA GWPS: 2 g/L NaHCO₃, 2 g/L Fe₂O₃, 10 g/L FeB, and 20 g/L FeB. Dissolved As in well DGWC-20 was reduced to below the GA GWPS in all potassium and sodium bicarbonate and Ferrobblack treatments.



Beryllium. In the AP-2 and 3/4 DGWC-48 and 20 groundwaters, most of the potassium and sodium bicarbonate and the Ferroblack treatments reduced dissolved Be levels to below the GA GWPS but the Fe₂O₃ treatments did not.

Cobalt. The GA GWPS for cobalt is 0.032 mg/L. The higher Ferroblack treatments reduced cobalt to below the GA GWPS in both wells.

Overall Conclusions. Addition of relatively high dosages of potassium or sodium bicarbonate buffers were generally able to reach the GA GWPS for arsenic and beryllium but not cobalt. The Ferroblack treatments were able to reduce the arsenic, beryllium, and cobalt to below the GA GWPS.

Please let me know if you have any questions about this draft report.

Sincerely,
TERRA SYSTEMS, INC.

Michael D Lee, Ph.D.

Michael D. Lee, Ph.D.
Vice-President Research and Development

Table 1
Estimated Sample Volumes and Preservatives

Analysis	Matrix	Volume mL per bottle	Preservative
Total As, Be, Co, Mo, Se, Fe, K, Mn, Mg, and Na (metals based upon contaminants at each site)	Aqueous	200	HNO ₃
Total Li (AP 234 only)	Aqueous	200	HNO ₃
Filtered As, Be, Co, Mo, and Se (metals based upon contaminants at each site)	Aqueous	200	HNO ₃
Filtered Li (AP 234 only)	Aqueous	200	HNO ₃
DOC	Aqueous	45	H ₃ PO ₄
Sulfate	Aqueous	50	None
Total		895	

Table 2
Plant McDonough AP-1 Initial Characterization Field and Hach Parameters

Well		GA GWPS	AP-1 DGWC-69	AP-1 DGWC-68A	AP-1 DGWC-40
pH	SU		7.4	6.8	5.3
ORP	mV		244	215	240
DO	mg/L		6.1	3.0	4.2
TSS	mg/L		6.6	0	4.3
Bicarbonate Alkalinity as CaCO3	mg/L		60	180	20
Hardness as CaCO3	mg/L		60	240	20
Ferrous Iron	mg/L		0.08	0.01	0.03
Sulfide	mg/L		0.01	0	0.01
Soil pH	SU		6.7	7.2	5.6
Soil Density	g/cm ³		1.56	1.58	1.69
Soil Field Holding Capacity	g/g		0.15	0.29	0.23
Soil Dry Weight	%		93.0	88.3	84.5
Sodium Hydroxide Titrations					
Groundwater	g		150.1	150	150.1
Soil	g		100	100	100
g/L NaHCO3	pH				
0			7.3	6.8	5.2
1			7.5	7.1	6.4
2			7.7	7.3	6.8
5			7.9	7.7	7.2
10			8.1	7.8	7.4
Potassium Hydroxide Titrations					
Groundwater	g		151.8	150	153.6
Soil	g		100	100	100
g/L KHCO3					
0			6.3	6.7	4.4
1			7.3	7.1	5.8
2			7.5	7.2	6.2
5			7.7	7.4	6.8
10			8.0	7.6	7.3
Sulfate	mg/L		10	40	230
Dissolved Organic Carbon	mg/L		0.59	0.71	<0.5
Total Arsenic	mg/L	0.010	0.026	<0.00068	
Dissolved Arsenic	mg/L	0.010	0.052	0.014	
Total Cobalt	mg/L	0.032			0.040
Dissolved Cobalt	mg/L	0.032			0.039
Total Molybdenum	mg/L	0.10	0.0055	0.20	
Dissolved Molybdenum	mg/L	0.10	0.0053	0.20	
Total Iron	mg/L		<0.020	0.029	<0.020
Total Magnesium	mg/L		2.6	18	19
Total Manganese	mg/L		0.0036	0.072	3.3
Total Potassium	mg/L		2.4	3.8	5.8
Total Sodium	mg/L		9.7	9.6	19
Soils					
Total Arsenic	mg/kg		3.1	1.0	
Total Cobalt	mg/kg				13
Total Molybdenum	mg/kg		0.68	7.4	
Total Iron	mg/kg		9600	35000	49000
Total Magnesium	mg/kg		3000	11000	9500
Total Manganese	mg/kg		250	530	460
Total Potassium	mg/kg		3900	12000	13000
Total Sodium	mg/kg		96	110	40
Moisture	%		19.7	12.9	14.9

0.010 GA GWPS = Georgia Groundwater Performance Standard

Table 3
AP-1 DGWC-69 Treatability Results

		GA GWPS	IC	Control	2 g/L KHCO3	5 g/L KHCO3	10 g/L KHCO3	2 g/L NaHCO3	5 g/L NaHCO3	10 g/L NaHCO3	0.5 g/L Fe2O3	1.0 g/L Fe2O3	2.0 g/L Fe2O3	10 g/L FeB	20 g/L FeB	30 g/L FeB
Soil	g			417	580	580	580	580	580	580	580	580	580	580	580	580
Groundwater	g			798.4	798.4	796	792	798.4	796	811.7						
Product	g			0	1.6	4.0	8	1.6	4	8	0.375	0.752	1.6	8	15	22.5
Solution	g				750.2	749.2	766.2	750.0	754	811.7	800.6	810.4	807.1	747.7	724.5	725.3
Product Concentration	g/L			0	2.0	5.0	10.0	2.0	5.0	9.8	0.5	0.9	2.0	10.6	20.3	30.1
Day				7	7	7	7	7	7	7	7	7	7	7	7	7
pH	SU		7.4	6.5	7.2	7.5	7.7	7.4	8.0	7.8	6.6	6.4	6.7	8.0	9.4	9.6
ORP	mV		244	194	198	192	175	168	150	181	160	188	191	48	56	113
DO	mg/L		6.1	6.0	6.9	6.5	4.6	6.0	6.6	6.2	6.1	6.2	6.4	1.9	2.6	4.6
TSS	mg/L		6.6													
Bicarbonate Alkalinity as CaCO3	mg/L		60	80	700	2100	4100	1200	4200	5200	80	60	60	100	120	120
Hardness as CaCO3	mg/L		60	60	220	460	230	100	230	230	110	110	110	110	60	60
Ferrous Iron	mg/L		0.08	0.75	2.75	1.5	2.05	0.65	3.35	0.95	0.9	0.85	2.3	1.65	2.0	1.5
Sulfide	mg/L		0.01	0.06	0.12	0.2	0.12	0.03	0.01	0.01	0.073	0.05	0.07	0.04	0.05	0.01
ELLE Results																
Sulfate	mg/L		10	12	15	15	16	16	16	16	14	16	15	20	22	30
Dissolved Organic Carbon	mg/L		0.59	2.7	4.2	5.5	6.8	4.0	4.9	7.7	2.6	2.8	2.4	4.3	2.0	5.0
Total Arsenic	mg/L	0.010	0.026	0.0067	0.020	0.032	0.047	0.026	0.056	0.084	0.0058	0.0046	0.0042	0.012	0.011	0.027
Dissolved Arsenic	mg/L	0.010	0.052	0.0061	0.015	0.035	0.047	0.036	0.055	0.088	0.0063	0.0045	0.0040	0.0077	0.012	0.030
Total Molybdenum	mg/L	0.10	0.0055	0.037	0.070	0.084	0.089	0.079	0.087	0.092	0.030	0.026	0.018	0.091	0.13	0.17
Dissolved Molybdenum	mg/L	0.10	0.0053	0.037	0.069	0.083	0.093	0.089	0.097	0.096	0.034	0.027	0.019	0.089	0.13	0.18
Total Iron	mg/L		<0.02	0.42	5.4	2.0	0.57	2.7	3.7	0.81	0.50	0.74	0.63	7.6	1.8	14
Total Magnesium	mg/L		2.6	1.2	18	20	20	7.7	12	13	3.3	3.6	3.5	7.2	3.4	4.0
Total Manganese	mg/L		0.0036	1.2	2.6	2.0	1.2	1.2	1.5	0.83	0.94	1.0	0.98	0.87	0.17	0.40
Total Potassium	mg/L		2.4	5.8	470	1700	3100	9.7	12	15	5.3	6.3	6.0	9.6	8.1	13
Total Sodium	mg/L		9.7	19	28	31	34	550	1100	2200	19	21	21	400	770	1400

0.010 GA GWPS = Georgia Groundwater Performance Standard

0.039

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J value. Compound detected above method detection limit but below method calibration limit.

Compound detected in blank

Table 4
AP-1 DGWC-68A Treatability Results

		GA GWPS	IC	Control	2 g/L KHCO3	5 g/L KHCO3	10 g/L KHCO3	2 g/L NaHCO3	5 g/L NaHCO3	10 g/L NaHCO3	0.5 g/L Fe2O3	1.0 g/L Fe2O3	2.0 g/L Fe2O3	10 g/L FeS	20 g/L FeS	30 g/L FeS
Soil	g			580	580	580	580	580	580	580	580	580	580	580	580	580
Groundwater	g			737.9	798.4	796	792	798.4	796	792						
Product	g			0	1.6	4.0	8	1.6	4	8	0.375	0.8	1.5	7.5	15	22.5
Solution	g				721.9	732.4	789	738.6	738.3	786.7	785.2	735.8	740.2	721.6	713.1	771.4
Product Concentration	g/L			0	2.0	5.0	10.0	2.0	5.0	10.0	0.5	1.1	2.0	10.3	20.6	28.3
Day				7	7	7	7	7	7	7	7	7	7	7	7	7
pH	SU		6.8	6.6	6.9	6.8	7.1	7.1	7.1	7.1	6.7	6.6	6.6	7.0	8.7	7.9
ORP	mV		215	228	213	219	215	201	169	143	201	185	183	123	5	22
DO	mg/L		3.0	5.9	5.4	5.1	4.9	6.0	5.9	4.6	5.3	5.6	6.3	2.3	2.7	2.1
TSS	mg/L		0													
Bicarbonate Alkalinity as CaCO3	mg/L		180	180	700	1600	4200	930	1400	4100	350	230	230	230	350	230
Hardness as CaCO3	mg/L		240	200	570	710	470	340	470	340	230	230	230	340	460	460
Ferrous Iron	mg/L		0.01	0.9	0.9	1.65	4.4	3.15	3.85	2.15	0.75	0.65	1.5	2.25	1.75	3.00
Sulfide	mg/L		0	0.11	0.13	0.19	<0.02	<0.01	0.01	<0.01	0	<0.02	0.07	0.09	<0.01	<0.01
ELLE Results																
Sulfate	mg/L		40	31	32	35	36	38	41	42	33	35	36	44	44	38
Dissolved Organic Carbon	mg/L		0.71	1.8	2.1	2.7	3.3	2.5	3.9	4.5	3.1	1.6	1.7	1.7	1.9	11
Total Arsenic	mg/L	0.010	<0.00068	0.0019	0.0022	0.0032	0.0061	0.0034	0.0045	0.0064	0.0020	0.0020	0.0012	0.0014	0.00094	0.0018
Dissolved Arsenic	mg/L	0.010	0.014	0.0033	0.058	0.0024	0.072	0.0030	0.066	0.030	0.047	0.023	0.016	0.013	0.0052	0.012
Total Molybdenum	mg/L	0.10	0.20	0.40	0.66	0.65	0.67	0.85	1.0	1.1	0.38	0.34	0.28	0.62	0.85	0.88
Dissolved Molybdenum	mg/L	0.10	0.20	0.39	0.67	0.67	0.69	0.88	1.0	1.2	0.41	0.35	0.28	0.68	0.84	0.86
Total Iron	mg/L		0.029	0.69	0.59	0.57	13	1.7	1.0	1.8	0.71	4.3	1.4	6.4	4.1	1.8
Total Magnesium	mg/L		18	16	44	55	70	25	34	40	15	16	16	25	35	33
Total Manganese	mg/L		0.072	1.1	1.1	0.18	0.62	0.80	0.41	0.16	0.96	1.0	0.83	6.0	5.4	4.5
Total Potassium	mg/L		3.8	6.0	170	1000	2800	9.4	11	14	6.0	7.4	5.8	9.4	10	11
Total Sodium	mg/L		9.6	12	17	19	23	380	1100	16000	11	11	11	310	640	1100

0.010 GA GWPS = Georgia Groundwater
Performance Standard

0.039

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J value. Compound detected above method detection limit but below method calibration limit.

Compound detected in blank

Table 5
AP-1 DGWC-40 Treatability Results

		GA GWPS	IC	Control	2 g/L KHCO ₃	5 g/L KHCO ₃	10 g/L KHCO ₃	2 g/L NaHCO ₃	5 g/L NaHCO ₃	10 g/L NaHCO ₃	0.5 g/L Fe ₂ O ₃	1.0 g/L Fe ₂ O ₃	2.0 g/L Fe ₂ O ₃	10 g/L FeS	20 g/L FeS	30 g/L FeS
Soil	g			580	580	580	580	580	580	580	580	580	580	580	580	580
Groundwater	g			779.5	798.4	796	792	798.4	796	792						
Product	g			0	1.6	4.0	8	1.6	4	8	0.375	0.75	1.5	7.5	15	22.5
Solution	g				713.5	781.1	779.9	719.3	722	740	713.7	729.2	721.4	774	705.3	713.8
Product Concentration	g/L			0	2.0	5.0	10.0	2.0	5.0	10.0	0.5	1.0	2.1	9.6	20.8	30.6
Day				7	7	7	7	7	7	7	7	7	7	7	7	7
pH	SU		5.3	5.5	6.3	6.7	7.0	6.5	6.9	7.2	6.2	6.3	5.5	6.1	6.4	6.6
ORP	mV		240	217	232	224	226	161	153	156	164	245	211	56	21	5
DO	mg/L		4.2	5.6	5.7	5.3	5.1	5.8	5.4	5.2	6.1	6.1	6.6	2.9	3.1	2.7
TSS	mg/L		4.3													
Bicarbonate Alkalinity as CaCO ₃	mg/L		20	20	480	1200	2800	700	2800	4100	40	20	20	40	60	60
Hardness as CaCO ₃	mg/L		20	<20	<20	60	420	200	340	230	<20	20	40	20	<20	<20
Ferrous Iron	mg/L		0.03	0.35	0.05	0.25	0.7	0.85	1.08	2.0	1.15	1.25	<0.05	1.75	6.6	0.90
Sulfide	mg/L		0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.02	<0.01	<0.01	0.18	0.02
ELLE Results																
Sulfate	mg/L		230	200	220	240	250	250	260	250	210	200	200	220	220	230
Dissolved Organic Carbon	mg/L		<0.5	1.4	3.6	1.9	2.4	1.6	3.5	2.3	1.6	1.4	1.4	1.6	1.5	1.7
Total Cobalt	mg/L	0.032	0.040	0.085	0.018	0.011	0.012	0.0073	0.0044	0.0033	0.073	0.070	0.074	0.013	0.0053	0.0046
Dissolved Cobalt	mg/L	0.032	0.039	0.082	0.015	0.0092	0.0087	0.0058	0.0029	0.0022	0.071	0.069	0.073	0.012	0.0061	0.0041
Total Iron	mg/L		<0.020	1.0	2.1	0.83	3.0	1.1	1.5	1.4	3.0	1.2	1.5	3.0	3.3	3.5
Total Magnesium	mg/L		19	18	37	56	73	18	29	44	19	18	18	25	29	31
Total Manganese	mg/L		3.3	4.7	5.4	5.6	4.9	2.5	2.4	2.3	4.4	4.2	4.1	9.6	8.0	6.3
Total Potassium	mg/L		5.8	13	290	1100	2500	12	15	19	13	12	11	13	15	18
Total Sodium	mg/L		19	21	29	27	35	410	980	2200	20	21	19	320	710	1100

0.010 GA GWPS = Georgia Groundwater
Performance Standard

0.039

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J value. Compound detected above method detection limit but below method calibration limit.

Compound detected in blank

Table 6
AP-1 Percent Removal from Initial Characterization for Dissolved Metals

Soil + GW	Metal	GA GWPS mg/L	Control	2 g/L	5 g/L	10 g/L	2 g/L	5 g/L	10 g/L	0.5 g/L	1.0 g/L	2.0 g/L	10 g/L	20 g/L	30 g/L	
				KHCO3	KHCO3	KHCO3	NaHCO3	NaHCO3	NaHCO3	Fe2O3	Fe2O3	Fe2O3	FeS	FeS	FeS	
AP1 DGWC-69	Dis As	0.010	% Rem	88.3	71.2	32.7	9.6	30.8	-5.8	-69.2	87.9	91.3	92.3	85.2	76.9	42.3
	Dis Mo	0.10	% Rem	-598.1	-1201.9	-1466.0	-1654.7	-1579.2	-1730.2	-1711.3	-541.5	-409.4	-258.5	-1579.2	-2352.8	-3296.2
AP1 DGWC-68A	Dis As	0.010	% Rem	76.4	-314.3	82.9	-414.3	78.6	-371.4	-114.3	-235.7	-64.3	-14.3	7.1	62.9	14.3
	Dis Mo	0.10	% Rem	-95.0	-235.0	-235.0	-245.0	-340.0	-235.0	-500.0	-90.0	-75.0	-40.0	-240.0	-320.0	-330.0
AP1 DGWC-40	Dis Co	0.032	% Rem	-110.3	61.5	76.4	77.7	85.1	92.6	94.4	-82.1	-76.9	-87.2	69.2	84.4	89.5

Table 7
Plant McDonough AP-2 and 3/4 Initial Characterization Field and Hach Parameters

Well		GA GWPS	AP-2 and 3/4 DGWC-48	AP-2 and 3/4 DGWC-20
GW pH	SU		4.8	6.3
GW ORP	mV		265	232
GW DO	mg/L		4.1	3.8
GW TSS	mg/L		5.6	3.0
GW Bicarbonate Alkalinity	mg/L		20	20
GW Hardness as CaCO3	mg/L		<20	20
GW Ferrous Iron	mg/L		0.56	0.06
GW Sulfide	mg/L		0	0
Sodium Hydroxide Titrations				
Groundwater	g		100	100
g/L NaHCO3	pH			
0			4.2	5.5
1			7.1	6.9
2			7.5	7.3
5			7.9	7.8
10			7.9	8.0
Potassium Hydroxide Titrations				
Groundwater	g		100	100
g/L KHCO3				
0			4.3	4.5
1			6.6	6.8
2			7.2	7.2
5			7.8	7.7
10			8.3	7.9
ELLE Results				
Sulfate	mg/L		330	560
Dissolved Organic Carbon	mg/L		<0.5	3.4
Total Arsenic	mg/L	0.010	<0.00068	0.022
Dissolved Arsenic	mg/L	0.010	0.035	<0.16
Total Beryllium	mg/L	0.0040	0.0031	0.0082
Dissolved Beryllium	mg/L	0.0040	0.0031	<0.010
Total Cobalt	mg/L	0.032	0.040	1.20
Dissolved Cobalt	mg/L	0.032	0.042	1.0
Total Lithium	mg/L	0.040	<0.011	<0.011
Dissolved Lithium	mg/L	0.040	<0.011	<0.011
Total Selenium	mg/L	0.050	<0.00028	<0.00028
Dissolved Selenium	mg/L	0.050	<0.016	<0.16
Total Iron	mg/L		<0.020	0.039
Total Magnesium	mg/L		19	27
Total Manganese	mg/L		3.3	41
Total Potassium	mg/L		5.8	15
Total Sodium	mg/L		19	22

0.010 GA GWPS = Georgia Groundwater Performance Standard

Table 8
AP-2 and 3/4 DGWC-48 Treatability Results

		GA GWPS	IC	Control	2 g/L KHCO3	5 g/L KHCO3	10 g/L KHCO3	2 g/L NaHCO3	5 g/L NaHCO3	10 g/L NaHCO3	0.5 g/L Fe2O3	1.0 g/L Fe2O3	2.0 g/L Fe2O3	10 g/L FeB	20 g/L FeB	30 g/L FeB
Groundwater	g			1056.4	1052.7	1059.4	1047.1	1058.7	1057.4	1058.9	1056.3	1054.6	1053.4	1047	1042.6	1034.5
Product	g			0	2.1	5.25	10.5	2.1	5.25	10.5	0.525	1.05	2.1	10.5	21	31.5
Product Concentration	g/L			0	2.0	4.9	9.9	2.0	4.9	9.8	0.5	1.0	2.0	9.9	19.7	29.5
Day				7	7	7	7	7	7	7	7	7	7	7	7	7
pH	SU		4.8	5.0	7.2	7.7	8.0	7.4	7.8	7.9	5.1	4.8	5.1	7.0	8.7	10.7
ORP	mV		265	289	251	241	235	186	158	150	224	259	254	219	15	-58
DO	mg/L		4.1	4.4	4.8	4.8	4.9	4.7	4.8	5.5	5.0	4.8	4.7	2.2	2.8	2.9
TSS	mg/L		5.6	2.8	1.9	14.1	5.9	7.2	0	1.5	0	22	11.8	86	6.2	18.4
Bicarbonate Alkalinity as CaCO3	mg/L		20	<20	1000	2700	6800	1300	3200	8000	20	20	20	80	60	140
Hardness as CaCO3	mg/L		<20	20	20	120	232	<20	58	120	20	20	20	40	80	40
Ferrous Iron	mg/L		0.56	0.05	0.05	<0.05	<0.05	<0.05	0.05	0.15	0.25	0.05	<0.05	0.55	1.35	1.95
Sulfide	mg/L		0	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	0.01	0.1
ELLE Results																
Sulfate	mg/L		330	310	330	320	330	330	330	340	330	330	330	330	310	310
Dissolved Organic Carbon	mg/L		<0.5	1.1	2.0	2.8	19	2.1	3.8	6.3	1.5	1.3	1.7	0.56	1.7	2.3
Total Arsenic	mg/L	0.010	<0.00068	<0.00068	<0.00068	<0.00068	0.0024	<0.00068	0.00078	<0.00068	<0.00068	0.0014	0.0031	<0.00068	<0.00068	0.00070
Dissolved Arsenic	mg/L	0.010	0.035	0.13	0.15	0.017	0.042	0.0088	0.047	0.025	0.042	0.030	0.0095	0.0093	0.0079	0.014
Total Beryllium	mg/L	0.0040	0.0031	0.0069	0.0047	0.0054	0.0024	0.0066	0.0037	0.0014	0.0072	0.0066	0.0052	0.0016	0.00089	0.00050
Dissolved Beryllium	mg/L	0.0040	0.0031	0.0077	0.0020	0.0032	0.0017	0.0040	0.0030	0.0012	0.0081	0.0070	0.0059	<0.00012	<0.00012	<0.00012
Total Cobalt	mg/L	0.032	0.040	0.34	0.32	0.31	0.17	0.34	0.30	0.059	0.33	0.34	0.34	0.081	0.053	0.031
Dissolved Cobalt	mg/L	0.032	0.042	0.36	0.31	0.30	0.16	0.33	0.28	0.058	0.35	0.34	0.33	0.0015	0.00041	0.00022
Total Lithium	mg/L	0.040	<0.011													
Dissolved Lithium	mg/L	0.040	<0.011													
Total Selenium	mg/L	0.050	<0.00028													
Dissolved Selenium	mg/L	0.050	<0.016													
Total Iron	mg/L		<0.020	0.19	0.17	0.19	0.10	0.15	0.15	0.027	5.1	33	110	87	95	81
Total Magnesium	mg/L		19	15	15	15	15	15	14	14	15	16	16	13	4.3	1.3
Total Manganese	mg/L		3.3	12	12	10	4.1	12	11	0.38	12	11	14	5.2	2.5	1.8
Total Potassium	mg/L		5.8	14	760	1900	3800	14	13	13	14	14	14	14	14	14
Total Potassium	mg/L		5.8	14	760	1900	3800	14	13	13	14	14	14	14	14	14
Total Sodium	mg/L		19	22	24	27	30	540	1400	2600	22	22	24	450	890	1500

0.010 GA GWPS = Georgia Groundwater Performance Standard

0.039

J value. Compound detected above method detection limit but below method calibration limit.

Table 9
AP-2 and 3/4 DGWC-20 Treatability Results

			IC	Control	2 g/L KHCO3	5 g/L KHCO3	10 g/L KHCO3	2 g/L NaHCO3	5 g/L NaHCO3	10 g/L NaHCO3	0.5 g/L Fe2O3	1.0 g/L Fe2O3	2.0 g/L Fe2O3	10 g/L FeS	20 g/L FeS	30 g/L FeS
Groundwater	g			1064.3	1059.3	1057.4	1058.5	1058	1054.8	1053.5	1068.9	1061.1	1054.7	1051.1	1040.9	1032.3
Product	g			0	2.1	5.25	10.5	2.1	5.25	10.5	0.525	1.05	2.1	10.5	21	31.5
Product Concentration	g/L	GA GWPS		0	2.0	4.9	9.8	2.0	5.0	9.9	0.5	1.0	2.0	9.9	19.8	29.6
Day				7	7	7	7	7	7	7	7	7	7	7	7	7
pH	SU		6.3	3.9	7.1	7.4	7.7	7.0	7.4	7.7	5.1	3.4	2.8	5.3	7.9	8.6
ORP	mV		232	275	215	219	223	189	153	145	210	347	410	204	139	78
DO	mg/L		3.8	5.5	5.6	5.8	6.3	5.4	5.8	5.5	5.4	5.4	5.6	3.3	2.6	3.0
TSS	mg/L		3.0	7.4	2.8	6.3	52	0.8	4.1	14.1	13.2	6.3	21.9	13.6	6.8	14.8
Bicarbonate Alkalinity as CaCO3	mg/L		20	20	1100	2300	5700	1100	3400	6800	20	20	20	80	100	80
Hardness as CaCO3	mg/L		20	<20	<20	350	230	60	350	230	<20	20	20	<20	20	160
Ferrous Iron	mg/L		0.06	0.08	<0.03	<0.03	0.12	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.03	<0.03
Sulfide	mg/L		0	<0.01	<0.01	<0.01	<0.01	0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
ELLE Results																
Sulfate	mg/L		560	530	540	540	540	540	550	540	550	470	480	490	520	580
Dissolved Organic Carbon	mg/L		3.4	1.5	1.8	3.4	6.8	2.3	2.5	2.5	0.99	0.85	1.0	1.2	1.5	1.7
Total Arsenic	mg/L	0.010	0.022	0.019	0.014	0.022	0.025	0.013	0.0015	0.012	0.019	0.021	0.021	0.0057	0.0032	0.0028
Dissolved Arsenic	mg/L	0.010	<0.16	0.044	0.0039	0.0082	0.010	0.0038	0.0054	0.0068	0.025	0.028	0.025	0.0038	0.0023	0.0014
Total Beryllium	mg/L	0.0040	0.0082	0.0071	0.0043	0.013	0.010	0.0045	0.00057	0.0048	0.0084	0.0068	0.0071	0.0019	0.00086	0.00059
Dissolved Beryllium	mg/L	0.0040	<0.010	0.0080	0.00040	0.00059	0.00034	0.00033	0.00023	0.00035	0.0078	0.0080	0.0091	<0.00012	<0.00012	<0.00012
Total Cobalt	mg/L	0.032	1.20	1.0	1.0	0.56	0.60	1.0	0.36	0.32	1.1	1.2	1.2	0.26	0.15	0.12
Dissolved Cobalt	mg/L	0.032	1.0	1.1	0.94	0.49	0.27	0.97	0.36	0.25	1.1	1.0	1.1	0.039	0.0020	0.00045
Total Lithium	mg/L	0.040	<0.011													
Dissolved Lithium	mg/L	0.040	<0.011													
Total Selenium	mg/L	0.050	<0.00028													
Dissolved Selenium	mg/L	0.050	<0.16													
Total Iron	mg/L		0.039	0.048	0.45	0.058	1.4	0.073	0.064	0.15	0.55	15	58	90	85	100
Total Magnesium	mg/L		27	26	25	25	25	24	24	26	25	25	25	23	15	3.3
Total Manganese	mg/L		41	37	39	7.7	17	38	4.2	4.3	40	45	44	31	7.3	4.5
Total Potassium	mg/L		15	15	770	1800	3800	15	15	14	15	15	15	15	15	15
Total Sodium	mg/L		22	22	24	26	29	500	1200	2700	22	22	22	460	950	1500

0.010 GA GWPS = Georgia Groundwater Performance Standard

0.039

J value. Compound detected above method detection limit but below method calibration limit.

Table 10
AP-2 and 3/4 Percent Removal from Initial Characterization for Dissolved Metals

GW	Metal	GA GWPS mg/L		Control	2 g/L	5 g/L	10 g/L	2 g/L	5 g/L	10 g/L	0.5 g/L	1.0 g/L	2.0 g/L	10 g/L	20 g/L	30 g/L
			% Rem		KHCO3	KHCO3	KHCO3	NaHCO3	NaHCO3	NaHCO3	Fe2O3	Fe2O3	Fe2O3	FeS	FeS	FeS
AP234 DGWC- 48	Dis As	0.010	% Rem	-271.4	-328.6	51.4	-20.0	74.9	-34.3	28.6	-20.0	14.3	72.9	73.4	77.4	60.0
	Dis Be	0.0040	% Rem	-148.4	35.5	-3.2	45.2	-29.0	3.2	61.3	-161.3	-125.8	-90.3	>96.2	>96.2	>96.2
	Dis Co	0.032	% Rem	-757.1	-638.1	-614.3	-281.0	-685.7	-566.7	-38.1	-733.3	-709.5	-685.7	96.4	99.0	99.5
AP234 DGWC- 20	Dis As	0.010	% Rem	0.0	91.1	81.4	77.3	91.4	87.7	84.5	43.2	36.4	43.2	91.4	94.8	96.8
	Dis Be	0.0040	% Rem	0.0	95.0	92.6	95.8	95.9	97.1	95.6	2.5	0.0	-13.8	>98.5	>98.5	>98.5
	Dis Co	0.032	% Rem	-10.0	6.0	51.0	73.0	3.0	64.0	75.0	-10.0	0.0	-10.0	96.1	99.8	99.96

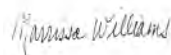
ANALYTICAL REPORT

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Laboratory Job ID: 410-91265-1
Client Project/Site: Golder CCR TS IL

For:
Terra Systems Inc
130 Hickman Road
Suite 1
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Attn: Dr. Michael D Lee



Authorized for release by:
8/16/2022 5:27:50 AM

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Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
 - Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
 - Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
- Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

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

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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Marrison Williams
Project Manager
8/16/2022 5:27:50 AM



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Definitions/Glossary

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.

Metals

Qualifier	Qualifier Description
^2	Calibration Blank (ICB and/or CCB) is outside acceptance limits.
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased
^5-	Linear Range Check (LRC) is outside acceptance limits, low biased.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
cn	Refer to Case Narrative for further detail
E	Result exceeded calibration range.
F1	MS and/or MSD recovery exceeds control limits.
F3	Duplicate RPD exceeds the control limit
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

General Chemistry

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.

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
1C	Result is from the primary column on a dual-column method.
2C	Result is from the confirmation column on a dual-column method.
CFL	Contains Free Liquid
CFU	Colony Forming Unit
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)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
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)

Definitions/Glossary

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Glossary (Continued)

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

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Case Narrative

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Job ID: 410-91265-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

Job Narrative 410-91265-1

Receipt

The samples were received on 7/15/2022 4:04 PM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.0°C

HPLC/IC

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

Metals

Method 6010D: The following sample was diluted due to the nature of the sample matrix: AP234-DGWC-20 GW IC (410-91265-8). Elevated reporting limits (RLs) are provided.

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

General Chemistry

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

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Detection Summary

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Client Sample ID: AP1-DGWC-69 GW IC

Lab Sample ID: 410-91265-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	10		7.5	2.5	mg/L	5		9056	Total/NA
Arsenic	26		2.0	0.68	ug/L	1		6020B	Total
Magnesium	2600		50	16	ug/L	1		6020B	Total Recoverable
Manganese	3.6		2.0	0.95	ug/L	1		6020B	Total Recoverable
Molybdenum	5.5		0.50	0.13	ug/L	1		6020B	Total Recoverable
Potassium	2400		200	65	ug/L	1		6020B	Total Recoverable
Sodium	9700		200	90	ug/L	1		6020B	Total Recoverable
Arsenic	52		2.0	0.68	ug/L	1		6020B	Dissolved
Molybdenum	5.3		0.50	0.13	ug/L	1		6020B	Dissolved
Dissolved Organic Carbon	0.59	J	1.0	0.50	mg/L	1		415.1	Dissolved

Client Sample ID: AP1-DGWC-69 Soil IC

Lab Sample ID: 410-91265-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	3.1		0.40	0.13	mg/Kg	2	✳	6020B	Total/NA
Iron	9600	^2	20	9.2	mg/Kg	2	✳	6020B	Total/NA
Magnesium	3000		10	3.1	mg/Kg	2	✳	6020B	Total/NA
Manganese	250		0.40	0.20	mg/Kg	2	✳	6020B	Total/NA
Molybdenum	0.68	^2	0.20	0.092	mg/Kg	2	✳	6020B	Total/NA
Potassium	3900		40	13	mg/Kg	2	✳	6020B	Total/NA
Sodium	96		50	20	mg/Kg	2	✳	6020B	Total/NA

Client Sample ID: AP1 DGWC-68A GW IC

Lab Sample ID: 410-91265-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	40		7.5	2.5	mg/L	5		9056	Total/NA
Iron	29	J	50	20	ug/L	1		6020B	Total Recoverable
Magnesium	18000		50	16	ug/L	1		6020B	Total Recoverable
Manganese	72		2.0	0.95	ug/L	1		6020B	Total Recoverable
Molybdenum	200		0.50	0.13	ug/L	1		6020B	Total Recoverable
Potassium	3800		200	65	ug/L	1		6020B	Total Recoverable
Sodium	9600		200	90	ug/L	1		6020B	Total Recoverable
Arsenic	14		2.0	0.68	ug/L	1		6020B	Dissolved
Molybdenum	200		0.50	0.13	ug/L	1		6020B	Dissolved
Dissolved Organic Carbon	0.71	J	1.0	0.50	mg/L	1		415.1	Dissolved

Client Sample ID: AP1 DGWC-68A Soil IC

Lab Sample ID: 410-91265-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Arsenic	1.0		0.36	0.12	mg/Kg	2	✳	6020B	Total/NA
Iron	35000		90	42	mg/Kg	10	✳	6020B	Total/NA
Magnesium	11000		9.0	2.8	mg/Kg	2	✳	6020B	Total/NA
Manganese	530		0.36	0.18	mg/Kg	2	✳	6020B	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Detection Summary

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Client Sample ID: AP1 DGWC-68A Soil IC (Continued)

Lab Sample ID: 410-91265-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Molybdenum	7.4		0.18	0.083	mg/Kg	2	✳	6020B	Total/NA
Potassium	12000		36	11	mg/Kg	2	✳	6020B	Total/NA
Sodium	110		45	18	mg/Kg	2	✳	6020B	Total/NA

Client Sample ID: AP1-DGWC-40 GW IC

Lab Sample ID: 410-91265-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	230		75	25	mg/L	50		9056	Total/NA
Cobalt	40		0.50	0.16	ug/L	1		6020B	Total Recoverable
Magnesium	19000		50	16	ug/L	1		6020B	Total Recoverable
Manganese	3300		2.0	0.95	ug/L	1		6020B	Total Recoverable
Potassium	5800		200	65	ug/L	1		6020B	Total Recoverable
Sodium	19000		200	90	ug/L	1		6020B	Total Recoverable
Cobalt	39		0.50	0.16	ug/L	1		6020B	Dissolved

Client Sample ID: AP1-DGWC-40 Soil IC

Lab Sample ID: 410-91265-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	13		0.18	0.053	mg/Kg	2	✳	6020B	Total/NA
Iron	49000		90	42	mg/Kg	10	✳	6020B	Total/NA
Magnesium	9500		9.0	2.8	mg/Kg	2	✳	6020B	Total/NA
Manganese	460		0.36	0.18	mg/Kg	2	✳	6020B	Total/NA
Potassium	13000		36	11	mg/Kg	2	✳	6020B	Total/NA
Sodium	40	J	45	18	mg/Kg	2	✳	6020B	Total/NA

Client Sample ID: AP234-DGWC-48 GW IC

Lab Sample ID: 410-91265-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	330	F1	75	25	mg/L	50		9056	Total/NA
Arsenic	0.035	J	0.052	0.016	mg/L	1		6010D	Dissolved
Beryllium	0.0031	J	0.0052	0.0010	mg/L	1		6010D	Dissolved
Cobalt	0.042	F1	0.0052	0.0015	mg/L	1		6010D	Dissolved
Beryllium	3.1		0.50	0.12	ug/L	1		6020B	Total Recoverable
Cobalt	40		0.50	0.16	ug/L	1		6020B	Total Recoverable
Magnesium	19000		50	16	ug/L	1		6020B	Total Recoverable
Manganese	3300		2.0	0.95	ug/L	1		6020B	Total Recoverable
Potassium	5800		200	65	ug/L	1		6020B	Total Recoverable
Sodium	19000		200	90	ug/L	1		6020B	Total Recoverable

Client Sample ID: AP234-DGWC-20 GW IC

Lab Sample ID: 410-91265-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Sulfate	560		75	25	mg/L	50		9056	Total/NA
Cobalt	1.0	cn	0.052	0.015	mg/L	10		6010D	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

Detection Summary

Client: Terra Systems Inc
 Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Client Sample ID: AP234-DGWC-20 GW IC (Continued)

Lab Sample ID: 410-91265-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil	Fac	D	Method	Prep Type
Arsenic	22		2.0	0.68	ug/L	1			6020B	Total Recoverable
Beryllium	8.2		0.50	0.12	ug/L	1			6020B	Total Recoverable
Cobalt	1200		10	3.1	ug/L	20			6020B	Total Recoverable
Iron	39	J	50	20	ug/L	1			6020B	Total Recoverable
Magnesium	27000		50	16	ug/L	1			6020B	Total Recoverable
Manganese	41000		40	19	ug/L	20			6020B	Total Recoverable
Potassium	15000		200	65	ug/L	1			6020B	Total Recoverable
Sodium	22000		200	90	ug/L	1			6020B	Total Recoverable
Dissolved Organic Carbon	3.4		1.0	0.50	mg/L	1			415.1	Dissolved

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC



Client Sample Results

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Client Sample ID: AP1-DGWC-69 GW IC

Lab Sample ID: 410-91265-1

Date Collected: 07/14/22 10:00

Matrix: Water

Date Received: 07/15/22 16:04

Method: 9056 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	10		7.5	2.5	mg/L			07/28/22 21:09	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	26		2.0	0.68	ug/L		07/20/22 21:47	07/26/22 15:34	1
Iron	<20		50	20	ug/L		07/20/22 21:47	07/26/22 15:34	1
Magnesium	2600		50	16	ug/L		07/20/22 21:47	07/26/22 15:34	1
Manganese	3.6		2.0	0.95	ug/L		07/20/22 21:47	07/26/22 15:34	1
Molybdenum	5.5		0.50	0.13	ug/L		07/20/22 21:47	07/26/22 15:34	1
Potassium	2400		200	65	ug/L		07/20/22 21:47	07/26/22 15:34	1
Sodium	9700		200	90	ug/L		07/20/22 21:47	07/26/22 15:34	1

Method: 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	52		2.0	0.68	ug/L		07/20/22 21:51	07/21/22 22:07	1
Molybdenum	5.3		0.50	0.13	ug/L		07/20/22 21:51	07/21/22 22:07	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	0.59	J	1.0	0.50	mg/L			07/28/22 23:38	1

Client Sample ID: AP1-DGWC-69 Soil IC

Lab Sample ID: 410-91265-2

Date Collected: 07/14/22 10:30

Matrix: Solid

Date Received: 07/15/22 16:04

Percent Solids: 80.3

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	3.1		0.40	0.13	mg/Kg	⊛	07/19/22 03:34	08/02/22 15:13	2
Iron	9600	^2	20	9.2	mg/Kg	⊛	07/19/22 03:34	08/02/22 15:13	2
Magnesium	3000		10	3.1	mg/Kg	⊛	07/19/22 03:34	08/02/22 15:13	2
Manganese	250		0.40	0.20	mg/Kg	⊛	07/19/22 03:34	08/02/22 15:13	2
Molybdenum	0.68	^2	0.20	0.092	mg/Kg	⊛	07/19/22 03:34	08/02/22 15:13	2
Potassium	3900		40	13	mg/Kg	⊛	07/19/22 03:34	08/02/22 15:13	2
Sodium	96		50	20	mg/Kg	⊛	07/19/22 03:34	08/02/22 22:20	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	19.7		1.0	1.0	%			07/18/22 18:09	1

Client Sample ID: AP1 DGWC-68A GW IC

Lab Sample ID: 410-91265-3

Date Collected: 07/14/22 11:00

Matrix: Water

Date Received: 07/15/22 16:04

Method: 9056 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	40		7.5	2.5	mg/L			07/28/22 21:44	5

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.68		2.0	0.68	ug/L		07/20/22 21:47	07/26/22 15:30	1
Iron	29	J	50	20	ug/L		07/20/22 21:47	07/26/22 15:30	1
Magnesium	18000		50	16	ug/L		07/20/22 21:47	07/26/22 15:30	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Client Sample ID: AP1 DGWC-68A GW IC

Lab Sample ID: 410-91265-3

Date Collected: 07/14/22 11:00

Matrix: Water

Date Received: 07/15/22 16:04

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	72		2.0	0.95	ug/L		07/20/22 21:47	07/26/22 15:30	1
Molybdenum	200		0.50	0.13	ug/L		07/20/22 21:47	07/26/22 15:30	1
Potassium	3800		200	65	ug/L		07/20/22 21:47	07/26/22 15:30	1
Sodium	9600		200	90	ug/L		07/20/22 21:47	07/26/22 15:30	1

Method: 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	14		2.0	0.68	ug/L		07/20/22 21:51	07/21/22 22:19	1
Molybdenum	200		0.50	0.13	ug/L		07/20/22 21:51	07/21/22 22:19	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	0.71	J	1.0	0.50	mg/L			07/28/22 23:58	1

Client Sample ID: AP1 DGWC-68A Soil IC

Lab Sample ID: 410-91265-4

Date Collected: 07/14/22 11:30

Matrix: Solid

Date Received: 07/15/22 16:04

Percent Solids: 87.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	1.0		0.36	0.12	mg/Kg	✱	07/19/22 03:34	08/02/22 15:31	2
Iron	35000		90	42	mg/Kg	✱	07/19/22 03:34	08/02/22 15:33	10
Magnesium	11000		9.0	2.8	mg/Kg	✱	07/19/22 03:34	08/02/22 15:31	2
Manganese	530		0.36	0.18	mg/Kg	✱	07/19/22 03:34	08/02/22 15:31	2
Molybdenum	7.4		0.18	0.083	mg/Kg	✱	07/19/22 03:34	08/02/22 15:31	2
Potassium	12000		36	11	mg/Kg	✱	07/19/22 03:34	08/02/22 15:31	2
Sodium	110		45	18	mg/Kg	✱	07/19/22 03:34	08/02/22 15:31	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	12.9		1.0	1.0	%			07/18/22 18:09	1

Client Sample ID: AP1-DGWC-40 GW IC

Lab Sample ID: 410-91265-5

Date Collected: 07/14/22 13:00

Matrix: Water

Date Received: 07/15/22 16:04

Method: 9056 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	230		75	25	mg/L			07/28/22 22:09	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	40		0.50	0.16	ug/L		07/20/22 21:47	07/26/22 15:32	1
Iron	<20		50	20	ug/L		07/20/22 21:47	07/26/22 15:32	1
Magnesium	19000		50	16	ug/L		07/20/22 21:47	07/26/22 15:32	1
Manganese	3300		2.0	0.95	ug/L		07/20/22 21:47	07/26/22 15:32	1
Potassium	5800		200	65	ug/L		07/20/22 21:47	07/26/22 15:32	1
Sodium	19000		200	90	ug/L		07/20/22 21:47	07/26/22 15:32	1

Method: 6020B - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	39		0.50	0.16	ug/L		07/29/22 05:25	08/01/22 09:14	1

Eurofins Lancaster Laboratories Environment Testing, LLC

Client Sample Results

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Client Sample ID: AP1-DGWC-40 GW IC

Lab Sample ID: 410-91265-5

Date Collected: 07/14/22 13:00

Matrix: Water

Date Received: 07/15/22 16:04

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.50		1.0	0.50	mg/L			07/29/22 00:17	1

Client Sample ID: AP1-DGWC-40 Soil IC

Lab Sample ID: 410-91265-6

Date Collected: 07/14/22 13:30

Matrix: Solid

Date Received: 07/15/22 16:04

Percent Solids: 85.1

Method: 6020B - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	13		0.18	0.053	mg/Kg	⊛	07/19/22 03:34	08/02/22 15:35	2
Iron	49000		90	42	mg/Kg	⊛	07/19/22 03:34	08/02/22 15:37	10
Magnesium	9500		9.0	2.8	mg/Kg	⊛	07/19/22 03:34	08/02/22 15:35	2
Manganese	460		0.36	0.18	mg/Kg	⊛	07/19/22 03:34	08/02/22 15:35	2
Potassium	13000		36	11	mg/Kg	⊛	07/19/22 03:34	08/02/22 15:35	2
Sodium	40	J	45	18	mg/Kg	⊛	07/19/22 03:34	08/02/22 15:35	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Percent Moisture	14.9		1.0	1.0	%			07/18/22 18:09	1

Client Sample ID: AP234-DGWC-48 GW IC

Lab Sample ID: 410-91265-7

Date Collected: 07/14/22 14:00

Matrix: Water

Date Received: 07/15/22 16:04

Method: 9056 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	330	F1	75	25	mg/L			08/10/22 12:40	50

Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.011		0.050	0.011	mg/L		07/20/22 21:47	08/02/22 15:03	1

Method: 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.035	J	0.052	0.016	mg/L		07/21/22 06:42	07/27/22 11:53	1
Beryllium	0.0031	J	0.0052	0.0010	mg/L		07/21/22 06:42	07/27/22 11:53	1
Cobalt	0.042	F1	0.0052	0.0015	mg/L		07/21/22 06:42	08/15/22 16:52	1
Lithium	<0.011	F1	0.052	0.011	mg/L		07/21/22 06:42	07/27/22 11:53	1
Selenium	<0.016		0.052	0.016	mg/L		07/21/22 06:42	07/27/22 11:53	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.68		2.0	0.68	ug/L		07/20/22 21:47	07/26/22 15:10	1
Beryllium	3.1		0.50	0.12	ug/L		07/20/22 21:47	07/26/22 15:10	1
Cobalt	40		0.50	0.16	ug/L		07/20/22 21:47	07/26/22 15:10	1
Iron	<20		50	20	ug/L		07/20/22 21:47	07/26/22 15:10	1
Magnesium	19000		50	16	ug/L		07/20/22 21:47	07/26/22 15:10	1
Manganese	3300		2.0	0.95	ug/L		07/20/22 21:47	07/26/22 15:10	1
Potassium	5800		200	65	ug/L		07/20/22 21:47	07/26/22 15:10	1
Selenium	<0.28		1.0	0.28	ug/L		07/20/22 21:47	07/26/22 15:10	1
Sodium	19000		200	90	ug/L		07/20/22 21:47	07/26/22 15:10	1

Client Sample Results

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Client Sample ID: AP234-DGWC-48 GW IC

Lab Sample ID: 410-91265-7

Date Collected: 07/14/22 14:00

Matrix: Water

Date Received: 07/15/22 16:04

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.50		1.0	0.50	mg/L			07/29/22 01:18	1

Client Sample ID: AP234-DGWC-20 GW IC

Lab Sample ID: 410-91265-8

Date Collected: 07/14/22 15:00

Matrix: Water

Date Received: 07/15/22 16:04

Method: 9056 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	560		75	25	mg/L			07/29/22 11:28	50

Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.11		0.50	0.11	mg/L		07/20/22 21:51	08/02/22 13:09	10

Method: 6010D - Metals (ICP) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.16	cn	0.52	0.16	mg/L		07/20/22 21:08	08/02/22 13:47	10
Beryllium	<0.010	cn	0.052	0.010	mg/L		07/20/22 21:08	08/02/22 13:47	10
Cobalt	1.0	cn	0.052	0.015	mg/L		07/20/22 21:08	08/02/22 13:47	10
Lithium	<0.11	cn	0.52	0.11	mg/L		07/20/22 21:08	08/02/22 13:47	10
Selenium	<0.16	cn	0.52	0.16	mg/L		07/20/22 21:08	08/02/22 13:47	10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	22		2.0	0.68	ug/L		07/20/22 21:51	07/21/22 22:15	1
Beryllium	8.2		0.50	0.12	ug/L		07/20/22 21:51	07/21/22 22:15	1
Cobalt	1200		10	3.1	ug/L		07/20/22 21:51	07/29/22 11:08	20
Iron	39	J	50	20	ug/L		07/20/22 21:51	07/21/22 22:15	1
Magnesium	27000		50	16	ug/L		07/20/22 21:51	07/21/22 22:15	1
Manganese	41000		40	19	ug/L		07/20/22 21:51	07/29/22 08:54	20
Potassium	15000		200	65	ug/L		07/20/22 21:51	07/21/22 22:15	1
Selenium	<0.28		1.0	0.28	ug/L		07/20/22 21:51	07/21/22 22:15	1
Sodium	22000		200	90	ug/L		07/20/22 21:51	07/21/22 22:15	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	3.4		1.0	0.50	mg/L			08/03/22 08:40	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Method: 9056 - Anions, Ion Chromatography

Lab Sample ID: MB 410-280663/5
Matrix: Water
Analysis Batch: 280663

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<0.50		1.5	0.50	mg/L			07/28/22 20:44	1

Lab Sample ID: LCS 410-280663/3
Matrix: Water
Analysis Batch: 280663

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	7.51	7.99		mg/L		106	90 - 110

Lab Sample ID: LCSD 410-280663/4
Matrix: Water
Analysis Batch: 280663

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	7.51	8.00		mg/L		107	90 - 110	0	20

Lab Sample ID: 410-91265-1 DU
Matrix: Water
Analysis Batch: 280663

Client Sample ID: AP1-DGWC-69 GW IC
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	10		9.94		mg/L		0.5	15

Lab Sample ID: MB 410-280699/5
Matrix: Water
Analysis Batch: 280699

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<0.50		1.5	0.50	mg/L			07/29/22 05:27	1

Lab Sample ID: LCS 410-280699/3
Matrix: Water
Analysis Batch: 280699

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	7.51	8.07		mg/L		107	90 - 110

Lab Sample ID: LCSD 410-280699/4
Matrix: Water
Analysis Batch: 280699

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	7.51	8.08		mg/L		108	90 - 110	0	20

Lab Sample ID: MB 410-284714/5
Matrix: Water
Analysis Batch: 284714

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	<0.50		1.5	0.50	mg/L			08/10/22 09:31	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Method: 9056 - Anions, Ion Chromatography

Lab Sample ID: LCS 410-284714/3
Matrix: Water
Analysis Batch: 284714

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	7.51	7.64		mg/L		102	90 - 110

Lab Sample ID: LCSD 410-284714/4
Matrix: Water
Analysis Batch: 284714

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Sulfate	7.51	7.59		mg/L		101	90 - 110	1	20

Lab Sample ID: 410-91265-7 MS
Matrix: Water
Analysis Batch: 284714

Client Sample ID: AP234-DGWC-48 GW IC
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Sulfate	330	F1	250	605	F1	mg/L		111	90 - 110

Lab Sample ID: 410-91265-7 DU
Matrix: Water
Analysis Batch: 284714

Client Sample ID: AP234-DGWC-48 GW IC
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Sulfate	330	F1	328		mg/L		0.5	15

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 410-277782/1-A
Matrix: Water
Analysis Batch: 281976

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 277782

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.016		0.052	0.016	mg/L		07/20/22 21:08	08/02/22 13:28	1
Beryllium	<0.0010		0.0052	0.0010	mg/L		07/20/22 21:08	08/02/22 13:28	1
Cobalt	<0.0015		0.0052	0.0015	mg/L		07/20/22 21:08	08/02/22 13:28	1
Lithium	<0.011		0.052	0.011	mg/L		07/20/22 21:08	08/02/22 13:28	1
Selenium	<0.016		0.052	0.016	mg/L		07/20/22 21:08	08/02/22 13:28	1

Lab Sample ID: LCS 410-277782/2-A
Matrix: Water
Analysis Batch: 281976

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 277782

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.500	0.559		mg/L		112	80 - 120
Beryllium	0.0500	0.0538		mg/L		108	80 - 120
Cobalt	0.500	0.534		mg/L		107	80 - 120
Lithium	0.500	0.509		mg/L		102	80 - 120
Selenium	0.100	0.106		mg/L		106	80 - 120

QC Sample Results

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: MB 410-277837/1-A
Matrix: Water
Analysis Batch: 280125

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 277837

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.016		0.052	0.016	mg/L		07/21/22 06:42	07/27/22 11:37	1
Beryllium	<0.0010		0.0052	0.0010	mg/L		07/21/22 06:42	07/27/22 11:37	1
Cobalt	<0.0015	^3+	0.0052	0.0015	mg/L		07/21/22 06:42	07/27/22 11:37	1
Lithium	<0.011		0.052	0.011	mg/L		07/21/22 06:42	07/27/22 11:37	1
Selenium	<0.016		0.052	0.016	mg/L		07/21/22 06:42	07/27/22 11:37	1

Lab Sample ID: MB 410-277837/1-A
Matrix: Water
Analysis Batch: 286260

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 277837

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.016		0.052	0.016	mg/L		07/21/22 06:42	08/15/22 16:46	1
Beryllium	<0.0010	^5-	0.0052	0.0010	mg/L		07/21/22 06:42	08/15/22 16:46	1
Cobalt	<0.0015		0.0052	0.0015	mg/L		07/21/22 06:42	08/15/22 16:46	1
Lithium	<0.011		0.052	0.011	mg/L		07/21/22 06:42	08/15/22 16:46	1
Selenium	<0.016		0.052	0.016	mg/L		07/21/22 06:42	08/15/22 16:46	1

Lab Sample ID: LCS 410-277837/2-A
Matrix: Water
Analysis Batch: 280125

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 277837

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Beryllium	0.0500	0.0516		mg/L		103	80 - 120
Cobalt	0.500	0.537	^3+	mg/L		107	80 - 120
Lithium	0.500	0.530		mg/L		106	80 - 120
Selenium	0.100	0.111		mg/L		111	80 - 120

Lab Sample ID: LCS 410-277837/2-A
Matrix: Water
Analysis Batch: 286260

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 277837

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Beryllium	0.0500	0.0515	^5-	mg/L		103	80 - 120
Cobalt	0.500	0.542		mg/L		108	80 - 120
Lithium	0.500	0.530		mg/L		106	80 - 120
Selenium	0.100	0.110		mg/L		110	80 - 120

Lab Sample ID: MB 410-27787/1-A
Matrix: Water
Analysis Batch: 282099

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 27787

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Lithium	<0.011		0.050	0.011	mg/L		07/20/22 21:47	08/02/22 14:56	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: LCS 410-277787/2-A
Matrix: Water
Analysis Batch: 282099

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 277787

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	0.500	0.532		mg/L		106	80 - 120

Lab Sample ID: 410-91265-7 MS
Matrix: Water
Analysis Batch: 282099

Client Sample ID: AP234-DGWC-48 GW IC
Prep Type: Total Recoverable
Prep Batch: 277787

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	<0.011		0.500	0.524		mg/L		105	75 - 125

Lab Sample ID: 410-91265-7 MSD
Matrix: Water
Analysis Batch: 282099

Client Sample ID: AP234-DGWC-48 GW IC
Prep Type: Total Recoverable
Prep Batch: 277787

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Lithium	<0.011		0.500	0.512		mg/L		102	75 - 125	2	20

Lab Sample ID: 410-91265-7 DU
Matrix: Water
Analysis Batch: 282099

Client Sample ID: AP234-DGWC-48 GW IC
Prep Type: Total Recoverable
Prep Batch: 277787

Analyte	Sample Result	Sample Qualifier	Spike Added	DU Result	DU Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Lithium	<0.011		0.500	1.02	E	mg/L				NC	20

Lab Sample ID: MB 410-277788/1-A
Matrix: Water
Analysis Batch: 281678

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 277788

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Lithium	<0.011		0.050	0.011	mg/L		07/20/22 21:51	08/01/22 19:31	1

Lab Sample ID: LCS 410-277788/2-A
Matrix: Water
Analysis Batch: 281678

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 277788

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Lithium	0.500	0.534		mg/L		107	80 - 120

Lab Sample ID: 410-91265-7 MS
Matrix: Water
Analysis Batch: 280125

Client Sample ID: AP234-DGWC-48 GW IC
Prep Type: Dissolved
Prep Batch: 277837

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	0.035	J	0.500	0.564		mg/L		106	75 - 125
Beryllium	0.0031	J	0.0500	0.0601		mg/L		114	75 - 125
Lithium	<0.011	F1	0.500	0.630	F1	mg/L		126	75 - 125
Selenium	<0.016		0.100	0.113		mg/L		113	75 - 125

QC Sample Results

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: 410-91265-7 MS
Matrix: Water
Analysis Batch: 286260

Client Sample ID: AP234-DGWC-48 GW IC
Prep Type: Dissolved
Prep Batch: 277837

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier					
Cobalt	0.042	F1	0.500	0.878	F1	mg/L		167		75 - 125

Lab Sample ID: 410-91265-7 MSD
Matrix: Water
Analysis Batch: 280125

Client Sample ID: AP234-DGWC-48 GW IC
Prep Type: Dissolved
Prep Batch: 277837

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Arsenic	0.035	J	0.500	0.555		mg/L		104		75 - 125	2	20
Beryllium	0.0031	J	0.0500	0.0578		mg/L		109		75 - 125	4	20
Lithium	<0.011	F1	0.500	0.608		mg/L		122		75 - 125	3	20
Selenium	<0.016		0.100	0.112		mg/L		112		75 - 125	0	20

Lab Sample ID: 410-91265-7 MSD
Matrix: Water
Analysis Batch: 286260

Client Sample ID: AP234-DGWC-48 GW IC
Prep Type: Dissolved
Prep Batch: 277837

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
Cobalt	0.042	F1	0.500	0.875	F1	mg/L		167		75 - 125	0	20

Lab Sample ID: 410-91265-7 DU
Matrix: Water
Analysis Batch: 280125

Client Sample ID: AP234-DGWC-48 GW IC
Prep Type: Dissolved
Prep Batch: 277837

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier		Qualifier				
Arsenic	0.035	J	0.0383	J	mg/L		8	20
Beryllium	0.0031	J	0.00847	F3	mg/L		92	20
Lithium	<0.011	F1	0.115		mg/L		NC	20
Selenium	<0.016		<0.016		mg/L		NC	20

Lab Sample ID: 410-91265-7 DU
Matrix: Water
Analysis Batch: 286260

Client Sample ID: AP234-DGWC-48 GW IC
Prep Type: Dissolved
Prep Batch: 277837

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Cobalt	0.042	F1	0.363	F3	mg/L		159	20

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-276852/1-A ^2
Matrix: Solid
Analysis Batch: 282060

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 276852

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.13		0.40	0.13	mg/Kg		07/19/22 03:34	08/02/22 14:49	2
Cobalt	<0.058		0.20	0.058	mg/Kg		07/19/22 03:34	08/02/22 14:49	2
Iron	<9.2		20	9.2	mg/Kg		07/19/22 03:34	08/02/22 14:49	2
Magnesium	<3.1		10	3.1	mg/Kg		07/19/22 03:34	08/02/22 14:49	2
Molybdenum	<0.092		0.20	0.092	mg/Kg		07/19/22 03:34	08/02/22 14:49	2
Manganese	<0.20		0.40	0.20	mg/Kg		07/19/22 03:34	08/02/22 14:49	2
Potassium	<13		40	13	mg/Kg		07/19/22 03:34	08/02/22 14:49	2

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QC Sample Results

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

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

Lab Sample ID: MB 410-276852/1-A ^2
Matrix: Solid
Analysis Batch: 282060

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 276852

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	<20		50	20	mg/Kg		07/19/22 03:34	08/02/22 14:49	2

Lab Sample ID: LCS 410-276852/2-A ^2
Matrix: Solid
Analysis Batch: 282060

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 276852

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	50.0	52.5		mg/Kg		105	80 - 120
Cobalt	50.0	51.7		mg/Kg		103	80 - 120
Iron	500	529		mg/Kg		106	80 - 120
Magnesium	500	515		mg/Kg		103	80 - 120
Molybdenum	5.00	5.23		mg/Kg		105	80 - 120
Manganese	50.0	53.1		mg/Kg		106	80 - 120
Potassium	500	518		mg/Kg		104	80 - 120
Sodium	500	491		mg/Kg		98	80 - 120

Lab Sample ID: MB 410-277787/1-A
Matrix: Water
Analysis Batch: 279761

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 277787

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	<0.68		2.0	0.68	ug/L		07/20/22 21:47	07/26/22 15:02	1
Beryllium	<0.12		0.50	0.12	ug/L		07/20/22 21:47	07/26/22 15:02	1
Cobalt	<0.16		0.50	0.16	ug/L		07/20/22 21:47	07/26/22 15:02	1
Iron	<20		50	20	ug/L		07/20/22 21:47	07/26/22 15:02	1
Magnesium	<16		50	16	ug/L		07/20/22 21:47	07/26/22 15:02	1
Molybdenum	<0.13		0.50	0.13	ug/L		07/20/22 21:47	07/26/22 15:02	1
Manganese	<0.95		2.0	0.95	ug/L		07/20/22 21:47	07/26/22 15:02	1
Potassium	<65		200	65	ug/L		07/20/22 21:47	07/26/22 15:02	1
Selenium	<0.28		1.0	0.28	ug/L		07/20/22 21:47	07/26/22 15:02	1
Sodium	<90		200	90	ug/L		07/20/22 21:47	07/26/22 15:02	1

Lab Sample ID: LCS 410-277787/2-A
Matrix: Water
Analysis Batch: 279761

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 277787

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Arsenic	500	492		ug/L		98	85 - 120
Beryllium	50.0	47.5		ug/L		95	90 - 112
Cobalt	500	504		ug/L		101	90 - 113
Iron	5000	5020		ug/L		100	88 - 119
Magnesium	5000	4990		ug/L		100	90 - 112
Molybdenum	50.0	52.4		ug/L		105	85 - 115
Manganese	500	496		ug/L		99	89 - 120
Potassium	5000	4980		ug/L		100	90 - 112
Selenium	100	103		ug/L		103	80 - 120
Sodium	5000	5040		ug/L		101	89 - 112

QC Sample Results

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

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

Lab Sample ID: 410-91265-7 MS
Matrix: Water
Analysis Batch: 279761

Client Sample ID: AP234-DGWC-48 GW IC
Prep Type: Total Recoverable
Prep Batch: 277787

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec	
	Result	Qualifier	Added	Result	Qualifier				Limits	
Arsenic	<0.68		500	496		ug/L		99	75 - 125	
Beryllium	3.1		50.0	49.6		ug/L		93	75 - 125	
Cobalt	40		500	541		ug/L		100	80 - 125	
Iron	<20		5000	4970		ug/L		99	75 - 125	
Magnesium	19000		5000	23500		ug/L		93	75 - 125	
Molybdenum	<0.13		50.0	52.4		ug/L		105	81 - 125	
Manganese	3300		500	3740	4	ug/L		90	75 - 125	
Potassium	5800		5000	10600		ug/L		96	75 - 125	
Selenium	<0.28		100	101		ug/L		101	75 - 125	
Sodium	19000		5000	23900		ug/L		94	75 - 125	

Lab Sample ID: 410-91265-7 MSD
Matrix: Water
Analysis Batch: 279761

Client Sample ID: AP234-DGWC-48 GW IC
Prep Type: Total Recoverable
Prep Batch: 277787

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec		RPD	
	Result	Qualifier	Added	Result	Qualifier				Limits	RPD	Limit	
Arsenic	<0.68		500	488		ug/L		98	75 - 125	2	20	
Beryllium	3.1		50.0	48.6		ug/L		91	75 - 125	2	20	
Cobalt	40		500	522		ug/L		96	80 - 125	4	20	
Iron	<20		5000	4810		ug/L		96	75 - 125	3	20	
Magnesium	19000		5000	22800		ug/L		79	75 - 125	3	20	
Molybdenum	<0.13		50.0	51.3		ug/L		103	81 - 125	2	20	
Manganese	3300		500	3620	4	ug/L		67	75 - 125	3	20	
Potassium	5800		5000	10200		ug/L		90	75 - 125	3	20	
Selenium	<0.28		100	100		ug/L		100	75 - 125	1	20	
Sodium	19000		5000	23400		ug/L		83	75 - 125	2	20	

Lab Sample ID: 410-91265-7 DU
Matrix: Water
Analysis Batch: 279761

Client Sample ID: AP234-DGWC-48 GW IC
Prep Type: Total Recoverable
Prep Batch: 277787

Analyte	Sample	Sample	DU		Unit	D	RPD	RPD	
	Result	Qualifier	Result	Qualifier				Limit	
Arsenic	<0.68		<0.68		ug/L		NC	20	
Beryllium	3.1		3.09		ug/L		1	20	
Cobalt	40		39.2		ug/L		2	20	
Iron	<20		<20		ug/L		NC	20	
Magnesium	19000		18600		ug/L		1	20	
Molybdenum	<0.13		<0.13		ug/L		NC	20	
Manganese	3300		3260		ug/L		1	20	
Potassium	5800		5670		ug/L		1	20	
Selenium	<0.28		<0.28		ug/L		NC	20	
Sodium	19000		18700		ug/L		3	20	

Lab Sample ID: MB 410-277788/1-A
Matrix: Water
Analysis Batch: 278367

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 277788

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	<0.68		2.0	0.68	ug/L		07/20/22 21:51	07/21/22 21:47	1

QC Sample Results

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

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

Lab Sample ID: MB 410-277788/1-A
Matrix: Water
Analysis Batch: 278367

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 277788

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Beryllium	<0.12		0.50	0.12	ug/L		07/20/22 21:51	07/21/22 21:47	1
Cobalt	<0.16		0.50	0.16	ug/L		07/20/22 21:51	07/21/22 21:47	1
Iron	<20		50	20	ug/L		07/20/22 21:51	07/21/22 21:47	1
Magnesium	<16		50	16	ug/L		07/20/22 21:51	07/21/22 21:47	1
Molybdenum	<0.13		0.50	0.13	ug/L		07/20/22 21:51	07/21/22 21:47	1
Manganese	<0.95		2.0	0.95	ug/L		07/20/22 21:51	07/21/22 21:47	1
Potassium	<65		200	65	ug/L		07/20/22 21:51	07/21/22 21:47	1
Selenium	<0.28		1.0	0.28	ug/L		07/20/22 21:51	07/21/22 21:47	1
Sodium	<90		200	90	ug/L		07/20/22 21:51	07/21/22 21:47	1

Lab Sample ID: LCS 410-277788/2-A
Matrix: Water
Analysis Batch: 278367

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 277788

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							%Rec	Limits
Arsenic	500	516		ug/L		103	85 - 120	
Beryllium	50.0	47.5		ug/L		95	90 - 112	
Cobalt	500	497		ug/L		99	90 - 113	
Iron	5000	5090		ug/L		102	88 - 119	
Magnesium	5000	5080		ug/L		102	90 - 112	
Molybdenum	50.0	51.8		ug/L		104	85 - 115	
Manganese	500	509		ug/L		102	89 - 120	
Potassium	5000	4990		ug/L		100	90 - 112	
Selenium	100	102		ug/L		102	80 - 120	
Sodium	5000	4880		ug/L		98	89 - 112	

Lab Sample ID: MB 410-280759/1-A
Matrix: Water
Analysis Batch: 281496

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 280759

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cobalt	<0.16		0.50	0.16	ug/L		07/29/22 05:25	08/01/22 08:07	1

Lab Sample ID: LCS 410-280759/2-A
Matrix: Water
Analysis Batch: 281496

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 280759

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec	
							%Rec	Limits
Cobalt	500	487		ug/L		97	90 - 113	

Method: 415.1 - DOC

Lab Sample ID: MB 410-280925/36
Matrix: Water
Analysis Batch: 280925

Client Sample ID: Method Blank
Prep Type: Dissolved

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Dissolved Organic Carbon	<0.50		1.0	0.50	mg/L			07/29/22 03:40	1

QC Sample Results

Client: Terra Systems Inc
 Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Method: 415.1 - DOC (Continued)

Lab Sample ID: LCS 410-280925/35

Matrix: Water

Analysis Batch: 280925

Client Sample ID: Lab Control Sample

Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	25.0	26.8		mg/L		107	86 - 114

Lab Sample ID: MB 410-282445/6

Matrix: Water

Analysis Batch: 282445

Client Sample ID: Method Blank

Prep Type: Dissolved

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dissolved Organic Carbon	<0.50		1.0	0.50	mg/L			08/03/22 07:27	1

Lab Sample ID: LCS 410-282445/5

Matrix: Water

Analysis Batch: 282445

Client Sample ID: Lab Control Sample

Prep Type: Dissolved

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Dissolved Organic Carbon	25.0	25.0		mg/L		100	86 - 114

QC Association Summary

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

HPLC/IC

Analysis Batch: 280663

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-1	AP1-DGWC-69 GW IC	Total/NA	Water	9056	
410-91265-3	AP1 DGWC-68A GW IC	Total/NA	Water	9056	
410-91265-5	AP1-DGWC-40 GW IC	Total/NA	Water	9056	
MB 410-280663/5	Method Blank	Total/NA	Water	9056	
LCS 410-280663/3	Lab Control Sample	Total/NA	Water	9056	
LCSD 410-280663/4	Lab Control Sample Dup	Total/NA	Water	9056	
410-91265-1 DU	AP1-DGWC-69 GW IC	Total/NA	Water	9056	

Analysis Batch: 280699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-8	AP234-DGWC-20 GW IC	Total/NA	Water	9056	
MB 410-280699/5	Method Blank	Total/NA	Water	9056	
LCS 410-280699/3	Lab Control Sample	Total/NA	Water	9056	
LCSD 410-280699/4	Lab Control Sample Dup	Total/NA	Water	9056	

Analysis Batch: 284714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-7	AP234-DGWC-48 GW IC	Total/NA	Water	9056	
MB 410-284714/5	Method Blank	Total/NA	Water	9056	
LCS 410-284714/3	Lab Control Sample	Total/NA	Water	9056	
LCSD 410-284714/4	Lab Control Sample Dup	Total/NA	Water	9056	
410-91265-7 MS	AP234-DGWC-48 GW IC	Total/NA	Water	9056	
410-91265-7 DU	AP234-DGWC-48 GW IC	Total/NA	Water	9056	

Metals

Prep Batch: 276852

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-2	AP1-DGWC-69 Soil IC	Total/NA	Solid	3050B	
410-91265-4	AP1 DGWC-68A Soil IC	Total/NA	Solid	3050B	
410-91265-6	AP1-DGWC-40 Soil IC	Total/NA	Solid	3050B	
MB 410-276852/1-A ^2	Method Blank	Total/NA	Solid	3050B	
LCS 410-276852/2-A ^2	Lab Control Sample	Total/NA	Solid	3050B	

Prep Batch: 277782

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-8	AP234-DGWC-20 GW IC	Dissolved	Water	Non-Digest Prep	
MB 410-277782/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-277782/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	

Prep Batch: 277787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-1	AP1-DGWC-69 GW IC	Total Recoverable	Water	3005A	
410-91265-3	AP1 DGWC-68A GW IC	Total Recoverable	Water	3005A	
410-91265-5	AP1-DGWC-40 GW IC	Total Recoverable	Water	3005A	
410-91265-7	AP234-DGWC-48 GW IC	Total Recoverable	Water	3005A	
MB 410-277787/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-277787/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
410-91265-7 MS	AP234-DGWC-48 GW IC	Total Recoverable	Water	3005A	
410-91265-7 MSD	AP234-DGWC-48 GW IC	Total Recoverable	Water	3005A	
410-91265-7 DU	AP234-DGWC-48 GW IC	Total Recoverable	Water	3005A	

QC Association Summary

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Metals

Prep Batch: 277788

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-1	AP1-DGWC-69 GW IC	Dissolved	Water	3005A	
410-91265-3	AP1 DGWC-68A GW IC	Dissolved	Water	3005A	
410-91265-8	AP234-DGWC-20 GW IC	Total Recoverable	Water	3005A	
MB 410-277788/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-277788/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Prep Batch: 277837

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-7	AP234-DGWC-48 GW IC	Dissolved	Water	Non-Digest Prep	
MB 410-277837/1-A	Method Blank	Total/NA	Water	Non-Digest Prep	
LCS 410-277837/2-A	Lab Control Sample	Total/NA	Water	Non-Digest Prep	
410-91265-7 MS	AP234-DGWC-48 GW IC	Dissolved	Water	Non-Digest Prep	
410-91265-7 MSD	AP234-DGWC-48 GW IC	Dissolved	Water	Non-Digest Prep	
410-91265-7 DU	AP234-DGWC-48 GW IC	Dissolved	Water	Non-Digest Prep	

Analysis Batch: 278367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-1	AP1-DGWC-69 GW IC	Dissolved	Water	6020B	277788
410-91265-3	AP1 DGWC-68A GW IC	Dissolved	Water	6020B	277788
410-91265-8	AP234-DGWC-20 GW IC	Total Recoverable	Water	6020B	277788
MB 410-277788/1-A	Method Blank	Total Recoverable	Water	6020B	277788
LCS 410-277788/2-A	Lab Control Sample	Total Recoverable	Water	6020B	277788

Analysis Batch: 279761

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-1	AP1-DGWC-69 GW IC	Total Recoverable	Water	6020B	277787
410-91265-3	AP1 DGWC-68A GW IC	Total Recoverable	Water	6020B	277787
410-91265-5	AP1-DGWC-40 GW IC	Total Recoverable	Water	6020B	277787
410-91265-7	AP234-DGWC-48 GW IC	Total Recoverable	Water	6020B	277787
MB 410-277787/1-A	Method Blank	Total Recoverable	Water	6020B	277787
LCS 410-277787/2-A	Lab Control Sample	Total Recoverable	Water	6020B	277787
410-91265-7 MS	AP234-DGWC-48 GW IC	Total Recoverable	Water	6020B	277787
410-91265-7 MSD	AP234-DGWC-48 GW IC	Total Recoverable	Water	6020B	277787
410-91265-7 DU	AP234-DGWC-48 GW IC	Total Recoverable	Water	6020B	277787

Analysis Batch: 280125

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-7	AP234-DGWC-48 GW IC	Dissolved	Water	6010D	277837
MB 410-277837/1-A	Method Blank	Total/NA	Water	6010D	277837
LCS 410-277837/2-A	Lab Control Sample	Total/NA	Water	6010D	277837
410-91265-7 MS	AP234-DGWC-48 GW IC	Dissolved	Water	6010D	277837
410-91265-7 MSD	AP234-DGWC-48 GW IC	Dissolved	Water	6010D	277837
410-91265-7 DU	AP234-DGWC-48 GW IC	Dissolved	Water	6010D	277837

Prep Batch: 280759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-5	AP1-DGWC-40 GW IC	Dissolved	Water	3005A	
MB 410-280759/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-280759/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

QC Association Summary

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Metals

Analysis Batch: 280973

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-8	AP234-DGWC-20 GW IC	Total Recoverable	Water	6020B	277788

Analysis Batch: 280984

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-8	AP234-DGWC-20 GW IC	Total Recoverable	Water	6020B	277788

Analysis Batch: 281496

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-280759/1-A	Method Blank	Total Recoverable	Water	6020B	280759
LCS 410-280759/2-A	Lab Control Sample	Total Recoverable	Water	6020B	280759

Analysis Batch: 281504

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-5	AP1-DGWC-40 GW IC	Dissolved	Water	6020B	280759

Analysis Batch: 281678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 410-277788/1-A	Method Blank	Total Recoverable	Water	6010D	277788
LCS 410-277788/2-A	Lab Control Sample	Total Recoverable	Water	6010D	277788

Analysis Batch: 281976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-8	AP234-DGWC-20 GW IC	Dissolved	Water	6010D	277782
410-91265-8	AP234-DGWC-20 GW IC	Total Recoverable	Water	6010D	277788
MB 410-277782/1-A	Method Blank	Total/NA	Water	6010D	277782
LCS 410-277782/2-A	Lab Control Sample	Total/NA	Water	6010D	277782

Analysis Batch: 282060

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-2	AP1-DGWC-69 Soil IC	Total/NA	Solid	6020B	276852
410-91265-4	AP1 DGWC-68A Soil IC	Total/NA	Solid	6020B	276852
410-91265-4	AP1 DGWC-68A Soil IC	Total/NA	Solid	6020B	276852
410-91265-6	AP1-DGWC-40 Soil IC	Total/NA	Solid	6020B	276852
410-91265-6	AP1-DGWC-40 Soil IC	Total/NA	Solid	6020B	276852
MB 410-276852/1-A ^2	Method Blank	Total/NA	Solid	6020B	276852
LCS 410-276852/2-A ^2	Lab Control Sample	Total/NA	Solid	6020B	276852

Analysis Batch: 282099

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-7	AP234-DGWC-48 GW IC	Total Recoverable	Water	6010D	277787
MB 410-277787/1-A	Method Blank	Total Recoverable	Water	6010D	277787
LCS 410-277787/2-A	Lab Control Sample	Total Recoverable	Water	6010D	277787
410-91265-7 MS	AP234-DGWC-48 GW IC	Total Recoverable	Water	6010D	277787
410-91265-7 MSD	AP234-DGWC-48 GW IC	Total Recoverable	Water	6010D	277787
410-91265-7 DU	AP234-DGWC-48 GW IC	Total Recoverable	Water	6010D	277787

Analysis Batch: 282135

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-2	AP1-DGWC-69 Soil IC	Total/NA	Solid	6020B	276852

QC Association Summary

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Metals

Analysis Batch: 286260

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-7	AP234-DGWC-48 GW IC	Dissolved	Water	6010D	277837
MB 410-277837/1-A	Method Blank	Total/NA	Water	6010D	277837
LCS 410-277837/2-A	Lab Control Sample	Total/NA	Water	6010D	277837
410-91265-7 MS	AP234-DGWC-48 GW IC	Dissolved	Water	6010D	277837
410-91265-7 MSD	AP234-DGWC-48 GW IC	Dissolved	Water	6010D	277837
410-91265-7 DU	AP234-DGWC-48 GW IC	Dissolved	Water	6010D	277837

General Chemistry

Analysis Batch: 276790

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-2	AP1-DGWC-69 Soil IC	Total/NA	Solid	Moisture	
410-91265-4	AP1 DGWC-68A Soil IC	Total/NA	Solid	Moisture	
410-91265-6	AP1-DGWC-40 Soil IC	Total/NA	Solid	Moisture	

Analysis Batch: 280925

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-1	AP1-DGWC-69 GW IC	Dissolved	Water	415.1	
410-91265-3	AP1 DGWC-68A GW IC	Dissolved	Water	415.1	
410-91265-5	AP1-DGWC-40 GW IC	Dissolved	Water	415.1	
410-91265-7	AP234-DGWC-48 GW IC	Dissolved	Water	415.1	
MB 410-280925/36	Method Blank	Dissolved	Water	415.1	
LCS 410-280925/35	Lab Control Sample	Dissolved	Water	415.1	

Analysis Batch: 282445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-91265-8	AP234-DGWC-20 GW IC	Dissolved	Water	415.1	
MB 410-282445/6	Method Blank	Dissolved	Water	415.1	
LCS 410-282445/5	Lab Control Sample	Dissolved	Water	415.1	

Lab Chronicle

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Client Sample ID: AP1-DGWC-69 GW IC

Lab Sample ID: 410-91265-1

Date Collected: 07/14/22 10:00

Matrix: Water

Date Received: 07/15/22 16:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056		5	280663	L4QM	ELLE	07/28/22 21:09
Dissolved	Prep	3005A			277788	UAMX	ELLE	07/20/22 21:51
Dissolved	Analysis	6020B		1	278367	S4PD	ELLE	07/21/22 22:07
Total Recoverable	Prep	3005A			277787	UAMX	ELLE	07/20/22 21:47
Total Recoverable	Analysis	6020B		1	279761	UCIG	ELLE	07/26/22 15:34
Dissolved	Analysis	415.1		1	280925	P684	ELLE	07/28/22 23:38

Client Sample ID: AP1-DGWC-69 Soil IC

Lab Sample ID: 410-91265-2

Date Collected: 07/14/22 10:30

Matrix: Solid

Date Received: 07/15/22 16:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	276790	JH8X	ELLE	07/18/22 18:09

Client Sample ID: AP1-DGWC-69 Soil IC

Lab Sample ID: 410-91265-2

Date Collected: 07/14/22 10:30

Matrix: Solid

Date Received: 07/15/22 16:04

Percent Solids: 80.3

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			276852	UJLA	ELLE	07/19/22 03:34
Total/NA	Analysis	6020B		2	282060	UCIG	ELLE	08/02/22 15:13
Total/NA	Prep	3050B			276852	UJLA	ELLE	07/19/22 03:34
Total/NA	Analysis	6020B		2	282135	UCIG	ELLE	08/02/22 22:20

Client Sample ID: AP1 DGWC-68A GW IC

Lab Sample ID: 410-91265-3

Date Collected: 07/14/22 11:00

Matrix: Water

Date Received: 07/15/22 16:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056		5	280663	L4QM	ELLE	07/28/22 21:44
Dissolved	Prep	3005A			277788	UAMX	ELLE	07/20/22 21:51
Dissolved	Analysis	6020B		1	278367	S4PD	ELLE	07/21/22 22:19
Total Recoverable	Prep	3005A			277787	UAMX	ELLE	07/20/22 21:47
Total Recoverable	Analysis	6020B		1	279761	UCIG	ELLE	07/26/22 15:30
Dissolved	Analysis	415.1		1	280925	P684	ELLE	07/28/22 23:58

Client Sample ID: AP1 DGWC-68A Soil IC

Lab Sample ID: 410-91265-4

Date Collected: 07/14/22 11:30

Matrix: Solid

Date Received: 07/15/22 16:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	276790	JH8X	ELLE	07/18/22 18:09

Lab Chronicle

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Client Sample ID: AP1 DGWC-68A Soil IC

Lab Sample ID: 410-91265-4

Date Collected: 07/14/22 11:30

Matrix: Solid

Date Received: 07/15/22 16:04

Percent Solids: 87.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			276852	UJLA	ELLE	07/19/22 03:34
Total/NA	Analysis	6020B		2	282060	UCIG	ELLE	08/02/22 15:31
Total/NA	Prep	3050B			276852	UJLA	ELLE	07/19/22 03:34
Total/NA	Analysis	6020B		10	282060	UCIG	ELLE	08/02/22 15:33

Client Sample ID: AP1-DGWC-40 GW IC

Lab Sample ID: 410-91265-5

Date Collected: 07/14/22 13:00

Matrix: Water

Date Received: 07/15/22 16:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056		50	280663	L4QM	ELLE	07/28/22 22:09
Dissolved	Prep	3005A			280759	UAMX	ELLE	07/29/22 05:25
Dissolved	Analysis	6020B		1	281504	F7JF	ELLE	08/01/22 09:14
Total Recoverable	Prep	3005A			277787	UAMX	ELLE	07/20/22 21:47
Total Recoverable	Analysis	6020B		1	279761	UCIG	ELLE	07/26/22 15:32
Dissolved	Analysis	415.1		1	280925	P684	ELLE	07/29/22 00:17

Client Sample ID: AP1-DGWC-40 Soil IC

Lab Sample ID: 410-91265-6

Date Collected: 07/14/22 13:30

Matrix: Solid

Date Received: 07/15/22 16:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	Moisture		1	276790	JH8X	ELLE	07/18/22 18:09

Client Sample ID: AP1-DGWC-40 Soil IC

Lab Sample ID: 410-91265-6

Date Collected: 07/14/22 13:30

Matrix: Solid

Date Received: 07/15/22 16:04

Percent Solids: 85.1

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	3050B			276852	UJLA	ELLE	07/19/22 03:34
Total/NA	Analysis	6020B		2	282060	UCIG	ELLE	08/02/22 15:35
Total/NA	Prep	3050B			276852	UJLA	ELLE	07/19/22 03:34
Total/NA	Analysis	6020B		10	282060	UCIG	ELLE	08/02/22 15:37

Client Sample ID: AP234-DGWC-48 GW IC

Lab Sample ID: 410-91265-7

Date Collected: 07/14/22 14:00

Matrix: Water

Date Received: 07/15/22 16:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056		50	284714	W5UX	ELLE	08/10/22 12:40
Dissolved	Prep	Non-Digest Prep			277837	UJLA	ELLE	07/21/22 06:42
Dissolved	Analysis	6010D		1	280125	T8CQ	ELLE	07/27/22 11:53
Dissolved	Prep	Non-Digest Prep			277837	UJLA	ELLE	07/21/22 06:42
Dissolved	Analysis	6010D		1	286260	T8CQ	ELLE	08/15/22 16:52

Lab Chronicle

Client: Terra Systems Inc
 Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Client Sample ID: AP234-DGWC-48 GW IC

Lab Sample ID: 410-91265-7

Date Collected: 07/14/22 14:00

Matrix: Water

Date Received: 07/15/22 16:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			277787	UAMX	ELLE	07/20/22 21:47
Total Recoverable	Analysis	6010D		1	282099	T8CQ	ELLE	08/02/22 15:03
Total Recoverable	Prep	3005A			277787	UAMX	ELLE	07/20/22 21:47
Total Recoverable	Analysis	6020B		1	279761	UCIG	ELLE	07/26/22 15:10
Dissolved	Analysis	415.1		1	280925	P684	ELLE	07/29/22 01:18

Client Sample ID: AP234-DGWC-20 GW IC

Lab Sample ID: 410-91265-8

Date Collected: 07/14/22 15:00

Matrix: Water

Date Received: 07/15/22 16:04

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	9056		50	280699	W5UX	ELLE	07/29/22 11:28
Dissolved	Prep	Non-Digest Prep			277782	UJLA	ELLE	07/20/22 21:08
Dissolved	Analysis	6010D		10	281976	VYB8	ELLE	08/02/22 13:47
Total Recoverable	Prep	3005A			277788	UAMX	ELLE	07/20/22 21:51
Total Recoverable	Analysis	6010D		10	281976	VYB8	ELLE	08/02/22 13:09
Total Recoverable	Prep	3005A			277788	UAMX	ELLE	07/20/22 21:51
Total Recoverable	Analysis	6020B		1	278367	S4PD	ELLE	07/21/22 22:15
Total Recoverable	Prep	3005A			277788	UAMX	ELLE	07/20/22 21:51
Total Recoverable	Analysis	6020B		20	280984	F7JF	ELLE	07/29/22 11:08
Total Recoverable	Prep	3005A			277788	UAMX	ELLE	07/20/22 21:51
Total Recoverable	Analysis	6020B		20	280973	S4PD	ELLE	07/29/22 08:54
Dissolved	Analysis	415.1		1	282445	P684	ELLE	08/03/22 08:40

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Terra Systems Inc
 Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
DE Haz. Subst. Cleanup Act (HSCA)	State	019-006 (PA cert)	01-31-23

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
415.1		Water	Dissolved Organic Carbon
6010D	3005A	Water	Lithium
6010D	Non-Digest Prep	Water	Arsenic
6010D	Non-Digest Prep	Water	Beryllium
6010D	Non-Digest Prep	Water	Cobalt
6010D	Non-Digest Prep	Water	Lithium
6010D	Non-Digest Prep	Water	Selenium
6020B	3005A	Water	Arsenic
6020B	3005A	Water	Beryllium
6020B	3005A	Water	Cobalt
6020B	3005A	Water	Iron
6020B	3005A	Water	Magnesium
6020B	3005A	Water	Manganese
6020B	3005A	Water	Molybdenum
6020B	3005A	Water	Potassium
6020B	3005A	Water	Selenium
6020B	3005A	Water	Sodium
6020B	3050B	Solid	Arsenic
6020B	3050B	Solid	Cobalt
6020B	3050B	Solid	Iron
6020B	3050B	Solid	Magnesium
6020B	3050B	Solid	Manganese
6020B	3050B	Solid	Molybdenum
6020B	3050B	Solid	Potassium
6020B	3050B	Solid	Sodium
9056		Water	Sulfate
Moisture		Solid	Percent Moisture



Method Summary

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Method	Method Description	Protocol	Laboratory
9056	Anions, Ion Chromatography	SW846	ELLE
6010D	Metals (ICP)	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
415.1	DOC	MCAWW	ELLE
Moisture	Percent Moisture	EPA	ELLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE
3050B	Preparation, Metals	SW846	ELLE
Non-Digest Prep	Preparation, Non-Digested Aqueous Metals	EPA	ELLE

Protocol References:

EPA = US Environmental Protection Agency

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

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

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



Sample Summary

Client: Terra Systems Inc
Project/Site: Golder CCR TS IL

Job ID: 410-91265-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-91265-1	AP1-DGWC-69 GW IC	Water	07/14/22 10:00	07/15/22 16:04
410-91265-2	AP1-DGWC-69 Soil IC	Solid	07/14/22 10:30	07/15/22 16:04
410-91265-3	AP1 DGWC-68A GW IC	Water	07/14/22 11:00	07/15/22 16:04
410-91265-4	AP1 DGWC-68A Soil IC	Solid	07/14/22 11:30	07/15/22 16:04
410-91265-5	AP1-DGWC-40 GW IC	Water	07/14/22 13:00	07/15/22 16:04
410-91265-6	AP1-DGWC-40 Soil IC	Solid	07/14/22 13:30	07/15/22 16:04
410-91265-7	AP234-DGWC-48 GW IC	Water	07/14/22 14:00	07/15/22 16:04
410-91265-8	AP234-DGWC-20 GW IC	Water	07/14/22 15:00	07/15/22 16:04

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- 12
- 13
- 14

Chain of Custody Record



Client Information		Sampler <i>MDL60</i>	Lab PM <i>Mavisso Williams</i>	410-91265 Chain of Custody			
Client Contact <i>Michael D Lee</i>		Phone <i>3027989553</i>	E-Mail <i>Mavisso.Williams@et.com</i>	State of Origin <i>GA</i>	Page <i>1 of 1</i>		
Company <i>Terra Systems Inc</i>		PWSID	Analysis Requested		Job #		
Address <i>130 Hickman Rd Suite 1</i>		Due Date Requested: <i>7/6/22</i>	Analysis Requested: <i>Dis. As and MD (field for Hg)</i> <i>DIC (field for lead)</i> <i>Substrate by EPA 300 IC</i> <i>Total As, Mg, Fe, K, Mn, Ni, Na</i> <i>Total As, Mg, Fe, K, Mn, Ni, Na, Zn</i> <i>Dis Co (field for Hg)</i> <i>Total Co, Fe, K, Mg, Mn, Ni</i> <i>Total Co, Fe, K, Mg, Mn, Ni, Zn</i> <i>Total Li</i> <i>Dis Li (field for lead)</i> <i>Total As, Pb, Cd, Cu, Fe, K, Mg, Mn, Ni, Na</i>		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify) Other:		
City <i>Claymont DE</i>		TAT Requested (days): <i>10</i>					
State Zip <i>DE 19703</i>		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No					
Phone <i>3027989553</i>		PO # <i>222512-71422</i>					
Email <i>mlee@terrasystems.net</i>		WO #					
Project Name <i>Golden CER TS II</i>		Project # <i>222512</i>					
Site <i>Symrna GA</i>		SSOV# <i>41009095 v2</i>					
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=soil, O=waste/oil, BT=Tissue, A=Air)	Special Instructions/Note:	
<i>AP1-DGWC-69 GW IC</i>		<i>7/14/22</i>	<i>10:00</i>	<i>C GW</i>	<i>X</i>		<i>X X X X</i>
<i>AP1-DGWC-69 Soil IC</i>		<i>7/14/22</i>	<i>10:30</i>	<i>C Soil</i>			<i>X</i>
<i>AP1-DGWC-68A Soil IC</i>		<i>7/14/22</i>	<i>11:00</i>	<i>C GW</i>	<i>X</i>		<i>X X X X</i>
<i>AP2-DGWC-68A Soil IC</i>		<i>7/14/22</i>	<i>11:30</i>	<i>C Soil</i>			<i>X</i>
<i>AP1-DGWC-40 GW IC</i>		<i>7/14/22</i>	<i>13:00</i>	<i>C GW</i>	<i>X</i>		<i>X X X X</i>
<i>AP1-DGWC-40 Soil IC</i>		<i>7/14/22</i>	<i>13:30</i>	<i>C Soil</i>			<i>X</i>
<i>AP234-DGWC-48 GW IC</i>		<i>7/14/22</i>	<i>14:00</i>	<i>C GW</i>	<i>X</i>		<i>X X X X</i>
<i>AP234-DGWC-20 GW IC</i>		<i>7/14/22</i>	<i>15:00</i>	<i>C GW</i>	<i>X</i>		<i>X X X X</i>
Possible Hazard Identification			Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)				
<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			<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:		Date:	Time:	Method of Shipment:			
Relinquished by <i>Michael D Lee</i>		Date/Time <i>7/15/22 11:45</i>	Company <i>ETC</i>	Received by <i>[Signature]</i>			
Relinquished by <i>[Signature]</i>		Date/Time <i>7/15/22 15:50</i>	Company <i>ETC</i>	Received by <i>[Signature]</i>			
Relinquished by <i>[Signature]</i>		Date/Time	Company	Received by <i>[Signature]</i>			
Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <i>1.0</i>			

Login Sample Receipt Checklist

Client: Terra Systems Inc

Job Number: 410-91265-1

Login Number: 91265

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: McBeth, Jessica

Question	Answer	Comment
The cooler's custody seal is intact.	N/A	
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 ($\leq 6^{\circ}\text{C}$, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	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	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	N/A	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	True	



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