

**2022 SEMI-ANNUAL GROUNDWATER MONITORING AND  
CORRECTIVE ACTION REPORT**

**ALABAMA POWER COMPANY  
PLANT GADSDEN  
ASH POND**

**February 1, 2023**

Prepared for

Alabama Power Company  
Birmingham, Alabama

By

Southern Company Services  
Earth Science and Environmental Engineering



### CERTIFICATION STATEMENT

This 2022 *Semi-Annual Groundwater Monitoring and Corrective Action Report, Alabama Power Company - Plant Gadsden Ash Pond* has been prepared in accordance with the United States Environmental Protection Agency's coal combustion residual rule (40 CFR Part 257, Subpart D), ADEM Admin. Code r. 335-13-15, and Part E of ADEM Administrative Order No. 18-095-GW, under the supervision of a licensed professional engineer in the State of Alabama. As such, I certify that the information contained herein is true and accurate to the best of my knowledge.

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02/01/2023

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## **EXECUTIVE SUMMARY**

In accordance with the United States Environmental Protection Agency (EPA) coal combustion residual (CCR) rule (40 CFR Part 257, Subpart 257), the Alabama Department of Environmental Management (ADEM) Admin. Code Ch. 335-13-15, and ADEM Administrative Order (AO) No. 19-104-GW, this 2022 Semi-Annual Groundwater Monitoring and Corrective Action Report has been prepared to document groundwater monitoring activities and results from the October 2022 semi-annual monitoring event at the Alabama Power Company (APC) Gadsden Electric Generating Plant (Site) Ash Pond and satisfies the requirements of § 257.90(e), ADEM Admin. Code r. 335-13-15-.06(1)(f), ADEM Admin. Code r. 335-13-15-.06(5)(g), and Part F of AO No. 19-104-GW. Semi-annual monitoring and associated reporting for the Ash Pond is performed in accordance with the monitoring requirements found in 40 CFR § 257.90 through § 257.98 and ADEM Admin. Code r. 335-13-15-.06(1) through r. 335-13-15-.06(9).

The CCR unit began the monitoring period in corrective action monitoring pursuant to 40 CFR § 257.98 and ADEM Admin. Code r. 335-13-15-.06(9). Statistically significant increases (SSIs) of Appendix III constituents over background were identified in the results of the first detection monitoring event (April 17, 2019) and assessment monitoring was initiated on July 16, 2019. Statistically significant levels (SSLs) of Appendix IV parameters above groundwater protection standards (GWPS) were identified while in assessment monitoring. Consequently, an assessment of corrective measures (ACM) was initiated on April 11, 2020, and completed on July 10, 2020, according to the requirements of § 257.96, ADEM Admin. Code r. 335-13-15-.06(7), and AO No. 19-104-GW. The ACM was subsequently submitted to ADEM and posted to the CCR compliance web site. A public meeting to discuss the ACM was held on October 19, 2020.

Since the submittal of the ACM extensive Site investigations have been performed to select effective corrective measures to address SSLs above GWPS. A Groundwater Remedy Selection Report was prepared to meet the requirements of § 257.97, ADEM Admin. Code r. 335-13-15-.06(8), and Part C of AO No. 19-104-GW and submitted to ADEM on October 29, 2021. Subsequently, within 90 days of remedy selection, a Corrective Action Groundwater Monitoring Program was developed and submitted to ADEM on January 27, 2022, for review.

The Corrective Action Groundwater Monitoring Program was prepared to meet § 257.98 and ADEM Admin. Code r. 335-13-15-.06(9) to detect potential downgradient changes in groundwater quality and assess the efficacy of the selected groundwater corrective action remedies. The Monitoring Program has been developed to meet the requirements of CFR § 257.98(a)(1) and ADEM Admin. Code r. 335-13-15-

.06(9)(a)(1) and will supplement the ongoing CCR compliance groundwater monitoring currently being performed at the Site.

SSLs of Appendix IV parameters arsenic and lithium were detected above GWPS during the October 2022 semi-annual monitoring events. The following summarizes semi-annual groundwater monitoring activities at Plant Gadsden Ash Pond:

- Submitted the 2022 Annual Groundwater Monitoring and Corrective Action Report on August 1, 2022.
- Completed the first semi-annual groundwater sampling event between October 25, 2022, and October 26, 2022.
- Began the treatability studies to evaluate the effectiveness of various treatment solutions and doses in removing constituents of interest (COI) from impacted groundwater for a geochemical manipulation injections pilot study that was selected as one of the corrective measures as described in the Groundwater Remedy Selection Report on October 29, 2021.
- Initiated a geogenic evaluation of Site bedrock (Conasauga shale/mudstone) as a geogenic source of lithium and potential mechanisms to mobilize lithium into deeper Site wells recently installed for vertical delineation in the area of monitor well GSD-AP-MW-2.
- Pursuant to 40 CFR 257.90(e)(6), a Monitoring Period Summary table has been prepared to describe the status of groundwater monitoring and corrective action during the monitoring period for this report.

The CCR unit concluded the monitoring period in corrective action and APC will continue implementation of the selected groundwater remedies identified in the Groundwater Remedy Selection Report and the Corrective Action Groundwater Monitoring Program submitted to ADEM. The following future actions will be taken or are recommended for the site to further evaluate remedy selection:

- Complete the Laboratory Treatability Studies and draft and submit a Class V Underground Injection Control (UIC) permit application for the geochemical manipulation via injections that was selected as one of the corrective measures as described in the Groundwater Remedy Selection Report and will be included in a Class V UIC permit application. The laboratory treatability studies include the following tasks:
  - Conduct batch testing to evaluate removal of COIs, and selection of the optimum reagents and doses for column tests

- Conduct column testing to evaluate removal of COIs by mixing treatment reagents with site-specific impacted groundwater and applying to site-specific soils (aquifer solids) in columns; Appendix III and IV constituents will be measured in the column effluents to determine the reduction of COIs in groundwater, and to evaluate any unintended consequences of treatment (e.g., release of constituents from soils).
- Conduct selective sequential extraction of post-column (treated) soils to help determine the sequestration mechanisms and stability of the COIs and their host solids.
- After treatment, the post-column (treated) soils will be leached with upgradient (background) groundwater from the respective plant in additional column studies, to help assess long-term stability of the COIs and their host solids.
- Continue the geogenic evaluation of Site bedrock (Conasauga shale/mudstone) as a geogenic source of lithium and potential mechanisms to mobilize lithium into deeper Site wells recently installed for vertical delineation to include the following tasks:
  - Additional evaluation of potential confinement between geologic zones will be evaluated.
  - Unconsolidated zone and bedrock core sample laboratory analysis for physical parameter(s), mineralogy, and geochemistry are planned to be conducted and will be evaluated.
  - Research being conducted on natural lithologic deposits that contain lithium or have an association with lithium will be completed.
- Conduct the second semi-annual assessment monitoring event and submit the annual groundwater monitoring and corrective action report summarizing the findings to ADEM by August 1, 2023.

**Executive Summary Table.  
Monitoring Period Summary  
Plant Gadsden - Ash Pond**

Assessment Monitoring Initiated: July 16, 2019
Monitoring Period: July 31, 2020 - December 31, 2022
Beginning Status: Corrective Action
Ending Status: Corrective Action

**Statistical Analysis Results \***

**Appendix III SSIs**

<b>Parameter</b>	<b>Wells</b>
Boron	GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-11.
Calcium	GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12.
Chloride	GSD-AP-MW-1, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-7, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12.
Fluoride	GSD-AP-MW-7.
pH	GSD-AP-MW-5, GSD-AP-MW-11.
Sulfate	GSD-AP-MW-1, GSD-AP-MW-11, GSD-AP-MW-12.
TDS	GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-11, and GSD-AP-MW-12.

**Appendix IV SSLs**

<b>Parameter</b>	<b>Wells</b>
Arsenic	GSD-AP-MW-2, GSD-AP-MW-4.
Lithium	None.

\* See the attached report for further details regarding statistical exceedances and alternate source demonstrations.

**Assessment of Corrective Measures & Groundwater Remedy**

**Assessment of Corrective Measures**

Date Initiated: April 11, 2020  
Date Complete: July 10, 2020  
Public Meeting Date: October 19, 2020

**Groundwater Remedy**

Selected During Period: Yes  
Selection Date: October 29, 2021  
Initiated During Period: Yes  
Ongoing During Period: Yes

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## ABBREVIATIONS

ACM	Assessment of Corrective Measures
ADEM	Alabama Department of Environmental Management
AL	Alabama
APC	Alabama Power Company
APCEL	APC Environmental Laboratory
ASD	Alternate Source Demonstration
ASTM	Alabama Power Company Environmental Laboratory
BGS	below ground surface
CCR	Coal Combustion Residual
CEC	cation exchange capacity
CFR	Code of Federal Regulations
COC	chain of custody
COI	constituents of interest
CSM	conceptual site model
DO	dissolved oxygen
EPA	United States Environmental Protection Agency
ft	feet
GW	groundwater
GWPS	Groundwater Protection Standard(s)
LCL	Lower Confidence Limit(s)
m	meter
mg/L	milligram per liter
MNA	monitored natural attenuation
MSL	mean sea level
MW-	denotes “Monitoring Well”
NCDS	National Coal Data System
NELAP	National Environmental Laboratory Accreditation Program
NTU	nephelometric turbidity unit
ORP	oxidation reduction potential
pCi/L	picocuries per liter
PE	Professional Engineer
PG	Professional Geologist
PL	prediction limits
PQL	practical quantitation limit
PVC	polymerizing vinyl chloride
QA/QC	quality assurance/quality control
RL	reporting limit
RPD	relative percent difference
SEM	scanning electron microscopy
SM	Standard Method(s)
SSE	selective sequential extraction

SSI	statistically significant increase
SSL	statistically significant level
TAL	Test America, Inc.
TOC	top of casing
TDS	total dissolved solids
USGS	Unites States Geological Survey
UTLs	Upper Tolerance Limits
XRD	X-ray diffraction
XRF	X-ray fluorescence

## **1.0 INTRODUCTION**

In accordance with the United States Environmental Protection Agency (EPA) coal combustion residual (CCR) rule (40 CFR Part 257, Subpart D) and the State of Alabama Department of Environmental Management (ADEM) Admin. Code Ch. 335-13-15, this 2022 Semi-Annual Groundwater Monitoring and Corrective Action Report has been prepared to document the first semi-annual groundwater monitoring activities at the Plant Gadsden Ash Pond and to satisfy the requirements of § 257.90(e) and ADEM Admin. Code r. 335-13-15-.06(1)(f). Semi-annual assessment monitoring and associated reporting for the Ash Pond is performed in accordance with the monitoring requirements 40 CFR § 257.90 through § 257.98 and ADEM Admin. Code r. 335-13-15-.06(1) through r. 335-13-15-.06(9).

Semi-Annual Groundwater Monitoring and Corrective Action Reports include an update on groundwater delineation activities completed since the submittal of the Facility Plan for Groundwater Investigation (September 30, 2019) and corrective action activities completed since the submittal of the Corrective Action Groundwater Monitoring Program (January 27, 2022).

## **2.0 MONITORING PROGRAM STATUS**

The site is currently in corrective action and APC will continue implementation of the selected groundwater remedies identified in the Groundwater Remedy Selection Report and the Corrective Action Groundwater Monitoring Program. In accordance with § 257.94(e) and ADEM Admin. Code r. 335-13-15-.06(5)(e), APC implemented assessment monitoring in July 2019. SSLs of Appendix IV parameters were identified at the Gadsden Ash Pond during assessment sampling. Pursuant to § 257.95(g)(3)(i) and ADEM Admin. Code r. 335-13-15-.06(6)(g)4.(i), APC completed an ACM in accordance with § 257.96, ADEM Admin. Code r. 335-13-15-.06(7), and ADEM AO No. 19-104-GW. The ACM was completed July 10, 2020, and a public meeting was held to discuss the ACM on October 19, 2020.

A Groundwater Remedy Selection Report was prepared to meet the requirements of § 257.97, ADEM Admin. Code r. 335-13-15-.06(8), and Part C of AO No. 19-104-GW and submitted to ADEM on October 29, 2021. Subsequently, within 90 days of remedy selection, a Corrective Action Groundwater Monitoring Program was developed and submitted to ADEM on January 27, 2022, for review.

The Corrective Action Groundwater Monitoring Program was prepared to meet § 257.98 and ADEM Admin. Code r. 335-13-15-.06(9) to detect potential downgradient changes in groundwater quality and assess the efficacy of the selected groundwater corrective action remedies. The Monitoring Program has been developed to meet the requirements of CFR § 257.98(a)(1) and ADEM Admin. Code r. 335-13-15-.06(9)(a)(1) and will supplement the ongoing CCR compliance groundwater monitoring currently being performed at the Site.

In accordance with § 257.98 and ADEM Admin. Code r. 335-13-15-.06(9), APC will continue semi-annual monitoring, including all monitoring wells in the certified groundwater monitoring system and any well installed to characterize the horizontal and vertical extent of SSLs. APC will continue implementation of the selected groundwater remedies identified in the Groundwater Remedy Selection Report and the Corrective Action Groundwater Monitoring Program submitted to ADEM.

### 3.0 SITE LOCATION AND DESCRIPTION

Plant Gadsden is located in the northeastern area of the city of Gadsden, in central Etowah County, Alabama. The physical address of the plant is 1000 Goodyear Avenue, Gadsden, AL 35903. Plant Gadsden occupies Sections 2, 3, and 11, Township 12 South, Range 6 East (USGS, 1986). The Ash Pond is located northeast of the plant and separated from the main plant by the Coosa River. **Figure 1, Site Location Map**, depicts the location of the Plant and Ash Pond with respect to the surrounding area.

### 3.1 PHYSICAL SETTING

Plant Gadsden is located within the Coosa Valley district of the Valley and Ridge physiographic section (Sapp and Emplainscourt, 1975). The neighboring Coosa River forms a broad, gently sloping valley with elevations ranging from 510 to 530 feet above mean sea level (MSL). To the west of the Coosa River is a series of ridges including Shinbone Ridge, Lookout Mountain, and Big Ridge, some of which reach elevations above 1,450 feet MSL (USGS, 1986). Local Site elevations near the Ash Pond are approximately 520 feet MSL. The embankment elevations that form the perimeter of the Ash Pond range from 520 to 525 feet MSL. **Figure 2, Site Topographic Map**, provides the topography of the Site.

### 3.2 SITE GEOLOGY AND HYDROGEOLOGY

Plant Gadsden is in the Appalachian thrust belt, which consists of a series of northeast trending thrust sheets and folds of Cambrian to Pennsylvanian strata. In general, the valleys represent eroded or breached anticlines underlain by Cambrian and Ordovician carbonates. The ridge crests are typically composed of relatively resistant sandstone and chert units and represent erosional remnants (Mann and Baker, 1995). The Appalachian thrust belt is bordered to the west by the Black Warrior basin, to the northwest by the East Warrior Platform, and to the north-northwest by the Nashville dome. It is bordered to the southeast by the Appalachian Piedmont (Osborne and Raymond, 1992).

A thrust fault lies near Plant Gadsden. The exact geometry and configuration of the fault is unknown because the fault is concealed under alluvium. To the north of the fault, folds and faults have a more moderate expression and generally trend to the northeast. To the south of the thrust fault, geologic structures become more complex, folding is more intense, and the structures trend in a more easterly orientation (Bossong, 1989). In general, faults in this region (including the Gadsden Fault) were active during the late Paleozoic Alleghanian orogeny but are not considered to be presently active. **Figure 3, Site Geologic Map**, illustrates the surface geology at the Site and neighboring areas.

Boring logs from monitoring well and piezometer installations provide details on subsurface geologic conditions between ground surface and 75 feet below ground surface (ft BGS). Site geology consists of two distinct formations underlying the Ash Pond, described from shallowest to deepest as follows:

1. Surficial soils are described as Quaternary-age alluvial low terrace deposits and high terrace deposits consisting of varying amounts of sand, silt, clay, and gravel associated with river deposition (Raymond et al., 1988). These deposits range from 20 to 30 feet in thickness at the Site. Site groundwater monitoring wells are installed within higher-permeability zones near the base of the alluvial deposits and near the interface with underlying rock.
2. The Conasauga Formation (Middle and Upper Cambrian), which consists of varying amounts of limestone, dolomite, and shale. Chert and siltstone horizons can be present locally. Limited core logs from the Site indicate the Conasauga to be a medium to dark gray mudstone or shale with noticeable calcite veining. In general, the Conasauga Formation is characterized as a shoaling-upward succession in which deep-water shale grades vertically into a diverse assemblage of carbonate ramp facies. In Etowah County, the Conasauga Formation has been targeted as a potential source for shale gas and is preserved within the Gadsden antiform (Pashin, 2008). The Conasauga Formation is not considered to be a water-bearing aquifer at the Site.

**Figure 4A Geologic Cross-Sections A-A' and Figure 4B, Geologic Cross-Sections B-B'** illustrate the geologic layering beneath the Site.

### **3.2.1 Uppermost Aquifer**

The uppermost aquifer beneath the Site corresponds to a coarse and more permeable fraction of alluvial overburden soils and weathered or fractured rock near the soil-rock interface. The uppermost aquifer is typically located at depths between 15 and 50 feet below ground surface (BGS). Soils are generally poorly graded sands with layers of clay and well-graded gravels that overlay a mudstone or shale bedrock. Groundwater recharge to the uppermost aquifer is largely accomplished by infiltration of precipitation and subsequent percolation down to the water table. Monitoring wells are typically screened across reddish-brown (iron-coated) coarse sediments and/or weathered Conasauga mudstone/shale.

### **3.2.2 Flow Interpretation**

Within overburden soils beneath the Site, groundwater flow occurs by porous (Darcy) flow mechanics with potential for preferential movement along more conductive sand and gravel lenses or channels. Slug and

Shelby Tube permeameter testing reveals that sandy fractions generally have a hydraulic conductivity between 0.5 and 7 feet per day.

Based on recent groundwater elevation data, it appears a localized groundwater divide is present in the drier later summer-fall season along the north side of the Ash Pond. During drier season monitoring events (August 2019, August 2020, and October 2021/2022), groundwater elevations range from 2.4 to 7.8 feet lower in monitoring wells GSD-AP-PZ-1, GSD-AP-PZ-5, GSD-AP-PZ-6, GSD-AP-MW-18H, and GSD-AP-MW-19H when compared to the April 2020, March 2021, and May 2022 monitoring events.

The result of the localized groundwater divide is a temporary reversal of flow from south to north in the direction of an intermittent stream that flows seasonally in response to the seasonal rise in the water table. It is possible that seasonal changes in evapotranspiration may cause a rise and fall in the water table, which produces bidirectionality in both stream-groundwater head gradients. Hydraulic gradients across the site, and Ash Pond, decrease during the drier season months leading to slower groundwater flow velocities.

During wetter months or seasons, this localized groundwater divide is not apparent on potentiometric surface contour maps. Instead, groundwater flow is more uniform with a predominantly southern flow direction. Groundwater flows from northeast to southwest prior to shifting to a more southern flow direction beneath the ash pond. Groundwater northwest and west of the ash pond provides some variability with a more local western flow component.

Groundwater elevations fluctuate in response to rainfall. Fluctuations are typically greater further away from the Coosa River, which is consistent with groundwater recharge areas.

Upgradient wells, located on the opposite side of the Coosa River, demonstrate groundwater flow to the north or northeast. The Coosa River forms a groundwater divide separating the upgradient and downgradient flow regimes.

### **3.3 GROUNDWATER MONITORING SYSTEM**

Pursuant to § 257.91 and ADEM Admin. Code r. 335-13-15-.06(2), Plant Gadsden has installed a groundwater monitoring well network to evaluate groundwater quality within the uppermost aquifer. The certified groundwater monitoring system for the Plant Gadsden Ash Pond is designed to monitor groundwater flow passing the waste boundary of the CCR unit. Wells were sited to serve as upgradient, and downgradient monitoring locations based on groundwater flow direction as determined by the potentiometric surface elevation contour maps. All groundwater monitoring wells were designed and



constructed using “Design and Installation of Groundwater Monitoring Wells in Aquifers,” ASTM Subcommittee D18.21, as a guideline.

### 3.3.1 Monitoring Wells

Well locations at the site are designated as upgradient, downgradient, piezometer (water-level only), vertical delineation, and horizontal delineation. The following subsections provide a summary of well designations and, if applicable, changes or modifications to the well network or designations. As described in the site Groundwater Monitoring Plan, modifications to the well network or designation must first be approved by ADEM.

The location and designation of site wells are presented on **Figure 5, Monitoring Well Location Map** and **Table 1a. Compliance Monitoring Well Network Details, Table 1b. Delineation Well Network Details, and Table 1c. Piezometer Well Network Details**, summarizes the monitoring well construction details and design purpose for the Plant Gadsden Ash Pond.

#### 3.3.1.1 Upgradient Wells

To evaluate upgradient well locations at the Site, groundwater elevations and CCR indicator parameters were reviewed. Radial flow has historically been observed at the Ash Pond and identifying a truly upgradient location in the vicinity was infeasible. To meet the requirements of the rules and establish background groundwater quality not affected by a release from the unit, on-site groundwater monitoring wells were installed within the same geologic formation as site monitoring wells and across the river from the Ash Pond. Monitoring well locations MW-14, MW-16, and MW-17 serve as upgradient locations for the Ash Pond. These well locations are located on the opposite side of the Coosa River and are hydraulically disconnected from downgradient flow away from the Gadsden Ash Pond. Groundwater flow in the area of upgradient locations is from south to north or southwest to northeast towards the Coosa River. **Table 1a**, summarizes the monitoring well construction details and design purpose.

#### 3.3.1.2 Downgradient Wells

Monitoring well locations MW-1 through MW-12, PZ-1, PZ-2, PZ-5, and PZ-6 are used as downgradient locations. These well locations are proximal to the waste boundary to the north, east, south, and west of the Ash Pond. Because groundwater flow conditions can change seasonally in response to rainfall at the Site (as described in **Section 3.2.2**), wells previously identified as being downgradient to the north (GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-PZ-1, GSD-

AP-PZ-5, GSD-AP-PZ-6) now appear hydraulically upgradient of the Site or hydraulically separated from the Site by a localized groundwater divide. APC will continue to monitor all wells surrounding the Ash Pond as downgradient compliance wells until a revision to the network is proposed to and approved by ADEM. Changes to well designations are not recommended at this time. **Table 1a**, summarizes the monitoring well construction details and design purpose.

### 3.3.1.3 Delineation Wells

Pursuant to AO 19-104-GW, additional wells were installed in October 2019, January 2020, and March 2021. These delineation wells were installed to define the horizontal and vertical extent of arsenic and lithium MCL exceedances. Horizontal delineation wells GSD-AP-MW-18H, GSD-AP-MW-19H, and GSD-AP-MW-20H were installed in October 2019 north of compliance wells GSD-AP-MW-2/GSD-AP-MW-4 and in areas historically interpreted as downgradient of the Ash Pond.

Two vertical delineation wells, GSD-AP-MW-2V and GSD-AP-MW-4V, were installed in October 2019, and one vertical delineation well, GSD-AP-MW-2VA, was installed in January 2020, to delineate the vertical extent of MCL exceedances. Vertical delineation well GSD-AP-MW-2V did not yield sufficient groundwater for well development and has been converted to a temporary piezometer. As a result, GSD-AP-MW-2VA was installed to replace GSD-AP-MW-2V. Because GSD-AP-MW-2VA exhibited elevated lithium concentrations above the GWPS, a second, deeper vertical delineation well was proposed and GSD-AP-MW-2VB was installed in March 2021. These vertical delineation wells were installed adjacent to monitoring wells GSD-AP-MW-2 and GSD-AP-MW4 where elevated concentrations of constituents had been observed.

Following a review of the March 2021 analytical data, it was determined that additional (Phase III) vertical delineation was necessary to further evaluate the spatial extent of lithium around wells GSD-AP-MW-2, GSD-AP-MW-2VA and GSD-AP-MW-2VB and further north and northwest in the direction of groundwater flow associated with the seasonal groundwater divide. Five vertical delineation wells (GSD-AP-MW-2VC, GSD-AP-MW21VB, GSD-P-MW-21VC, GSD-AP-MW-22VB, and GSD-AP-MW-23VB) were installed between August 17, 2021, and September 3, 2021. Two of the vertical delineation wells (GSD-AP-MW-21VC and GSD-AP-MW-22VB) were successfully developed and sampled during the 2022 semi-annual sampling event in October. Vertical delineation wells GSD-AP-MW-2VC, GSD-AP-MW21VB, and GSD-AP-MW-23VB did not produce sufficient water to be sampled and are designated as water level only piezometers.

Delineation wells are identified on **Figure 5** and detailed on **Table 1b**. All delineation wells are sampled semi-annually as part of the semi-annual groundwater monitoring program.

#### **3.3.1.4 Piezometers**

Vertical delineation wells GSD-AP-MW-2V and GSD-AP-MW-2VC, GSD-AP-MW21VB, and GSD-AP-MW-23VB did not produce sufficient water for sampling. As a result, these wells have been designated as piezometers and will be used better define groundwater flow direction at the Site. **Table 1c**, summarizes the water level only piezometer construction details and design purpose.

#### **3.3.1.5 Monitoring Well Replacement and Abandonment**

No monitoring well replacements and/or abandonments were conducted during the reporting period.

### **3.4 GROUNDWATER MONITORING HISTORY**

In accordance with § 257.94(b) and ADEM Admin. Code r. 335-13-15-.06(5)(b), eight independent samples were collected from each background and downgradient well and analyzed for the constituents listed in Appendix III and IV prior to April 17, 2019. Background sampling was performed over the period of December 2017 to February 2019. Groundwater sampling for the first detection monitoring event after the background period was performed in February 2019.

Based on results of the 2018 and 2019 monitoring, APC initiated an assessment monitoring program on July 16, 2019. Pursuant to 40 CFR § 257.95(a) and ADEM Admin. Code r. 335-13-15-.06(6)(a), monitoring wells were sampled for all Appendix IV parameters in August, within 90 days of initiating the assessment monitoring program.

The Site entered assessment monitoring pursuant to 40 CFR § 257.95(a) and ADEM Admin. Code r. 335-13-15-.06(6)(a) in July 2019. Statistical evaluations of the 2019 assessment monitoring data identified SSLs of Appendix IV constituents above the GWPS, and the Site entered Assessment of Corrective Measures. Pursuant to 40 CFR §257.95(g)(1), ADEM Admin. Code r. 335-13-15-.06(6)(g)2., and AO 19-104-GW, additional monitoring wells were installed to characterize the horizontal and vertical extent of GWPS exceedances identified during assessment monitoring in three phases of groundwater investigations between October 2019 and September 2021. These wells, along with the compliance monitoring well network, are sampled semi-annually. Delineation wells installed at the Site have been sampled concurrently with the compliance monitoring well network beginning with the first semi-annual sampling event after the well installation.

### **3.4.1 Available Monitoring Data**

Laboratory analytical data is available for the groundwater monitoring history outlined in **Section 3.4**. Tables summarizing analytical data from all previous groundwater monitoring events are included in **Appendix A, Analytical Data Summary**.

### **3.4.2 Historical Groundwater Flow**

Groundwater level monitoring was initiated with background sampling in December 2017, before Ash Pond closure and dewatering was complete. Groundwater elevation contours between December 2017 and December 2018 displayed a radial pattern of groundwater flow away from the Site. Groundwater flow interpretations suggest flow to the north, south, east, and west from this mound. Thus, wells around the periphery of the pond are all classified as downgradient.

Between December 2018 and February 2019, as the pond was dewatered, the radial groundwater flow pattern appeared to diminish, exhibiting a more north-to-south groundwater flow pattern. The observed change in flow pattern likely represents groundwater flow returning to pre-pond conditions as the hydraulic influence of the pond was eliminated by closure and dewatering.

A less prominent groundwater mound was observed just to the north of the Site during the August 2019, August 2020, October 2021, and October 2022 sampling events and appears to form a localized groundwater divide where groundwater flow bifurcates to the north (north of the divide) or to the south (south of the divide). The groundwater divide appears to be centered approximately 120 feet north of the Ash Pond, indicating north to south flow across the Ash Pond. This groundwater flow divide appears to be seasonal or temporary with occurrences during drier periods. Tables summarizing groundwater elevations from all groundwater monitoring events are included in **Appendix B, Historical Groundwater Elevations Summary**.

### **3.4.3 Monitoring Variance**

The groundwater monitoring program at the site is operating under a Variance granted by ADEM on April 15, 2019, to conform State monitoring requirements under the CCR rule to Federal requirements.

The variance:

1. Retains boron as an Appendix III detection monitoring parameter and excludes it as an Appendix IV monitoring parameter.

2. Authorizes the use of Federally-published GWPS of 0.006 milligrams per liter (mg/L) for cobalt, 0.015 mg/L for lead, 0.040 mg/L for lithium, and 0.100 mg/L for molybdenum in lieu of background where those levels are greater than background levels.

### **3.5 GROUNDWATER SAMPLING AND ANALYSIS**

Site compliance wells are sampled semi-annually between: (1) early to late fall and (2) late winter – mid-spring. The temporal spacing between sampling events is sufficient to ensure that sampling events yield independent groundwater samples and generally represent different climatic or meteorological seasons with often foster a degree of natural variability in groundwater quality.

During routine semi-annual monitoring events, all compliance and delineation network wells are sampled and analyzed for Appendix III and Appendix IV constituents. Additional general chemistry constituents (major ions and anions) are now being collected routinely as well. These non-compliance parameters will be periodically analyzed to explore seasonal or closure-related changes to geochemical facies in site groundwater.

The following subsections summarize the sequential steps and process for the sampling, handling/transport, and analysis of compliance-related groundwater samples at the site.

#### **3.5.1 Groundwater Sample Collection**

Prior to recording water levels and collecting samples, each well was opened and allowed to equilibrate to atmospheric pressure. Within a 24-hour period, depths to groundwater were measured to the nearest 0.01 foot with an electronic water level indicator with depth referenced from the top of the inner PVC well casing. Groundwater elevations were calculated by subtracting the depth to groundwater from surveyed top-of-casing (TOC) elevations.

Groundwater samples were collected from monitoring wells using low-flow sampling procedures in accordance with § 257.93(a) and ADEM Admin. Code r. 335-13-15-.06(4)(a). All monitoring wells at Plant Gadsden are equipped with a dedicated pump. Monitoring wells were purged and sampled using low-flow sampling procedures. In this procedure, field water quality parameters (pH, turbidity, conductivity, and dissolved oxygen) are measured to determine stabilization and groundwater samples are collected when the following stabilization criteria are met:

- 0.2 standard units for pH.
- 5% for specific conductance.

- 0.2 mg/L or 10% for DO > 0.5 mg/l (whichever is greater).
- Turbidity measurements less than 10 NTU.
- Temperature and ORP – record only, no stabilization criteria.

During purging and sampling, an In-Situ Aqua Troll instrument was used to monitor and record field parameters. Once stabilization was achieved, samples were collected and submitted to the laboratory following standard chain-of-custody (COC) protocol. Field data recorded in support of groundwater sampling activities are included in **Appendix C, Laboratory and Field Records**.

### **3.5.2 Sample Preservation and Handling**

Groundwater samples were collected within the designated size and type of laboratory-supplied containers required for specific parameters. Sample bottles were pre-preserved by the laboratory. Where temperature control was required, samples were placed in an ice-packed cooler and cooled to less than 6 °C immediately after collection. Blue ice or other cooling packs were not used for cooling samples. An ice-packed cooler was on hand when samples were collected.

### **3.5.3 Chain of Custody**

A chain-of-custody (COC) record was used to track sample possession from the time of collection to the time of receipt at the laboratory. All samples were handled under strict COC procedures beginning in the field. COC records are included with the analytical laboratory reports included in **Appendix C**.

### **3.5.4 Laboratory Analysis**

Laboratory analyses were performed by the APC Environmental Laboratory (APCEL) in Calera, Alabama and Pace Analytical Services, LLC (Pace). Each of these labs are accredited by National Environmental Laboratory Accreditation Program (NELAP) and maintain a NELAP certification for all parameters analyzed. **Table 2, Parameters and Reporting Limits**, lists Monitoring constituents analyzed from site groundwater samples. Laboratory reports for the monitoring period are presented in **Appendix C**.

### **3.5.5 Monitoring Period Sampling Events Summary**

As required by § 257.90(e) and ADEM Admin. Code r. 335-13-15-.06(1)(f), the following describes monitoring-related activities performed during the first semi-annual Monitoring sampling event that occurred between October 25, 2022, and October 26, 2022.

Groundwater samples were analyzed for the full list of Appendix III and Appendix IV parameters during the monitoring event. During the most recent sampling event, additional general chemistry and monitored natural attenuation monitoring parameters were sampled and analyzed. These analytes have been incorporated for continued evaluations of geochemical facies and their evolution over time. These analytes will also support geochemical modeling and evaluations associated with monitored natural attenuation. These parameters include:

- Calcium (filtered)
- Iron (total and dissolved)
- Silicon (total and dissolved)
- Silica (total and dissolved)
- Sodium (total and dissolved)
- Sulfide
- Potassium
- Aluminum (total and dissolved)
- Manganese
- Magnesium (total and filtered)
- Nitrate-Nitrite
- Total Alkalinity, Carbonate Alkalinity, Bicarbonate Alkalinity
- Total Organic Carbon.

All groundwater sampling activities were conducted by APC Field and Water Services. Pace Analytical Services performed the laboratory analyses of Radium-226 and Radium-228 (reported combined). APCEL performed the remaining Appendix III and Appendix IV analyses. Analytical data from the groundwater monitoring events is included as **Appendix C**, in accordance with the requirements of § 257.90(e)(3), and ADEM Admin. Code r. 335-13-15-.06(1)(f)3.

#### 4.0 GROUNDWATER DATA EVALUATION

During the October 2022 sampling event, depths to water ranged from 5.86 to 26.42 feet below top of casing (ft BTOC) and groundwater elevations ranged from 530.02 to 506.64 feet above mean seal level (ft NAVD). **Figure 6, Potentiometric Surface Contour Map (October 24, 2022)**, depicts groundwater elevations and inferred groundwater flow direction from higher elevation to lower. As shown on **Figure 6**, the seasonal groundwater divide is depicted north of the Ash Pond. Recent monitoring events have shown that this seasonal groundwater divide occurs during fall/dry season monitoring events. The divide during the October 2022 sampling event appears to occur or be centered along or near a straight line between GSD-AP-MW-1 and GSD-AP-MW-4.

Small magnitude vertical gradients were noted between compliance well GSD-AP-MW-2 and corresponding vertical delineation wells GSD-AP-MW-2VA, GSD-AP-MW-2VB, and GSD-AP-MW-21VC which implies that stratigraphic intervals monitored are not confined to a high degree and appear hydraulically connected.

**Figure 6** also depicts a northeast groundwater flow direction on the opposite side of the Coosa River where upgradient wells are located. The Coosa River forms a groundwater divide separating the upgradient and downgradient flow regimes. Recent groundwater elevation data have been tabulated and are included in **Table 3, Recent Groundwater Elevations Summary**. All available groundwater elevation data recorded since 2017 have been tabulated and included in **Appendix B**.

#### 4.1 GROUNDWATER FLOW VELOCITY CALCULATIONS

Groundwater flow velocity at the Site was calculated based on hydraulic gradients, hydraulic conductivity values derived from slug tests, and an estimated effective porosity of the screened horizon. To date, four slug tests have been analyzed. Based on these analyses, the horizontal hydraulic conductivities for the uppermost aquifer ranges from 2.28 ft/day and 67.75 ft/day, with 67.75 ft/day observed in a more permeable gravel zone. The geometric mean hydraulic conductivity for the Site is 12.33 ft/day. The hydraulic gradient was calculated between well pairs shown in **Appendix D, Horizontal Groundwater Flow Velocity Calculations**. The hydraulic conductivity value used in the calculations is  $4.35 \times 10^{-3}$  cm/sec or 12.33 ft/day and representative of the geometric mean. An estimated effective porosity of 20% is used in the flow rate calculations.

Horizontal flow velocity was calculated using the commonly-used derivative of Darcy's Law:



$$V = \frac{K * i}{n_e}$$

Where:

$V$  = Groundwater flow velocity  $\left(\frac{feet}{day}\right)$

$K$  = Average permeability of the aquifer  $\left(\frac{feet}{day}\right)$

$i$  = Horizontal hydraulic gradient

$n_e$  = Effective porosity

Using this equation, horizontal groundwater flow velocity is calculated for the site flow regime. **Appendix D** presents the estimated horizontal flow velocity calculated using groundwater elevation data from the October 2022 sampling event.

## 5.0 EVALUATION OF GROUNDWATER QUALITY DATA

During each sampling event, quality assurance/quality control samples (QA/QC) were collected at an interval of 1 sample per group of 10 well samples. These QA/QC samples include well duplicates, equipment blanks, and field blanks. Routine analyses of field QA/QC samples are a method for evaluating whether artificial bias could have been introduced into lab results by ways of sampling activities or equipment.

### 5.1 DATA VALIDATION QUALITY ASSURANCE/QUALITY CONTROL

Analytical precision is measured through the calculation of the relative percent difference (RPD) of two data sets generated from a similar source. Here, a comparison of results between samples and field duplicate samples are used as measure of laboratory precision. Where field duplicates are collected, the RPD between the sample and duplicate sample is calculated as:

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

Where:

RPD = Relative Percent Difference (%)

Conc1 = Higher concentration of the sample or field duplicate

Conc2 = Lower concentration of the sample or field duplicate

Where the relative percent difference is below 20%, the difference is considered acceptable, and no further action is needed. Where an RPD is greater than 20%, further evaluation is required in attempt to determine the cause of the difference and potentially result in qualified data. **Table 4a, Relative Percent Difference Calculations**, provides the relative percent differences for sample and sample duplicates during the October 2022 semi-annual sampling event. RPD calculations are only conducted on sets of valid detections as estimated concentrations and non-detects do not provide a reliable base for comparison. All RPDs were below 20% for the October 2022 sampling event with the exception of cadmium, in parent-duplicate pair GC-AP-MW-14/GC-AP-MW-14 DUP. A qualifier (+) J was needed because both of the results were greater than five times the RL.

Analytical data reviewed provided low-level or trace detections in one field blank for arsenic during the October 2022 monitoring period sampling event. **Table 4b, Field QC: Blank Detections** provides a summary of the low-level detection observed during the monitoring event. The detection was an estimated concentration, above the MDL but below the RL, and qualified in the laboratory analytical reports with “J flags.” However, if concentrations are detected above the MDL in field QC samples, original results on the (1) date of a blank detection and (2) with a value less than 5 times the field QC detection are flagged with a (+) U\* and MDL/RL values modified based upon the blank concentration.

Validated flags do not have an impact on possible statistical analyses due to: (1) low-level concentrations flagged during validation and or (2) constituents flagged are not Site COI. The extent of trace arsenic detections in blanks can be explained by a low MDL value of 0.000081 mg/L.

## **5.2 STATISTICAL METHODOLOGY AND TESTS**

The Sanitas groundwater statistical software is used to perform the statistical analyses. Sanitas is a decision support software package that incorporates the statistical tests required of Subtitle C and D facilities by EPA regulations. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015) as well as with the USEPA Unified Guidance (2009).

### **5.2.1 Appendix III Evaluation**

Intrawell prediction limits, combined with a 1-of-2 verification strategy, were constructed for fluoride and pH. Interwell prediction limits, combined with a 1-of-2 verification strategy, are used to evaluate boron, calcium, chloride, sulfate, and TDS. Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The most recent sample from each downgradient well is compared to the background limit to identify SSIs.

Groundwater Stats Consulting demonstrated that these test methods were appropriate in the April 2019 Statistical Analysis Plan. Time series plots were used to screen proposed background data for suspected outliers, or extreme values that would result in limits that are not conservative from a regulatory perspective. Suspected outliers at all wells for Appendix III parameters are formally tested using Tukey’s box plot method and, when identified, flagged in the computer database.

The following adjustments were made:

- No statistical analyses are required on wells and analytes containing 100% non-detects (EPA Unified Guidance, 2009, Chapter 6).
- When data contain <15% non-detects in the background, simple substitution of one-half the reporting limit is utilized in the statistical analysis. The reporting limit utilized for non-detects is the practical quantitation 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.
- Non-parametric prediction limits are used on data containing greater than 50% non-detects.

### 5.2.2 Appendix IV Evaluation

When in corrective action, Appendix IV constituents are sampled semi-annually, and concentrations are statistically compared to GWPS. Following the Unified Guidance, spatial variation for Appendix III parameters is tested using the ANOVA; this test is not prescribed for Appendix IV constituents. Unlike the statistical evaluation of Appendix III constituents (where single-sample results are compared to the statistical limit), Appendix IV analysis uses the pooled results from each downgradient well to develop a well-specific Confidence Interval that is compared to the statistical limit. The statistical limit is either the Interwell Tolerance limit (i.e. background) calculated using the pool of all available upgradient well data (see Chapter 7 of the Unified Guidance), or an applicable groundwater protection standard such as the MCL. Appendix IV background data are screened for outliers and extreme trending patterns that would lead to artificially elevated statistical limits.

Parametric tolerance limits (i.e. UTLs) were calculated using 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 on the number of background samples. The UTLs were then used as the GWPS.

As described in 40 CFR §257.95(h)(1)-(3) and the ADEM Variance (see **Section 3.4.3**), the GWPS is:

- (1) The maximum contaminant level (MCL) established under 40 CFR §§141.62 and 141.66.
- (2) Where an MCL has not been established:
  - (i) Cobalt 0.006 mg/l.
  - (ii) Lead 0.015 mg/l.
  - (iii) Lithium 0.040 mg/l.
  - (iv) Molybdenum 0.100 mg/l.

- (3) Background levels for constituents where the background level is higher than the MCL or rule-specified GWPS.

In corrective action monitoring, when the Lower Confidence Limit (LCL), or the entire interval, exceeds the GWPS as discussed in the USEPA Unified Guidance (2009), the result is recorded as an SSL. GWPS for Appendix IV constituents are updated on a biennial schedule. This schedule was initiated in 2019 with updates generally occurring after the second semi-annual sampling event of each biennial year. Data from upgradient wells collected between updates may still be used to support ASDs if merited.

### 5.3 STATISTICAL EXCEEDANCES

Analytical data from the October 2022 semi-annual monitoring event were statistically analyzed in accordance with the Professional Engineer (PE)-certified Statistical Analysis Plan (April 2019 and revised in August 2020) by Groundwater Stats Consulting. Appendix III statistical analysis was performed to determine if constituents have returned to background levels. Appendix IV monitoring parameters were evaluated to determine if concentrations statistically exceeded the established groundwater protection standard.

#### 5.3.1 Appendix III Constituents

Based on review of the Appendix III statistical analysis presented in **Appendix E, Statistical Analyses**, Appendix III constituents have not returned to background levels.

#### 5.3.2 Appendix IV Constituents

**Table 5, Summary of Background Levels and Groundwater Protection Standards**, summarizes the background limit established at each monitoring well and the GWPS. A summary table of the statistical limits accompanies the prediction limits in **Appendix E**.

Statistical analysis of Appendix IV data identified the following SSLs over GWPS at the listed wells during the October 2022 semi-annual monitoring event:

- GSD-AP-MW-2: Arsenic.
- GSD-AP-MW-4: Arsenic.

**Table 6, First Semi-Annual Monitoring Event Analytical Results Summary**, provides a summary of all detected constituents for the October 2022 semi-annual sampling event.

Limited groundwater analytical data is available for delineation wells installed at the Site; therefore, groundwater quality is simply compared to the GWPS. A review of analytical data derived from delineation wells revealed the following GWPS exceedances for the October 2022 semi-annual sampling event:

- GSD-AP-MW-2VA: Lithium.
- GSD-AP-MW-2VB: Fluoride, Lithium.
- GSD-AP-MW-21VC: Fluoride, Lithium.
- GSD-AP-MW-22VB: Lithium.

Fluoride was detected at a concentration exceeding the GWPS in newly installed vertical delineation wells GSD-AP-MW-2VB and GSD-AP-MW-21VC. However, it is not being considered as a potential impact from the Ash Pond. Additional discussion is presented in **Section 6.2** outlining rationale for why fluoride is not being considered an impact from the Ash Pond.

To address SSLs at the site, an ACM was prepared to evaluate potential groundwater corrective measures for the occurrence of arsenic and lithium in groundwater at the Site in accordance with § 257.96, ADEM Admin. Code r. 335-13-15-.06(7), and ADEM Administrative Order No. 19-104-GW. The ACM was completed on July 10, 2020 and submitted to ADEM and placed on the CCR compliance web site on August 9, 2020. A Groundwater Remedy Selection Report was prepared and submitted to ADEM on October 29, 2021. Subsequently, within 90 days of remedy selection, a Corrective Action Groundwater Monitoring Program was developed and submitted to ADEM on January 27, 2022, for review.

## **6.0 GROUNDWATER ASSESSMENT AND CORRECTIVE ACTION**

As required by Part F of the Order (AO 19-104-GW) and correspondence from ADEM (March 2021), this report provides an update on groundwater delineation activities completed since the submittal of the Facility Plan for Groundwater Investigation (September 30, 2019). The primary purpose of this plan and subsequent phases of work were to identify the horizontal and vertical extent of groundwater impacts defined by the EPA Appendix IV groundwater protection standards.

A comprehensive groundwater delineation report summarizing findings was submitted to ADEM in November 2020. The conclusion and results presented indicate that groundwater delineation have been completed to a sufficient degree to define the spatial extent of groundwater impacts and to inform a groundwater remedy selection plan. However, following a review of the March 2021 analytical data, it was determined that additional (Phase III) vertical delineation was necessary to further evaluate the spatial extent of lithium around wells GSD-AP-MW-2, GSD-AP-MW-2VA and GSD-AP-MW-2VB and further north and northwest in the direction of groundwater flow associated with the seasonal groundwater divide.

### **6.1 CHRONOLOGY OF DELINEATION ACTIVITIES**

Initially, Semi-Annual Progress Reports were to be routinely provided to ADEM in May and November, annually. Alabama Power Company (APC) requested approval to combine information typically provided in the Semi-Annual Progress Reports with Semi-Annual Groundwater Monitoring and Corrective Action Reports on March 15, 2021. ADEM approved this approach and revised timeline for submittals on March 16, 2021. APC will now provide the Department with a discussion of delineation results and corrective action activities in each semi-annual groundwater monitoring and corrective action report (February; August) until released in writing.

#### **6.1.1 Delineation Wells**

Part C of the Order required the installation of additional wells as necessary to define the extent of groundwater impacts. The following sections describe monitoring wells installed to delineate impacts to groundwater.

#### **Phase I – Groundwater Investigation (June 2019 – April 2020)**

Phase I was conducted between the dates of June 5, 2019, to April 16, 2020. **Table 1b** and **Figure 5** present details and locations of the on-site delineation wells.

The following summarizes all activities that were completed during Phase I of groundwater delineation at the site:

- Installation of three horizontal delineation wells (GSD-AP-MW-18H through GSD-AP-MW-20H) north of compliance wells GSD-AP-MW-2 and GSD-AP-MW-4, and in areas historically interpreted as downgradient of the Ash Pond, between June 5, 2019 and October 24, 2019. Horizontal delineation wells were installed in coarse fractions of water-bearing alluvial deposits or in shallow, weathered intervals of the Conasauga formation.
- Installation of three vertical delineation wells (GSD-AP-MW-2V, GSD-AP-MW-2VA, and GSD-AP-MW-4V) adjacent to monitoring wells GSD-AP-MW-2 and GSD-AP-MW-4. GSD-AP-MW-2 and GSD-AP-MW-4 had historically exhibited elevated concentrations of Appendix IV constituents. Vertical delineation wells targeted more permeable/fractured water-bearing zones within the Conasauga formation in the upper 50 feet of bedrock.
- Vertical delineation well GSD-AP-MW-2VA was installed because the initial attempt (GSD-AP-MW-2V) at vertical delineation proximal to GSD-AP-MW-2 did not yield sufficient groundwater for well development or sampling. As a result, GSD-AP-MW-2V has been converted to a temporary piezometer.
- Successfully developed the three horizontal and two vertical delineation wells between June 25, 2019 and April 14, 2020.
- Sampled the delineation wells between April 13, 2020 and April 16, 2020.
- Submitted a Groundwater Investigation Report to the Department on May 22, 2020. This report recommended a second phase of groundwater investigation to complete delineation of groundwater impacts as required by Part C of the Order.
- Submitted an Assessment of Corrective Measures to the Department on July 10, 2020 as required by Part D of the Order.
- Submitted the 2020 Annual Groundwater Monitoring and Corrective Action Report to document groundwater monitoring activities and results from the August 2019 and April 2020 semi-annual monitoring events on August 1, 2020.

### **Phase II – Groundwater Investigation – March 2021 to July 2021**

Field work for Phase II was conducted during March 2021 and included the installation of an additional, deeper vertical delineation well. GSD-AP-MW-2VB was installed in the vicinity of compliance well GSD-AP-MW-2 and vertical delineation well GSD-AP-MW-2VA to further evaluate the depth of potential impacts. The well was installed, developed, and sampled during the second semi-annual event in March 2021.



### **Phase III – Groundwater Investigation – August 2021 to Present**

Field work for Phase III was conducted between August 2021 October 2021 and included the installation additional vertical delineation wells to further evaluate the depth of potential impacts. The following summarizes all activities that were completed during Phase III of groundwater delineation at the site:

- Installation of one additional vertical delineation well (GSD-AP-MW-2VC) to vertically delineate groundwater impacts at the Site in proximity to the GSD-AP-MW-2, GSD-AP-MW-2VA, and GSD-AP-MW-2VB well locations.
- Installation of two additional vertical delineation well (GSD-AP-MW-21VB and GSD-AP-MW-21VC) to vertically delineate groundwater impacts at the Site to the north of GSD-AP-MW-2, GSD-AP-MW-2VA, and GSD-AP-MW-2VB well locations and in the direction of historical groundwater flow.
- Installation of two additional vertical delineation well (GSD-AP-WW-22VB and GSD-AP-MW-23VB) to vertically delineate groundwater impacts at the Site to the north in the direction of historical groundwater flow.
- Successfully developed and sampled vertical delineation wells GSD-AP-MW-21VC and GSD-AP-WW-22VB. Wells GSD-AP-MW-21VB, GSD-AP-MW-2VC, and GSD-AP-MW-23VB did not yield sufficient groundwater for well development or sampling and have been designated as water level only piezometers.

Phase III delineation field work concluded with the first semi-annual groundwater sampling event in October 2021, and a discussion of the results are included in the following sections.

## **6.2 DISCUSSION OF DELINEATION RESULTS**

Groundwater Monitoring and Corrective Action reports for the Plant Gadsden Ash Pond have historically identified SSLs in groundwater for arsenic and lithium in compliance well GSD-AP-MW-2 and arsenic in compliance well GSD-AP-MW-4. Lithium is no longer an SSL in GSD-AP-MW-2 and recent analytical results have identified only lithium concentrations above GWPS in deeper vertical delineation wells GSD-AP-MW-2VA, GSD-AP-MW-2VB, GSD-AP-MW-21VC, and GSD-AP-MW-22VB.

However, these new vertical delineation wells are screened in a deeper section of the Conasauga Formation, which has different geochemical characteristics and can introduce new types of variability not observed in shallow site wells. These data are not congruent with the previous conceptual site model (CSM) that

attributes the source of lithium to the ash pond; rather, the data suggest that natural, geogenic sources for lithium may exist. The Conasauga shale/mudstone formation at the Site may be a geogenic source of lithium to deeper groundwater. Among the common rock or sediment types, the highest lithium concentrations occur in shales (average 66 parts per million lithium; USGS 2017), which is more than enough lithium to produce the observed concentrations in deeper groundwater at the Site. Existing monitoring data supporting a natural source includes:

- Geochemical facies consistent with ancient or old water (Sodium Chloride Type)
- Linear increase in lithium concentration as a function of well depth
- Increase in lithium concentration also associated with rock formation
- Higher pH indicating longer residence time and water-rock interactions
- Elevated sodium and fluoride

A geogenic investigation work plan to investigate the potential natural geogenic sources of lithium is currently being conducted. The geogenic investigation is composed of two major components: (1) determine if lithium is present in bedrock and could be released to groundwater and (2) determine by various geochemical methods if ash pond water may have impacted deeper groundwater. This approach provides multiple lines of evidence to assess a geogenic source for lithium.

Additionally, with the most recent phase of groundwater investigation and monitoring, fluoride exceedances were observed in vertical delineation wells GSD-AP-MW-2VB and GSD-AP-MW-21VC during recent semi-annual sampling events in October 2021, May 2022, and October 2022. However, it is not being considered as a potential impact from the Ash Pond. The reasons for this determination are date driven: (1) fluoride impacts have not been observed historically in the uppermost aquifer or other site delineation wells (including paired locations GSD-AP-MW-2, GSD-AP-MW-2VA) and (2) GSD-AP-MW-2VB and GSD-AP-MW-21VC are new wells, screened in a deeper section of the Conasauga Formation, which has different geochemical characteristics and can introduce new types of variability not observed in shallow site wells. Groundwater quality obtained from recently installed wells also have the potential to provide (temporary) unrepresentative results as the physical processes utilized during the boring and well installation process can disrupt equilibrium conditions for months to years.

Isoconcentration maps for arsenic and lithium are presented in **Figure 7 Arsenic Isoconcentration Map (October 2022)** and **Figure 8 Lithium Isoconcentration Map (October 2022)**, respectively. Geologic profiles depicting arsenic and lithium concentrations in cross-section are presented in **Figure 9 Arsenic Concentrations along Geologic Cross-Section A-A'** and **Figure 10 Lithium Concentrations along**

**Geologic Cross-Section A-A'**, respectively. **Table 6** identifies Appendix IV constituents in delineation wells with concentrations above GWPS.

Isoconcentration lines shown on **Figures 7** and **8** are data-driven contours derived from the spatial distribution of constituent concentrations in the well network. When spatially distributed objects are spatially correlated (objects close to together have similar characteristics) interpolation analysis can be used to predict “unknowns” between objects. ArcGIS and geostatistical analyst are utilized to interpolate chemical concentrations between well locations. This process involves the transformation of chemical concentration data to log-normal distribution prior to interpolation. In cases where concentrations decrease below the GWPS in between well pairs, the extent of groundwater impacts are interpreted from the interpolated (predicted) data set. This method takes into account the spatial pattern of decreasing concentrations observed in nearby wells.

The location and spacing of delineation wells are largely based upon the following goals and site factors:

1. Determine if impacts to groundwater could extend off-site in the direction of groundwater flow away from the facility.
2. Evaluate potential for vertical migration adjacent to compliance wells with SSLs and within the context of site hydrogeology.
3. Address key data gaps between phases – working in from property line or off-site depending on gaps.
4. Ability to safely access locations with drill rig and supporting equipment.
5. Occurrence of groundwater and sufficient groundwater yield/recharge at locations.
6. Delineate extent of impacts and capture additional hydrogeologic data necessary to evaluate the feasibility of groundwater remediation technologies.

As shown on **Table 1b**, nine delineation wells have been installed at the site to assess potential impacts. Additionally, as shown on **Table 1c**, four delineation wells were installed but did not produce sufficient water to sample and were designated as water-level only piezometers.

### **6.2.1 Arsenic Delineation**

As shown on **Figures 7** and **9** arsenic impacts to groundwater include two compliance wells GSD-AP-MW-2 and GSD-AP-MW-4. Phase I groundwater delineation activities were executed to continue the investigation of impacts to groundwater at Plant Gadsden and delineation wells were installed to define the horizontal and vertical extent of Appendix IV exceedances. In addition, existing downgradient piezometers

GSD-AP-PZ-1, GSD-AP-PZ-2, GSD-AP-PZ-5, and GSD-AP-PZ-6 were also sampled and utilized in delineation of Appendix IV exceedances.

Arsenic concentrations in well GSD-AP-MW-2 have declined since October 2018 and the completion of ash pond closure. Arsenic concentrations in compliance well GSD-AP-MW-2 fluctuate but exhibit an overall decrease from 1.01 mg/L in October 2018 to 0.424 mg/L in October 2021 to 0.555 mg/L in October 2022.

Compliance well GSD-AP-MW-4 has displayed a consistent or overall flat trend since sampling began in 2017. However, arsenic concentrations in well GSD-AP-MW-4 demonstrate a distinctive seasonal overprint pattern of higher concentrations in Fall/Winter sampling events and lower concentrations in spring sampling events. The magnitude of these seasonal trends is small with variations typically around 0.001 to 0.002 mg/L or presented differently, concentration variations of 9-11% between events. It should be noted that the average concentration (0.0128 mg/L) is just above the GWPS (0.01 mg/L). While arsenic does not show a decreasing trend, boron in well GSD-AP-MW-4, has shown an overall decreasing trend from 0.510 to 0.371 mg/L between December 2018 and the most recent sampling event. This indicates that throughout this period pond closure activities have had a positive impact on limiting CCR sources of COI and reducing concentrations overall. Arsenic concentrations and fluctuations in GSD-AP-MW-4 likely represent a geochemical dynamic of sorption and desorption from aquifer minerals.

Arsenic concentrations have not been detected above GWPS in horizontal delineation wells GSD-AP-MW-18H, GSD-AP-MW-19H, and GSD-AP-MW-20H or vertical delineation wells GSD-AP-MW-2VA and GSD-AP-MW-4V installed north of compliance wells GSD-AP-MW-2 and GSD-AP-MW-4 which are areas historically interpreted as downgradient of the Ash Pond. Vertical delineation wells targeted more permeable/fractured water-bearing zones within Conasauga Formation bedrock in the upper 50 feet of bedrock. Vertical delineation well GSD-AP-MW-2VA was installed because the initial attempt (GSD-AP-MW-2V) at vertical delineation proximal to GSD-AP-MW-2 did not yield sufficient groundwater for well development. As a result, GSD-AP-MW-2V has been converted to a temporary piezometer. Phase II and Phase III vertical delineation wells were installed to further evaluate the spatial extent of lithium around wells GSD-AP-MW-2 and GSD-AP-MW-2VA and further north and northwest in the direction of groundwater flow associated with the seasonal groundwater divide. Arsenic concentrations have not been detected above GWPS in Phase II or III vertical delineation wells GSD-AP-MW-2VB, GSD-AP-MW-21VC, or GSD-AP-MW-22VB. As shown on **Figures 7 and 9**, analytical results for arsenic in horizontal and vertical delineation wells have been below GWPS and is sufficiently delineated laterally and vertically at the Site.

### 6.2.2 Lithium Delineation

Phase I and II of groundwater delineation also explored the extent of potential lithium impacts to groundwater in the vicinity of GSD-AP-MW-2. Analytical results from horizontal delineation wells have been below the GWPS for lithium as shown on **Figures 8 and 10**.

As described previously, the results from existing compliance wells installed near the northern waste boundary (GSD-AP-PZ-1, GSD-AP-PZ-2, GSD-AP-PZ-5, and GSD-AP-PZ-6) supplement delineation efforts to the north. These wells continued to be non-detect for lithium and thus, provide no indications of off-site migration.

Vertical delineation results obtained from GSD-AP-MW-2VA showed lithium concentrations above GWPS during the August 2020 sampling event with concentrations increasing with depth from MW-2 to MW-2VA. Additionally, an upward hydraulic gradient was noted at the well pair GSD-AP-MW-2 and GSD-AP-MW-2VA where groundwater appeared to be flowing from deeper intervals towards the shallow water table. To continue vertical delineation, a second deeper vertical delineation well, GSD-AP-MW-2VB, was installed to further assess groundwater conditions in the vicinity of compliance well GSD-AP-MW-2. Results from the recent May 2022 and October 2022 sampling events continue to indicate increased lithium concentrations with depth. The lithium concentration exhibited in vertical delineation well GSD-AP-MW-2VB was approximately twice the concentration exhibited in vertical delineation well GSD-AP-MW-2VA, and over four times the concentration exhibited in the shallow compliance well GSD-AP-MW-2. Additional vertical delineation wells were installed to further evaluate lithium around wells GSD-AP-MW-2, GSD-AP-MW-2VA, and GSD-AP-MW-2VB further north and northwest in the direction of groundwater flow. Two vertical delineation wells GSD-AP-MW-21VC and GSD-AP-MW-22VB exhibited lithium concentrations of above GWPS during the October 2021, May 2022, and October 2022 semi-annual sampling events continuing to indicate increased lithium concentrations with depth.

Lithium concentrations in compliance well GSD-AP-MW-2 remained below the GWPS for the fourth time during the October 2022 sampling event and is no longer an SSL. The decreasing lithium concentration trend in GSD-AP-MW-2 began between October 2018 and February 2019, which correlates exactly with the timing and disappearance of the radial flow pattern described in **Section 3.2.2**

### 6.3 STATUS OF DELINEATION

A comprehensive groundwater delineation report summarizing findings was submitted to ADEM in November 2020. The conclusion and results presented indicate that groundwater delineation have been completed to a sufficient degree to define the spatial extent of groundwater impacts and to inform a

groundwater remedy selection plan. However, following a review of the March 2021 analytical data, it was determined that additional (Phase III) vertical delineation was necessary to further evaluate the spatial extent of lithium around wells GSD-AP-MW-2, GSD-AP-MW-2VA and GSD-AP-MW-2VB and further north and northwest in the direction of groundwater flow associated with the seasonal groundwater divide.

As presented in **Section 6.2**, the horizontal and vertical extent of arsenic impacts have been successfully delineated, and no future actions are planned. Lithium impacts appear to be delineated laterally but are not yet fully delineated in the vertical sense. Additional sampling and geochemical analyses will be performed to evaluate groundwater quality in deep rock intervals where constituents and concentrations may vary from the more-shallow monitoring network naturally.

#### **6.4 GEOGENIC EVALUATION**

A geogenic investigation work plan to investigate the potential natural geogenic sources of lithium is currently being conducted. Because lithium concentrations tend to increase with depth in vertical delineation wells, a clay zone separates rock from the overlying alluvial aquifer, and an initial review of water chemistry data suggests differences in water chemistry between groundwater in the alluvial aquifer and rock aquifer, a natural source of lithium (possibly Conasauga shale) is suspected. A geogenic study of lithium was, therefore, initiated. The following activities have been accomplished:

- Existing reports, geologic logs, and water quality data have been reviewed.
- Groundwater quality data have been plotted on Piper diagrams to determine if there are distinct differences in water types between the unconsolidated sediments (alluvial aquifer) and bedrock. Based on information gathered, there appear to be distinct water quality differences between the unconsolidated sediments and bedrock zones.
- Groundwater data have been evaluated and correlation plots have been conducted to determine whether there were strong relationships between groundwater parameters and lithium. For example, lithium is correlated with fluoride, which suggests fluorine-bearing minerals may be a source of lithium.
- An initial evaluation on the geological units and potential for permeability and groundwater flow isolation or retardation has been conducted.
- Initial laboratory testing of on-site geologic units is in process for lithium. This data will help us determine if there are distinct variations in lithium concentrations with depth and geologic units.

Work, either ongoing or scheduled to be performed, includes the following:

- Additional evaluation of potential confinement between geologic zones will be evaluated.
- Unconsolidated zone and bedrock core sample laboratory analysis for physical parameter(s), mineralogy, and geochemistry are planned to be conducted and will be evaluated.
- Evaluate the vertical distribution of arsenic and lithium in the unconsolidated material overlying the bedrock and in the upper portion of the mudstone. This information would help further evaluate the distribution of these constituents in the subsurface and determine which of the intervals could be the source in several monitoring wells.

## 6.5 GROUNDWATER QUALITY CHANGES AND TRENDS

Important groundwater quality changes or trends have been noted in **Section 6.2**. The key findings include:

- Arsenic concentrations exceeding GWPS are limited to two compliance wells GSD-AP-MW-2 and GSD-AP-MW-4. Arsenic has been delineated laterally and vertically.
- Arsenic concentrations in compliance well GSD-AP-MW-2 fluctuate seasonally but exhibit an overall decrease from 1.01 mg/L in October 2018 to 0.424 mg/L in October 2021 to 0.555 mg/L in October 2022.
- Arsenic concentrations in compliance well GSD-AP-MW-4 historically have exhibited a trend of fluctuating concentrations of just slightly above GWPS with an average concentration of 0.0128 mg/L.
- Lithium concentrations in compliance well GSD-AP-MW-2 have decreased to below GWPS during the last four sampling events in March 2021, October 2021, May 2022, and October 2022 and is no longer an SSL.
- Recent analytical results have identified only lithium concentrations above GWPS in deeper vertical delineation wells GSD-AP-MW-2VA, GSD-AP-MW-2VB, GSD-AP-MW-21VC, and GSD-AP-MW-22VB. A geogenic investigation will be performed to evaluate groundwater quality in deep rock intervals where constituents and concentrations may vary from the more-shallow monitoring network naturally.

Additionally, annualized averages from waste boundary compliance wells suggest overall improvements in groundwater quality. Increasing ORP and decreasing pH, conductivity, and boron at the waste boundary show a reduction of CCR influence and an increase in meteoric signatures. Changes such as increasing ORP can play a significant role in arsenic reduction. Annual averages are summarized below.

<b>Annualized Averages – Boundary Compliance Wells</b>				
<b>Year</b>	<b>Boron (mg/L)</b>	<b>Conductivity (Us/cm)</b>	<b>ORP (mv)</b>	<b>Field_pH (SU)</b>
2017	0.39	576	-25.9	6.56
2018	0.37	525	-13.4	6.41
2019	0.35	498	17.9	6.21
2020	0.34	438	21.3	6.27
2021	0.31	457	41.4	6.25
2022	0.3	444	38.7	6.16

Furthermore, statistically decreasing trends for appendix III parameters are noticeably clustered in northern boundary wells. This clustering may be related to the dissipation of radial groundwater flow since closure.

**Statistically Decreasing:**

- Boron: GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-4, and GSD-AP-MW-5
- Calcium: GSD-AP-MW-1, GSD-AP-MW-2, and GSD-AP-MW-3
- Chloride: GSD-AP-MW-17 (upgradient), GSD-AP-MW-3, and GSD-AP-MW-5
- pH: GSD-AP-MW-16 (upgradient)and GSD-AP-MW-11
- TDS: GSD-AP-MW-1, GSD-AP-MW-2, and GSD-AP-MW-3.



## 7.0 GROUNDWATER REMEDY AND CORRECTIVE ACTION

An Assessment of Corrective Measures (ACM) for groundwater impacts was conducted and formally submitted to ADEM in July 2020. Additional data analyses and investigations conducted since the ACM culminated with a more detailed Groundwater Remedy Selection Report, submitted in October 2021, and a Corrective Action Groundwater Monitoring Program document submitted in January 2022.

Submittal	Submittal Date	Purpose
Assessment of Corrective Measures	07/2020	Initial evaluation of the feasibility, performance, and implementation of known and emerging groundwater remediation technologies against site conditions and factors.
Groundwater Remedy Selection Report	10/2021	Formal selection and detailed description of groundwater remedies selected for implementation at the site.
Corrective Action Groundwater Monitoring Program	01/2022	Plan document to describe process and program for implementation and monitoring of groundwater remedies selected at the site.

### 7.1 GROUNDWATER REMEDY SELECTION

The Groundwater Remedy Selection Report described the selected remedies for groundwater corrective actions at the site:

- Source control (complete) that included dewatering, consolidation, capping of the Site.
- Geochemical manipulation via injections in areas of relatively high concentrations of constituents of interest (COI) to remove them from groundwater and immobilize them in situ.
- Monitored natural attenuation (MNA) over the entire Site.

Closure of the Site, which included dewatering, consolidation, and capping, has reduced source contributions to groundwater. Geochemical manipulation via injections was selected because of its effectiveness, ease of implementation, versatility (ability to treat more than one COI with the same treatment solution), ability to implement in areas with limited working space, and lack of byproducts that

would require further treatment or disposal. MNA was selected because substantial evidence indicates that it is currently occurring at the Site.

## **7.2 CORRECTIVE ACTION – GROUNDWATER MONITORING PROGRAM**

The Corrective Action Groundwater Monitoring Program describes early plans for implementation and monitoring of groundwater remedies described above. As discussed in the Groundwater Remedy Selection Report (Anchor QEA 2021), construction activities associated with closure reached substantial completion in August 2018. Site closure included removal of free water, dewatering the CCR material, grading the Site to promote drainage, and installing a final cover consisting of a low-permeability cover system consisting of synthetic turf and geomembrane. The final cover was constructed over the consolidated footprint of the CCR unit, which has an area of approximately 55 acres.

In addition to continued rule-required monitoring, the objectives of this Monitoring Program are to demonstrate that horizontal and vertical delineation remain complete, demonstrate that natural attenuation is occurring, evaluate groundwater remedy performance against groundwater protection standards, evaluate groundwater constituent of interest concentrations with respect to standards protective of potential human and ecological receptors, and evaluate system performance against adaptive triggers to determine if adaptation or change to the remedy system is necessary.

For the first 2 years (2022 through 2024), background (in time) monitoring will be conducted to establish post-closure baseline Site conditions with respect to MNA parameters. After the 2-year period, the baseline data will be evaluated, and subsequent adjustments to the Monitoring Program may be implemented. Specific adaptive triggers for MNA monitoring will also be developed after the initial 2-year background monitoring.

MNA and source control (Site closure) will operate in conjunction with each other as remedies. Site closure appears to be reducing source contributions of COIs to groundwater. Geochemical manipulation via injections will be implemented after completion of successful laboratory treatability studies, issuance of an underground injection control permit, and installation of injection and additional monitoring wells associated with the injection areas. The following tasks outline the first phase of the implementation and monitoring of selected groundwater remedies.

Selected Remedy	Implementation Task(s)
Monitored Natural Attenuation	1. Implementation of expanded MNA sampling parameters.  2. Further assessment of MNA monitoring network.
Geochemical Injection	1. Complete laboratory treatability studies to evaluate reagent composition, dosing, effectiveness, and sequencing for in situ groundwater treatment of constituents of interest (COIs) via injection. Results from the treatability studies would be incorporated into an Underground Injection Control (UIC) permit application for the Site.  2. Implementation of geochemical injection pilot tests using data collected from the laboratory treatability studies and issuance of an UIC permit.

**Implementation of Monitored Natural Attenuation**

MNA sampling parameters were added to the sampling plans and analyzed in the laboratory during the May 2022 sampling event (**Table 7**). These parameters in addition to field parameters, Appendix III, and Appendix IV parameters are utilized to study the processes that govern or facilitate MNA as well as changes in geochemical conditions. Parameters will be included in the site geochemical model.

**Geochemical Injection Pilot Testing Program**

Laboratory treatability studies using Site aquifer media and impacted groundwater to evaluate reagent composition, dosing, effectiveness, and sequencing (if applicable) for in situ groundwater treatment of COIs via injection is currently being conducted. The Laboratory Treatability Study Work Plan is presented in

**Appendix F.** Treatability tests include the following tasks and procedures prior to field implementation of an injection treatment pilot study.

- Selection and formulation of reagent solutions based on previous similar studies.
- Batch testing using multiple treatment solutions to determine the most effective formulations to carry forward to column testing.
- Column testing to better simulate field conditions, determine effectiveness, and evaluate potential release of COIs due to treatment (unintended consequences).
- Post-column testing, using selective sequential extraction, on treated soils to determine the long-term stability of the accumulated COIs.
- Results from the treatability studies would be incorporated into an Underground Injection Control permit application to be submitted to ADEM for approval prior to field implementation of an injection treatment pilot study.

The tentative schedule for this initial foundation phase is outlined as:

- Aquifer solids (soils) and groundwater sample collection from the selected pilot test areas – First and Second quarters of 2022 (completed).
- Laboratory batch and column testing, and selective sequential extraction of treated soil (in-progress).
- Underground Injection Permit application – Third quarter 2023.
- Geochemical Injection Pilot Program – TBD, pending requisite documents and approvals supporting the injection program.

## 8.0 SUMMARY AND CONCLUSIONS

The first semi-annual monitoring event was conducted in October 2022. Statistical evaluations of the monitoring data identified SSLs of the Appendix IV constituent arsenic above the GWPS. To address previously identified SSLs, a Groundwater Remedy Selection Report was prepared and submitted to ADEM on October 29, 2021. Subsequently, within 90 days of remedy selection, a Corrective Action Groundwater Monitoring Program was developed and submitted to ADEM on January 27, 2022, for review.

The Corrective Action Groundwater Monitoring Program was prepared to detect potential downgradient changes in groundwater quality and assess the efficacy of the selected groundwater corrective action remedies. The Monitoring Program will supplement the ongoing CCR compliance groundwater monitoring currently being performed at the Site. The following future actions will be taken or are recommended for the site:

- Complete the Laboratory Treatability Studies and draft and submit a Class V Underground Injection Control (UIC) permit application for the geochemical manipulation via injections that was selected as one of the corrective measures as described in the Groundwater Remedy Selection Report and will be included in a Class V UIC permit application. The laboratory treatability studies include the following tasks:
  - Conduct batch testing to evaluate removal of COIs, and selection of the optimum reagents and doses for column tests.
  - Conduct column testing to evaluate removal of COIs by mixing treatment reagents with site-specific impacted groundwater and applying to site-specific soils (aquifer solids) in columns; Appendix III and IV constituents will be measured in the column effluents to determine the reduction of COIs in groundwater, and to evaluate any unintended consequences of treatment (e.g., release of constituents from soils).
  - Conduct selective sequential extraction of post-column (treated) soils to help determine the sequestration mechanisms and stability of the COIs and their host solids.
  - After treatment, the post-column (treated) soils will be leached with upgradient (background) groundwater from the Site in additional column studies, to help assess long-term stability of the COIs and their host solids.
- Complete the geogenic investigation work plan to evaluate if Site bedrock (Conasauga shale/mudstone) may be a geogenic source of lithium to deeper groundwater in recently installed vertical delineation wells that exhibit increasing lithium concentrations with depth to include the following tasks:
  - Additional evaluation of potential confinement between geologic zones will be evaluated.

- Unconsolidated zone and bedrock core sample laboratory analysis for physical parameter(s), mineralogy, and geochemistry are planned to be conducted and will be evaluated.
- Research being conducted on natural lithologic deposits that contain lithium or have an association with lithium will be completed.
- Conduct the second semi-annual monitoring event and submit the annual groundwater monitoring and corrective action report summarizing the findings to ADEM by August 1, 2023.

## 9.0 REFERENCES

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# Tables



**Table 1a. - Compliance Monitoring Well Network Details  
Plant Gadsden Ash Pond**

Well ID	Hydraulic Location	Geologic Unit	Latitude	Longitude	Ground Surface Elevation (ft NAVD)	Top Of Casing Elevation (ft NAVD)	Well Depth (ft BTOC)	Top Of Screen Elevation (ft NAVD)	Bottom Of Screen Elevation (ft NAVD)	Screen Length (ft)	Date Of Installation
<b>WELL NETWORK</b>											
GSD-AP-MW-14	Upgradient	Alluvium	34.01101	-85.96841	545.49	548.34	32.8	525.90	515.90	10	3/27/2018
GSD-AP-MW-16	Upgradient	Alluvium	34.01086	-85.96891	553.08	555.83	36.2	530.00	520.00	10	9/20/2018
GSD-AP-MW-17	Upgradient	Alluvium	34.01036	-85.96866	546.88	550.11	62.8	497.73	487.73	10	9/24/2018
GSD-AP-MW-10	Downgradient	Alluvium	34.01752	-85.97338	527.70	530.91	48.4	492.89	482.89	10	8/3/2017
GSD-AP-MW-11	Downgradient	Alluvium	34.01615	-85.97171	514.18	517.01	34.0	493.41	483.41	10	7/17/2013
GSD-AP-MW-12	Downgradient	Alluvium	34.01662	-85.96922	518.73	521.82	31.8	500.47	490.47	10	7/17/2013
GSD-AP-MW-1	Downgradient	Alluvium	34.01809	-85.96893	523.48	526.37	27.8	508.98	498.98	10	8/8/2017
GSD-AP-MW-2	Downgradient	Alluvium	34.01929	-85.97051	523.04	526.16	28.2	508.39	498.39	10	8/10/2017
GSD-AP-MW-3	Downgradient	Alluvium	34.02036	-85.97215	523.68	526.80	27.5	509.75	499.75	10	8/11/2017
GSD-AP-MW-4	Downgradient	Alluvium	34.02107	-85.97287	517.27	520.60	26.3	504.73	494.73	10	7/15/2013
GSD-AP-MW-5	Downgradient	Alluvium	34.02208	-85.97386	513.26	516.27	26.9	499.79	489.79	10	8/15/2017
GSD-AP-MW-6	Downgradient	Alluvium	34.02311	-85.9759	512.09	515.23	26.3	499.38	489.38	10	8/3/2017
GSD-AP-MW-7	Downgradient	Alluvium	34.02142	-85.97702	517.05	519.86	30.3	499.96	489.96	10	7/16/2013
GSD-AP-MW-8	Downgradient	Alluvium	34.01903	-85.97735	516.02	519.22	32.7	496.94	486.94	10	8/2/2017
GSD-AP-MW-9	Downgradient	Alluvium	34.01809	-85.97538	517.41	520.36	35.2	495.57	485.57	10	7/16/2013
GSD-AP-PZ-1	Downgradient	Alluvium	34.02224	-85.97234	518.80	521.64	27.5	504.57	494.57	10	8/14/2017
GSD-AP-PZ-2	Downgradient	Alluvium	34.02369	-85.97598	513.46	516.49	23.9	502.95	492.95	10	8/16/2017
GSD-AP-PZ-5	Downgradient	Alluvium	34.0209	-85.9692	521.36	524.26	30.8	503.89	493.89	10	3/28/2018
GSD-AP-PZ-6	Downgradient	Alluvium	34.02082	-85.97066	516.69	519.60	22.4	507.65	497.65	10	3/28/2018

**Notes:**  
 ft = feet; ft NAVD = elevation in feet, referenced to North American Vertical Datum; ft BTOC = depth, referenced in feet below top of casing  
 (1) Coordinates have been transformed into WGS84 from NAD 27/83, State Plane, Alabama, feet.  
 (2) Vertical elevations are in feet relative to the North American Vertical Datum (NAVD)1988.  
 (3) Total well depth accounts for sump if data provided on well construction logs.



**Table 1b. - Delineation Well Network Details  
Plant Gadsden Ash Pond**

Well ID	Hydraulic Location	Geologic Unit	Latitude	Longitude	Ground Surface Elevation (ft NAVD)	Top Of Casing Elevation (ft NAVD)	Well Depth (ft BTOC)	Top Of Screen Elevation (ft NAVD)	Bottom Of Screen Elevation (ft NAVD)	Screen Length (ft)	Date Of Installation
<b>WELL NETWORK</b>											
GSD-AP-MW-2VA	Vertical Delineation	Conasauga Formation	34.01938	-85.97044	521.54	524.94	78.6	456.79	446.79	10	1/30/2020
GSD-AP-MW-2VB	Vertical Delineation	Conasauga Formation	34.01951	-85.97042	519.74	522.56	105.5	427.44	417.44	10	3/6/2021
GSD-AP-MW-4V	Vertical Delineation	Conasauga Formation	34.02103	-85.97282	517.56	520.33	44.8	485.98	475.98	10	10/22/2019
GSD-AP-MW-21VC	Vertical Delineation	Conasauga - Knox Contact (Fault Zone)	34.01962	-85.97032	519.00	521.13	157.6	373.90	363.90	10	8/24/2021
GSD-AP-MW-22VB	Vertical Delineation	Conasauga - Knox Contact (Fault Zone)	34.02005	-85.97023	515.48	518.01	52.6	475.81	465.81	10	8/27/2021
GSD-AP-MW-18H	Horizontal Delineation	Alluvium	34.01929	-85.96866	522.28	524.45	27.6	507.25	497.25	10	10/24/2019
GSD-AP-MW-19H	Horizontal Delineation	Alluvium	34.02013	-85.97054	513.95	517.32	22.1	505.64	495.64	10	10/24/2019
GSD-AP-MW-20H	Horizontal Delineation	Alluvium	34.02113	-85.97273	514.28	516.68	20.3	506.79	496.79	10	10/24/2019

**Notes:**  
 ft = feet; ft NAVD = elevation in feet, referenced to North American Vertical Datum; ft BTOC = depth, referenced in feet below top of casing  
 (1) Coordinates have been transformed into WGS84 from NAD 27/83, State Plane, Alabama, feet.  
 (2) Vertical elevations are in feet relative to the North American Vertical Datum (NAVD)1988.  
 (3) Total well depth accounts for sump if data provided on well construction logs.



**Table 1c. - Piezometer Well Network Details  
Plant Gadsden Ash Pond**

Well ID	Hydraulic Location	Geologic Unit	Latitude	Longitude	Ground Surface Elevation (ft NAVD)	Top Of Casing Elevation (ft NAVD)	Well Depth (ft BTOC)	Top Of Screen Elevation (ft NAVD)	Bottom Of Screen Elevation (ft NAVD)	Screen Length (ft)	Date Of Installation
<b>WELL NETWORK</b>											
GSD-AP-MW-2V	Piezometer	Conasauga Formation	34.01932	-85.97048	522.90	525.31	62.4	473.31	463.31	10	10/24/2019
GSD-AP-MW-2VC	Piezometer	Conasauga Formation	34.01945	-85.9705	520.45	522.87	139.9	427.44	417.44	10	8/22/2021
GSD-AP-MW-21VB	Piezometer	Conasauga - Knox Contact (Fault Zone)	34.01969	-85.97025	517.72	520.24	105.4	425.28	415.28	10	8/26/2021
GSD-AP-MW-23VB	Piezometer	Conasauga - Knox Contact (Fault Zone)	34.0208	-85.97068	516.58	519.03	102.7	426.70	416.70	10	8/30/2021

**Notes:**  
 ft = feet; ft NAVD = elevation in feet, referenced to North American Vertical Datum; ft BTOC = depth, referenced in feet below top of casing  
 (1) Coordinates have been transformed into WGS84 from NAD 27/83, State Plane, Alabama, feet.  
 (2) Vertical elevations are in feet relative to the North American Vertical Datum (NAVD)1988.  
 (3) Total well depth accounts for sump if data provided on well construction logs.



## Table 2. Parameters And Reporting Limits

Plant Gadsden Ash Pond  
10/25/2022 - 10/26/2022

Appendix III Parameters			
Parameters	Analytical Methods	Reporting Limits	Units of Measure
Boron	EPA 200.7	0.1015	mg/L
Calcium	EPA 200.7	0.406-4.06	mg/L
Chloride	SM4500Cl E	1-10	mg/L
Fluoride	SM4500F G 2017	0.125-0.25	mg/L
pH_Field	Field Sampling	NA	SU
Sulfate	SM4500SO4 E 2011	2-50	mg/L
TDS	NA	NA	mg/L
Appendix IV Parameters			
Parameters	Analytical Methods	Reporting Limits	Units of Measure
Antimony	EPA 200.8	0.001015	mg/L
Arsenic	EPA 200.8	0.000203	mg/L
Barium	EPA 200.8	0.001015	mg/L
Beryllium	EPA 200.8	0.001015	mg/L
Cadmium	EPA 200.8	0.000203	mg/L
Chromium	EPA 200.8	0.001015	mg/L
Cobalt	EPA 200.8	0.000203	mg/L
Lead	EPA 200.8	0.000203	mg/L
Lithium	EPA 200.7	0.02	mg/L
Mercury	EPA 245.1	0.0005	mg/L
Molybdenum	EPA 200.8	0.000203	mg/L
Selenium	EPA 200.8	0.001015	mg/L
Thallium	EPA 200.8	0.000203	mg/L
Combined Radium 226 + 228	Total Radium Calculation	0.726-1.07	pCi/L

Notes:

1. Reporting Limit values can display range depending upon matrix interferences and dilution factors
2. pH is a field acquired parameter and does not have a laboratory method or reporting limit
3. Combined Radium 226 + 228 – product of radium-226 + radium-228; reporting limits presented are sum of radium 226, radium 228 reporting limits
4. EPA 200.7 – EPA methodology for the "Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma-Atomic Emission Spectrometry"
5. EPA 200.8 - EPA methodology for the "Determination of Metals and Trace Elements in Water and Wastes by Inductively Coupled Plasma-Mass Spectrometry (ICP-MS)"
6. SM 2320, 2540, 4500 – Standard Methods for Examination of Water and Wastewater.
7. Total Radium Calculation – Term used herein for EPA9315 + EPA9320
8. EPA 9315 – Used for Radium-226; SW-846: Alpha-Emitting Radium Isotopes, part of Test Methods for Evaluation Solid Waste, Physical/Chemical Methods
9. EPA 9320 – Used for Radium-228; SW-846: Alpha-Emitting Radium Isotopes, part of Test Methods for Evaluation Solid Waste, Physical/Chemical Methods



**Table 3.  
Recent Groundwater Elevations Summary**

Well Name	Top of Casing Elevation											
		2/4/2019	2/25/2019	6/10/2019	8/19/2019	4/13/2020	8/24/2020	3/15/2021	10/4/2021	1/11/2022	5/5/2022	10/24/2022
GSD-AP-MW-1	526.37	517.76	519.26	514.50	511.97	517.91	512.36	516.98	513.76	515.65	516.18	510.76
GSD-AP-MW-2	526.16	516.64	518.15	514.30	512.01	516.67	512.37	516.10	513.65	515.05	515.54	510.75
GSD-AP-MW-3	526.80	515.98	517.38	514.21	512.03	516.42	512.48	515.58	513.71	515.01	515.04	510.82
GSD-AP-MW-4	520.60	515.78	517.13	514.13	512.00	515.99	512.57	515.40	513.70	515.01	514.94	510.86
GSD-AP-MW-5	516.27	512.09	513.01	511.13	508.72	512.38	510.36	511.63	511.16	514.84	514.81	508.00
GSD-AP-MW-6	515.23	510.70	511.64	510.02	507.89	511.28	509.81	510.32	510.19	512.26	511.48	507.51
GSD-AP-MW-7	519.86	509.82	513.85	508.34	506.95	510.09	507.64	508.87	508.25	510.72	510.16	506.64
GSD-AP-MW-8	519.22	508.46	511.45	507.78	507.62	509.16	507.98	507.18	508.03	509.84	508.75	507.68
GSD-AP-MW-9	520.36	508.46	511.42	507.83	507.61	508.71	508.06	507.19	508.06	508.01	507.97	507.70
GSD-AP-MW-10	530.91	509.93	511.87	509.34	508.74	509.73	509.13	508.82	509.19	508.04	507.98	508.35
GSD-AP-MW-11	517.01	509.06	511.67	508.12	507.59	509.18	507.99	507.92	508.29	509.67	509.05	507.50
GSD-AP-MW-12	521.82	514.11	515.43	511.29	508.94	514.20	509.66	513.06	511.21	508.88	508.32	508.36
GSD-AP-MW-14	548.34	527.65	528.71	527.07	526.25	528.26	526.07	527.24	526.85	513.49	512.20	525.88
GSD-AP-MW-16	555.83	531.32	531.98	530.55	529.71	531.91	529.60	530.64	530.09	526.75	527.40	529.41
GSD-AP-MW-17	550.11	532.25	534.03	531.23	530.30	532.80	530.65	531.68	530.89	529.97	530.93	530.02
GSD-AP-PZ-1	521.64	517.29	519.05	513.54	510.14	517.30	510.78	516.46	513.04	513.88	515.45	508.63
GSD-AP-PZ-2	516.49	509.02	511.33	508.15	507.31	509.12	508.13	507.85	508.33	508.98	508.25	507.17
GSD-AP-PZ-5	524.26	517.72	519.28	513.81	510.37	518.21	511.00	516.90	513.14	521.34	515.92	509.05
GSD-AP-PZ-6	519.60	517.43	518.72	513.82	510.30	517.75	510.99	516.73	513.18	517.86	515.77	508.98
GSD-AP-MW-4V	520.33	--	--	--	--	516.09	512.39	515.31	513.51	517.86	515.77	510.75
GSD-AP-MW-18H	524.45	--	--	--	--	518.59	511.07	517.02	513.14	516.86	516.01	509.19
GSD-AP-MW-19H	517.32	--	--	--	--	516.97	511.36	516.29	513.21	NM	515.58	509.60
GSD-AP-MW-20H	516.68	--	--	--	--	516.28	512.47	515.39	513.66	511.40	514.90	510.82
GSD-AP-MW-2V	525.31	--	--	--	--	516.60	512.43	516.13	516.13	515.11	515.54	510.77
GSD-AP-MW-2VA	524.94	--	--	--	--	519.33	512.43	516.13	516.13	515.14	515.56	510.75
GSD-AP-MW-2VB	522.56	--	--	--	--	--	--	516.15	516.15	515.07	515.59	510.72
GSD-AP-MW-2VC <sup>5</sup>	522.87	--	--	--	--	--	--	--	483.16	515.05	515.84	510.91
GSD-AP-MW-21VB <sup>5</sup>	520.24	--	--	--	--	--	--	--	467.53	513.83	515.61	510.62
GSD-AP-MW-21VC	521.13	--	--	--	--	--	--	--	513.09	513.31	515.83	510.87
GSD-AP-MW-22VB	518.01	--	--	--	--	--	--	--	513.30	516.24	515.68	509.52
GSD-AP-MW-23VB <sup>5</sup>	519.03	--	--	--	--	--	--	--	510.42	515.79	515.92	509.52

Notes:

1. ft. AMSL - feet above mean sea level
2. -- Not Measured



**Table 4a. Relative Percent Difference (RPD) Calculations**

Plant Gadsden Ash Pond  
10/26/2022 - 10/26/2022

<b>GSD-AP-MW-14</b>				
<b>Sample Date = 10/26/2022</b>				
<b>Analyte</b>	<b>Units</b>	<b>Original Result</b>	<b>Duplicate Result</b>	<b>RPD (%)</b>
Calcium	mg/L	8.97	8.93	0.45%
Chloride	mg/L	2.56	2.59	1.17%
Sulfate	mg/L	50.7	52.6	3.68%
Arsenic	mg/L	0.00107	0.00111	3.67%
Barium	mg/L	0.0238	0.0246	3.31%
Cadmium	mg/L	0.00025	0.00037	40.13%
Cobalt	mg/L	0.0201	0.0202	0.50%
Lead	mg/L	0.00134	0.00127	5.36%
Selenium	mg/L	0.00151	0.00145	4.05%
<b>GSD-AP-MW-19H</b>				
<b>Sample Date = 10/26/2022</b>				
<b>Analyte</b>	<b>Units</b>	<b>Original Result</b>	<b>Duplicate Result</b>	<b>RPD (%)</b>
Boron	mg/L	0.327	0.327	0.00%
Calcium	mg/L	51.6	46.5	10.40%
Chloride	mg/L	7.04	7.01	0.43%
Sulfate	mg/L	55.1	54.6	0.91%
Arsenic	mg/L	0.00058	0.0005	15.53%
Barium	mg/L	0.159	0.158	0.63%
Cobalt	mg/L	0.00294	0.00292	0.68%
<b>GSD-AP-MW-5</b>				
<b>Sample Date = 10/26/2022</b>				
<b>Analyte</b>	<b>Units</b>	<b>Original Result</b>	<b>Duplicate Result</b>	<b>RPD (%)</b>
Boron	mg/L	0.23	0.231	0.43%
Calcium	mg/L	39.6	39.5	0.25%
Chloride	mg/L	6.4	6.46	0.93%
Sulfate	mg/L	16.1	16.6	3.06%
Arsenic	mg/L	0.00025	0.00022	11.86%
Barium	mg/L	0.231	0.229	0.87%
Cobalt	mg/L	0.00094	0.00095	1.27%
Molybdenum	mg/L	0.00037	0.00042	12.63%

Notes:

1. The RPD calculations presented are for analyte pairs where original and duplicate results are valid, unqualified detections.
2. RPD calculation results less than or equal to 20% are considered acceptable.
3. Results greater than 20% are given data validation flags to indicate RPD criteria failure. Communication to sampling team and lab may be necessary to explore nature of RPD failure(s).



## Table 4b. - Field QC: Blank Detections

Plant Gadsden Ash Pond  
10/26/2022 - 10/26/2022

Parameters Detected Above MDL					
Sample Date	QC Location	Parameter	Blank Concentration	Units	MDL
10/26/2022	FB-2	Arsenic	9E-05 J	mg/L	8E-05

Notes:

1. Lab qualifiers have been appended to result when applicable
2. MDL = Method Detection Limit
3. Only Appendix 4 Constituents were compared and validated. Radium data was not validated.
4. mg/L = milligrams per liter





## Table 5. Summary of Background Levels and Groundwater Protection Standards

### Plant Gadsden Ash Pond

Appendix IV Analytes			
Analyte	Units	Background	GWPS
Antimony	mg/L	0.000922	0.006
Arsenic	mg/L	0.00614	0.01
Barium	mg/L	0.312	2
Beryllium	mg/L	0.00157	0.004
Cadmium	mg/L	0.00108	0.005
Chromium	mg/L	0.00267	0.1
Cobalt	mg/L	0.0563	0.0563
Fluoride	mg/L	0.23	4
Lead	mg/L	0.00258	0.015
Lithium	mg/L	0.0134	0.04
Mercury	mg/L	0.000775	0.002
Molybdenum	mg/L	0.00507	0.1
Selenium	mg/L	0.0134	0.05
Thallium	mg/L	7E-05	0.002
Combined Radium 226 + 228	pCi/L	2.01	5

Notes:

1. mg/L - Milligrams per liter
2. pCi/L - Picocuries per liter
3. Background concentrations/limits are used when determining the groundwater protection standard (GWPS) under 40 CFR §257.95(h) and ADEM Rule 335-13-15-.06(h).
4. GWPS are generally updated on a 2 year basis which began in the Fall of 2019 (Fall 2019, Fall 2021, etc).

## Table 6. First Semi-Annual Monitoring Event

Analytical Results Summary  
Plant Gadsden Ash Pond  
10/25/2022 - 10/26/2022

Field Parameters								
Hydraulic Location	Well	Sample Date	Conductivity uS/cm	DO mg/L	ORP mv	pH_Field SU	Field Temperature C	Turbidity NTU
Upgradient	GSD-AP-MW-14	10/26/2022	178.64	4.05	301.57	4.07	18.74	2.21
Upgradient	GSD-AP-MW-16	10/25/2022	124.19	4.26	271.3	4.64	19.81	1.43
Upgradient	GSD-AP-MW-17	10/25/2022	274.82	0.63	131.72	7.97	20.89	0.84
Downgradient	GSD-AP-MW-1	10/26/2022	1082.91	0.08	122.63	5.86	18.47	1.15
Downgradient	GSD-AP-MW-10	10/26/2022	330.76	0.07	-115.3	6.84	19.46	3.59
Downgradient	GSD-AP-MW-11	10/26/2022	793.94	0.06	14.54	6.2	20.1	5.04
Downgradient	GSD-AP-MW-12	10/26/2022	586.4	0.09	192.4	5.52	19.08	2.52
Downgradient	GSD-AP-MW-2	10/25/2022	594.44	0.1	-57.73	6.64	20.34	6.21
Downgradient	GSD-AP-MW-3	10/26/2022	514.86	0.07	167.33	5.97	20.51	1.58
Downgradient	GSD-AP-MW-4	10/26/2022	439.89	0.1	-85.64	6.67	20.14	5.32
Downgradient	GSD-AP-MW-5	10/26/2022	297.31	0.09	71.19	6.44	20.5	2.35
Downgradient	GSD-AP-MW-6	10/26/2022	145.68	0.12	109.23	5.98	19.56	0.09
Downgradient	GSD-AP-MW-7	10/26/2022	204.38	0.04	118.84	6.44	18.76	0.13
Downgradient	GSD-AP-MW-8	10/26/2022	374.4	0.08	-26.02	6.68	18.33	3.37
Downgradient	GSD-AP-MW-9	10/26/2022	314.94	0.06	-15.67	7.07	18.45	0.8
Downgradient	GSD-AP-PZ-1	10/26/2022	162.02	1.38	124.79	6.66	19.28	0.02
Downgradient	GSD-AP-PZ-2	10/26/2022	204.73	0.2	40.66	6.16	20.42	0.37
Downgradient	GSD-AP-PZ-5	10/26/2022	124.69	4.1	298.14	5.31	16.9	1.84
Downgradient	GSD-AP-PZ-6	10/26/2022	124.63	5.35	255.13	5.43	19.3	3.99
Vert. Delineation	GSD-AP-MW-21VC	10/26/2022	1576.52	0.17	-161.89	8.31	17.59	1.12

Notes:

- "J" indicates the result was detected above the MDL but below the PQL
- "<" indicates the result was not detected above the MDL and is considered a non-detect.
- U - Radium data is 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.
- DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
- mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
- NC = value not detected with alkalinity calculation

## Table 6. First Semi-Annual Monitoring Event

Analytical Results Summary  
Plant Gadsden Ash Pond  
10/25/2022 - 10/26/2022

Field Parameters								
Hydraulic Location	Well	Sample Date	Conductivity uS/cm	DO mg/L	ORP mv	pH_Field SU	Field Temperature C	Turbidity NTU
Vert. Delineation	GSD-AP-MW-22VB	10/26/2022	425.07	0.23	-160.45	8.11	17.45	0.97
Vert. Delineation	GSD-AP-MW-2VA	10/25/2022	587.02	0.56	-169.61	8.33	20.78	1.82
Vert. Delineation	GSD-AP-MW-2VB	10/25/2022	1015.36	0.48	-180.1	8.33	22.14	0.77
Vert. Delineation	GSD-AP-MW-4V	10/26/2022	391.47	0.3	-154.36	7.92	18.65	2.19
Horiz. Delineation	GSD-AP-MW-18H	10/26/2022	181.03	7.68	369	4.81	17.16	0.81
Horiz. Delineation	GSD-AP-MW-19H	10/26/2022	362.9	0.11	45.29	6.25	18.57	2.09
Horiz. Delineation	GSD-AP-MW-20H	10/26/2022	600.06	0.04	30.46	6.36	18.9	4.82

Notes:

1. "J" indicates the result was detected above the MDL but below the PQL
2. "<" indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is 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.
4. DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
5. mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
6. NC = value not detected with alkalinity calculation

## Table 6. First Semi-Annual Monitoring Event

### Analytical Results Summary Plant Gadsden Ash Pond 10/25/2022 - 10/26/2022

EPA Appendix III Set								
Hydraulic Location	Well	Sample Date	Boron mg/L	Calcium mg/L	Chloride mg/L	Fluoride mg/L	pH_Field SU	Sulfate mg/L
Upgradient	GSD-AP-MW-14	10/26/2022	<0.03	8.97	2.56	<0.06	4.07	50.7
Upgradient	GSD-AP-MW-16	10/25/2022	<0.03	8.46	3.24	<0.06	4.64	37.1
Upgradient	GSD-AP-MW-17	10/25/2022	0.0308 J	30.7	2.88	0.15	7.97	9.25
Downgradient	GSD-AP-MW-1	10/26/2022	0.977	200	6.02	<0.06	5.86	512
Downgradient	GSD-AP-MW-10	10/26/2022	0.0868 J	39.5	5.87	0.0929 J	6.84	4.42
Downgradient	GSD-AP-MW-11	10/26/2022	0.306	129	4.98	0.069 J	6.2	278
Downgradient	GSD-AP-MW-12	10/26/2022	0.0995 J	60.2	5.76	<0.06	5.52	230
Downgradient	GSD-AP-MW-2	10/25/2022	0.5	86.9	2.45	0.271	6.64	111
Downgradient	GSD-AP-MW-3	10/26/2022	0.85	55.3	4.38	<0.06	5.97	206
Downgradient	GSD-AP-MW-4	10/26/2022	0.371	33.6	7.88	0.283	6.67	61.8
Downgradient	GSD-AP-MW-5	10/26/2022	0.23	39.6	6.4	0.0845 J	6.44	16.1
Downgradient	GSD-AP-MW-6	10/26/2022	0.0788 J	12.2	9.4	<0.06	5.98	12.2
Downgradient	GSD-AP-MW-7	10/26/2022	0.0839 J	21.4	7.09	0.128	6.44	11.4
Downgradient	GSD-AP-MW-8	10/26/2022	0.0526 J	63.7	5.72	0.0911 J	6.68	10.1
Downgradient	GSD-AP-MW-9	10/26/2022	0.0595 J	47.7	6.99	0.119 J	7.07	13.8
Downgradient	GSD-AP-PZ-1	10/26/2022	<0.03	23.1	3.39	<0.06	6.66	3.43
Downgradient	GSD-AP-PZ-2	10/26/2022	<0.03	27.5	5.09	<0.06	6.16	3.32
Downgradient	GSD-AP-PZ-5	10/26/2022	<0.03	3.09	4.03	<0.06	5.31	0.992 J
Downgradient	GSD-AP-PZ-6	10/26/2022	<0.03	3.42	3.5	<0.06	5.43	1.7 J
Vert. Delineation	GSD-AP-MW-21VC	10/26/2022	0.559	3.6	181	7.57	8.31	23.9
Vert. Delineation	GSD-AP-MW-22VB	10/26/2022	0.4	9.75	1.56	1.36	8.11	3.55

Notes:

1. "J" indicates the result was detected above the MDL but below the PQL
2. "<" indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is 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.
4. DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
5. mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
6. NC = value not detected with alkalinity calculation

## Table 6. First Semi-Annual Monitoring Event

Analytical Results Summary  
Plant Gadsden Ash Pond  
10/25/2022 - 10/26/2022

EPA Appendix III Set								
Hydraulic Location	Well	Sample Date	Boron mg/L	Calcium mg/L	Chloride mg/L	Fluoride mg/L	pH_Field SU	Sulfate mg/L
Vert. Delineation	GSD-AP-MW-2VA	10/25/2022	0.555	5.52	6.86	2.41	8.33	2.13
Vert. Delineation	GSD-AP-MW-2VB	10/25/2022	0.628	4.99	49	5.77	8.33	18
Vert. Delineation	GSD-AP-MW-4V	10/26/2022	0.0618 J	23	5.53	0.164	7.92	2.36
Horiz. Delineation	GSD-AP-MW-18H	10/26/2022	0.0784 J	10	5.44	<0.06	4.81	37.3
Horiz. Delineation	GSD-AP-MW-19H	10/26/2022	0.327	51.6	7.04	<0.06	6.25	55.1
Horiz. Delineation	GSD-AP-MW-20H	10/26/2022	0.584	76.3	5.91	0.121 J	6.36	158

Notes:

1. "J" indicates the result was detected above the MDL but below the PQL
2. "<" indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is 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.
4. DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
5. mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
6. NC = value not detected with alkalinity calculation

## Table 6. First Semi-Annual Monitoring Event

### Analytical Results Summary Plant Gadsden Ash Pond 10/25/2022 - 10/26/2022

EPA Appendix IV Set										
Hydraulic Location	Well	Sample Date	Antimony mg/L	Arsenic mg/L	Barium mg/L	Beryllium mg/L	Cadmium mg/L	Chromium mg/L	Cobalt mg/L	Fluoride mg/L
Upgradient	GSD-AP-MW-14	10/26/2022	<0.000508	0.00107	0.0238	0.000798 J	0.000245	0.000428 J	0.0201	<0.06
Upgradient	GSD-AP-MW-16	10/25/2022	<0.000508	0.00117	0.029	<0.000406	0.000203 J	0.000275 J	0.013	<0.06
Upgradient	GSD-AP-MW-17	10/25/2022	<0.000508	0.000572	0.292	<0.000406	0.000132 J	0.000357 J	0.000311	0.15
Downgradient	GSD-AP-MW-1	10/26/2022	<0.000508	0.00223	0.028	<0.000406	0.00013 J	0.000321 J	0.0152	<0.06
Downgradient	GSD-AP-MW-10	10/26/2022	<0.000508	0.00414	0.278	<0.000406	<6.8e-005	0.000207 J	0.000907	0.0929 J
Downgradient	GSD-AP-MW-11	10/26/2022	<0.000508	0.00215	0.117	<0.000406	<6.8e-005	0.000318 J	0.009	0.069 J
Downgradient	GSD-AP-MW-12	10/26/2022	<0.000508	0.000102 J	0.0376	<0.000406	0.000299	0.000276 J	0.00603	<0.06
Downgradient	GSD-AP-MW-2	10/25/2022	0.000538 J	0.555	0.0888	<0.000406	<6.8e-005	0.00022 J	0.0302	0.271
Downgradient	GSD-AP-MW-3	10/26/2022	<0.000508	0.000311	0.0306	<0.000406	0.000147 J	0.000276 J	0.0132	<0.06
Downgradient	GSD-AP-MW-4	10/26/2022	<0.000508	0.0145	0.239	<0.000406	<6.8e-005	<0.000203	0.0289	0.283
Downgradient	GSD-AP-MW-5	10/26/2022	<0.000508	0.00025	0.231	<0.000406	<6.8e-005	<0.000203	0.000936	0.0845 J
Downgradient	GSD-AP-MW-6	10/26/2022	<0.000508	0.000151 J	0.0702	<0.000406	<6.8e-005	0.000222 J	0.0012	<0.06
Downgradient	GSD-AP-MW-7	10/26/2022	<0.000508	0.000105 J	0.0852	<0.000406	<6.8e-005	<0.000203	0.00016 J	0.128
Downgradient	GSD-AP-MW-8	10/26/2022	<0.000508	0.0033	0.224	<0.000406	<6.8e-005	<0.000203	0.00266	0.0911 J
Downgradient	GSD-AP-MW-9	10/26/2022	<0.000508	0.000618	0.154	<0.000406	<6.8e-005	<0.000203	0.000812	0.119 J
Downgradient	GSD-AP-PZ-1	10/26/2022	<0.000508	0.000164 J	0.0682	<0.000406	<6.8e-005	<0.000203	<6.8e-005	<0.06
Downgradient	GSD-AP-PZ-2	10/26/2022	<0.000508	0.000188 J	0.133	<0.000406	<6.8e-005	<0.000203	0.0021	<0.06
Downgradient	GSD-AP-PZ-5	10/26/2022	<0.000508	<8.1e-005	0.0474	<0.000406	<6.8e-005	0.000251 J	<6.8e-005	<0.06
Downgradient	GSD-AP-PZ-6	10/26/2022	<0.000508	0.00015 J	0.0282	<0.000406	<6.8e-005	0.000224 J	7.79e-005 J	<0.06
Vert. Delineation	GSD-AP-MW-21VC	10/26/2022	0.000695 J	0.00122	0.431	<0.000406	<6.8e-005	<0.000203	<6.8e-005	7.57
Vert. Delineation	GSD-AP-MW-22VB	10/26/2022	<0.000508	0.00269	0.257	<0.000406	<6.8e-005	<0.000203	<6.8e-005	1.36

Notes:

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4. DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
5. mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
6. NC = value not detected with alkalinity calculation

## Table 6. First Semi-Annual Monitoring Event

### Analytical Results Summary Plant Gadsden Ash Pond 10/25/2022 - 10/26/2022

EPA Appendix IV Set								
Hydraulic Location	Well	Sample Date	Lead mg/L	Lithium mg/L	Mercury mg/L	Molybdenum mg/L	Selenium mg/L	Thallium mg/L
Upgradient	GSD-AP-MW-14	10/26/2022	0.00134	<0.007105	<0.0003	<0.000102	0.00151	<6.8e-005
Upgradient	GSD-AP-MW-16	10/25/2022	0.000634	<0.007105	<0.0003	<0.000102	0.00118	<6.8e-005
Upgradient	GSD-AP-MW-17	10/25/2022	0.000196 J	0.00897 J	<0.0003	0.000466	<0.000508	7.03e-005 J
Downgradient	GSD-AP-MW-1	10/26/2022	<6.8e-005	<0.007105	<0.0003	0.000198 J	<0.000508	<6.8e-005
Downgradient	GSD-AP-MW-10	10/26/2022	<6.8e-005	<0.007105	<0.0003	0.000438	<0.000508	<6.8e-005
Downgradient	GSD-AP-MW-11	10/26/2022	<6.8e-005	<0.007105	<0.0003	<0.000102	<0.000508	<6.8e-005
Downgradient	GSD-AP-MW-12	10/26/2022	<6.8e-005	<0.007105	<0.0003	<0.000102	<0.000508	<6.8e-005
Downgradient	GSD-AP-MW-2	10/25/2022	<6.8e-005	0.0304	<0.0003	0.0202	<0.000508	0.000361
Downgradient	GSD-AP-MW-3	10/26/2022	<6.8e-005	<0.007105	<0.0003	<0.000102	<0.000508	0.00011 J
Downgradient	GSD-AP-MW-4	10/26/2022	<6.8e-005	<0.007105	<0.0003	0.00106	<0.000508	<6.8e-005
Downgradient	GSD-AP-MW-5	10/26/2022	<6.8e-005	<0.007105	<0.0003	0.000371	<0.000508	<6.8e-005
Downgradient	GSD-AP-MW-6	10/26/2022	<6.8e-005	<0.007105	<0.0003	<0.000102	<0.000508	<6.8e-005
Downgradient	GSD-AP-MW-7	10/26/2022	<6.8e-005	<0.007105	<0.0003	0.000169 J	<0.000508	<6.8e-005
Downgradient	GSD-AP-MW-8	10/26/2022	<6.8e-005	<0.007105	<0.0003	0.000422	<0.000508	<6.8e-005
Downgradient	GSD-AP-MW-9	10/26/2022	<6.8e-005	<0.007105	<0.0003	0.000276	<0.000508	<6.8e-005
Downgradient	GSD-AP-PZ-1	10/26/2022	<6.8e-005	<0.007105	<0.0003	<0.000102	<0.000508	<6.8e-005
Downgradient	GSD-AP-PZ-2	10/26/2022	<6.8e-005	<0.007105	<0.0003	0.00022	<0.000508	<6.8e-005
Downgradient	GSD-AP-PZ-5	10/26/2022	<6.8e-005	<0.007105	<0.0003	<0.000102	<0.000508	<6.8e-005
Downgradient	GSD-AP-PZ-6	10/26/2022	<6.8e-005	<0.007105	<0.0003	<0.000102	<0.000508	<6.8e-005
Vert. Delineation	GSD-AP-MW-21VC	10/26/2022	<6.8e-005	0.262	<0.0003	0.00238	<0.000508	<6.8e-005
Vert. Delineation	GSD-AP-MW-22VB	10/26/2022	<6.8e-005	0.0616	<0.0003	0.0019	<0.000508	<6.8e-005

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4. DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
5. mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
6. NC = value not detected with alkalinity calculation

## Table 6. First Semi-Annual Monitoring Event

Analytical Results Summary  
Plant Gadsden Ash Pond  
10/25/2022 - 10/26/2022

EPA Appendix IV Set										
Hydraulic Location	Well	Sample Date	Antimony mg/L	Arsenic mg/L	Barium mg/L	Beryllium mg/L	Cadmium mg/L	Chromium mg/L	Cobalt mg/L	Fluoride mg/L
Vert. Delineation	GSD-AP-MW-2VA	10/25/2022	0.000539 J	0.00165	0.137	<0.000406	<6.8e-005	<0.000203	<6.8e-005	2.41
Vert. Delineation	GSD-AP-MW-2VB	10/25/2022	<0.000508	0.000907	0.346	<0.000406	<6.8e-005	<0.000203	<6.8e-005	5.77
Vert. Delineation	GSD-AP-MW-4V	10/26/2022	<0.000508	0.000446	0.474	<0.000406	<6.8e-005	0.000214 J	<6.8e-005	0.164
Horiz. Delineation	GSD-AP-MW-18H	10/26/2022	<0.000508	0.000338	0.0349	<0.000406	<6.8e-005	<0.000203	0.000452	<0.06
Horiz. Delineation	GSD-AP-MW-19H	10/26/2022	<0.000508	0.000583	0.159	<0.000406	<6.8e-005	<0.000203	0.00294	<0.06
Horiz. Delineation	GSD-AP-MW-20H	10/26/2022	<0.000508	0.00151	0.0993	<0.000406	<6.8e-005	<0.000203	0.00924	0.121 J

Notes:

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- DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
- mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
- NC = value not detected with alkalinity calculation



## Table 6. First Semi-Annual Monitoring Event

### Analytical Results Summary Plant Gadsden Ash Pond 10/25/2022 - 10/26/2022

EPA Appendix IV Set								
Hydraulic Location	Well	Sample Date	Lead mg/L	Lithium mg/L	Mercury mg/L	Molybdenum mg/L	Selenium mg/L	Thallium mg/L
Vert. Delineation	GSD-AP-MW-2VA	10/25/2022	<6.8e-005	0.0748	<0.0003	0.00361	<0.000508	<6.8e-005
Vert. Delineation	GSD-AP-MW-2VB	10/25/2022	<6.8e-005	0.141	<0.0003	0.00135	<0.000508	<6.8e-005
Vert. Delineation	GSD-AP-MW-4V	10/26/2022	<6.8e-005	0.0226	<0.0003	0.00135	<0.000508	<6.8e-005
Horiz. Delineation	GSD-AP-MW-18H	10/26/2022	<6.8e-005	<0.007105	<0.0003	<0.000102	0.00117	<6.8e-005
Horiz. Delineation	GSD-AP-MW-19H	10/26/2022	<6.8e-005	<0.007105	<0.0003	0.000136 J	<0.000508	<6.8e-005
Horiz. Delineation	GSD-AP-MW-20H	10/26/2022	<6.8e-005	<0.007105	<0.0003	0.00033	<0.000508	0.000149 J

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4. DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
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## Table 6. First Semi-Annual Monitoring Event

Analytical Results Summary  
Plant Gadsden Ash Pond  
10/25/2022 - 10/26/2022

General Chemistry and MNA Parameters										
Hydraulic Location	Well	Sample Date	Sulfide mg/L	Aluminum mg/L	Calcium mg/L	Iron Total mg/L	Potassium mg/L	Magnesium Total mg/L	Manganese Total mg/L	Sodium mg/L
Upgradient	GSD-AP-MW-14	10/26/2022	0	4.89	8.97	0.0142 J	0.309 J	3.09	0.284	1.8
Upgradient	GSD-AP-MW-16	10/25/2022	0	2.48	8.46	0.0139 J	0.339 J	2.52	0.145	2.74
Upgradient	GSD-AP-MW-17	10/25/2022	0	0.0169	30.7	0.0255 J	0.497 J	5.22	0.0186	25.8
Downgradient	GSD-AP-MW-1	10/26/2022	0	0.00791 J	200	1.76	7.87	36.7	3.1	19.2
Downgradient	GSD-AP-MW-10	10/26/2022	0	0.0139	39.5	20.9	0.561	6.18	0.697	12.4
Downgradient	GSD-AP-MW-11	10/26/2022	0	0.0617	129	7.5	2.55	20	11.4	16.4
Downgradient	GSD-AP-MW-12	10/26/2022	0	<0.00609	60.2	0.103	0.892	28.6	2.22	16.6
Downgradient	GSD-AP-MW-2	10/25/2022	0	0.0563	86.9	11.6	7.68	10	7.98	5.11
Downgradient	GSD-AP-MW-3	10/26/2022	0	<0.00609	55.3	0.233	2.98	15.4	18.6	10.2
Downgradient	GSD-AP-MW-4	10/26/2022	0	<0.00609	33.6	51.9	2.47	10.5	2.25	14.9
Downgradient	GSD-AP-MW-5	10/26/2022	0	0.0428	39.6	0.163	0.711	7.87	0.168	14.7
Downgradient	GSD-AP-MW-6	10/26/2022	0	<0.00609	12.2	0.0693	0.966	3.47	0.294	11.8
Downgradient	GSD-AP-MW-7	10/26/2022	0	<0.00609	21.4	0.0123 J	0.267 J	3.89	0.038	17.9
Downgradient	GSD-AP-MW-8	10/26/2022	0	<0.00609	63.7	8.94	0.416 J	6.03	1.59	10.8
Downgradient	GSD-AP-MW-9	10/26/2022	0	<0.00609	47.7	1.04	1.75	7.25	1.55	14.1
Downgradient	GSD-AP-PZ-1	10/26/2022	0	<0.00609	23.1	<0.00812	0.434 J	3.26	0.0108	3.85
Downgradient	GSD-AP-PZ-2	10/26/2022	0	0.00632 J	27.5	0.209	0.529	4.79	0.226	6.87
Downgradient	GSD-AP-PZ-5	10/26/2022	0	0.0114	3.09	0.00903 J	0.546	1.11	0.00906	3.59
Downgradient	GSD-AP-PZ-6	10/26/2022	0	0.0369	3.42	0.0306 J	0.449 J	1.02	0.00223	3.67
Vert. Delineation	GSD-AP-MW-21VC	10/26/2022	0	0.0282	3.6	0.071	1.05	1.11	0.00738	431

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## Table 6. First Semi-Annual Monitoring Event

Analytical Results Summary  
Plant Gadsden Ash Pond  
10/25/2022 - 10/26/2022

General Chemistry and MNA Parameters										
Hydraulic Location	Well	Sample Date	Silica mg/L	Silicon mg/L	Chloride mg/L	Nitrate Nitrite mg/L as N	Sulfate mg/L	Carbon, Total Organic mg/L	Alkalinity Total as CaCO3 mg CaCO3/L	Carbonate Alkalinity as CaCO3 mg CaCO3/L
Upgradient	GSD-AP-MW-14	10/26/2022	8.54	3.99	2.56	0.395	50.7	3.41	--	--
Upgradient	GSD-AP-MW-16	10/25/2022	8.5	3.97	3.24	0.901	37.1	2.03	2.44	NC
Upgradient	GSD-AP-MW-17	10/25/2022	17.8	8.3	2.88	<0.2	9.25	1.44 J	135	2.22
Downgradient	GSD-AP-MW-1	10/26/2022	11.5	5.36	6.02	<0.2	512	2.77	81.3	NC
Downgradient	GSD-AP-MW-10	10/26/2022	35.7	16.7	5.87	<0.2	4.42	4.99	139	0.555
Downgradient	GSD-AP-MW-11	10/26/2022	19.3	9.01	4.98	<0.2	278	5.84	107	NC
Downgradient	GSD-AP-MW-12	10/26/2022	18.9	8.82	5.76	<0.2	230	5.49	37.7	NC
Downgradient	GSD-AP-MW-2	10/25/2022	11.6	5.4	2.45	<0.2	111	1.08 J	157	NC
Downgradient	GSD-AP-MW-3	10/26/2022	10.2	4.78	4.38	<0.2	206	4.7	76.5	NC
Downgradient	GSD-AP-MW-4	10/26/2022	10.3	4.8	7.88	0.317	61.8	6.25	97.6	NC
Downgradient	GSD-AP-MW-5	10/26/2022	16.3	7.62	6.4	<0.2	16.1	3.39	129	NC
Downgradient	GSD-AP-MW-6	10/26/2022	13.2	6.17	9.4	<0.2	12.2	2.66	45.6	NC
Downgradient	GSD-AP-MW-7	10/26/2022	17	7.95	7.09	<0.2	11.4	3.42	83.6	NC
Downgradient	GSD-AP-MW-8	10/26/2022	24.6	11.5	5.72	<0.2	10.1	5.18	177	NC
Downgradient	GSD-AP-MW-9	10/26/2022	21.6	10.1	6.99	<0.2	13.8	3.54	145	0.566
Downgradient	GSD-AP-PZ-1	10/26/2022	16.6	7.76	3.39	0.801	3.43	1.32 J	65.5	NC
Downgradient	GSD-AP-PZ-2	10/26/2022	17.4	8.13	5.09	<0.2	3.32	4.29	90.9	NC
Downgradient	GSD-AP-PZ-5	10/26/2022	15.7	7.32	4.03	1.13	0.992 J	<1	10.5	NC
Downgradient	GSD-AP-PZ-6	10/26/2022	13.7	6.38	3.5	1.15	1.7 J	<1	10.4	NC
Vert. Delineation	GSD-AP-MW-21VC	10/26/2022	8.71	4.07	181	<0.2	23.9	2.18	581	25

Notes:

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- NC = value not detected with alkalinity calculation

### Analytical Results Summary Plant Gadsden Ash Pond 10/25/2022 - 10/26/2022

General Chemistry and MNA Parameters			
Hydraulic Location	Well	Sample Date	Bicarbonate Alkalinity as CaCO <sub>3</sub> mg CaCO <sub>3</sub> /L
Upgradient	GSD-AP-MW-14	10/26/2022	--
Upgradient	GSD-AP-MW-16	10/25/2022	2.44
Upgradient	GSD-AP-MW-17	10/25/2022	133
Downgradient	GSD-AP-MW-1	10/26/2022	81.3
Downgradient	GSD-AP-MW-10	10/26/2022	138
Downgradient	GSD-AP-MW-11	10/26/2022	107
Downgradient	GSD-AP-MW-12	10/26/2022	37.7
Downgradient	GSD-AP-MW-2	10/25/2022	157
Downgradient	GSD-AP-MW-3	10/26/2022	76.5
Downgradient	GSD-AP-MW-4	10/26/2022	97.5
Downgradient	GSD-AP-MW-5	10/26/2022	129
Downgradient	GSD-AP-MW-6	10/26/2022	45.5
Downgradient	GSD-AP-MW-7	10/26/2022	83.5
Downgradient	GSD-AP-MW-8	10/26/2022	177
Downgradient	GSD-AP-MW-9	10/26/2022	144
Downgradient	GSD-AP-PZ-1	10/26/2022	65.3
Downgradient	GSD-AP-PZ-2	10/26/2022	90.8
Downgradient	GSD-AP-PZ-5	10/26/2022	10.5
Downgradient	GSD-AP-PZ-6	10/26/2022	10.4
Vert. Delineation	GSD-AP-MW-21VC	10/26/2022	556

**Notes:**

1. "J" indicates the result was detected above the MDL but below the PQL
2. "<" indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is 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.
4. DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
5. mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
6. NC = value not detected with alkalinity calculation

### Analytical Results Summary Plant Gadsden Ash Pond 10/25/2022 - 10/26/2022

General Chemistry and MNA Parameters										
Hydraulic Location	Well	Sample Date	Sulfide mg/L	Aluminum mg/L	Calcium mg/L	Iron Total mg/L	Potassium mg/L	Magnesium Total mg/L	Manganese Total mg/L	Sodium mg/L
Vert. Delineation	GSD-AP-MW-22VB	10/26/2022	0	0.028	9.75	0.094	0.503 J	2.08	0.0225	107
Vert. Delineation	GSD-AP-MW-2VA	10/25/2022	0	0.0232	5.52	0.116	0.642	1.34	0.0137	152
Vert. Delineation	GSD-AP-MW-2VB	10/25/2022	0	0.0509	4.99	0.0739	1.37	1.56	0.0252	308
Vert. Delineation	GSD-AP-MW-4V	10/26/2022	0	0.0302	23	0.378	0.792	5.29	0.0435	77
Horiz. Delineation	GSD-AP-MW-18H	10/26/2022	0	0.0428	10	<0.00812	0.972	4.16	0.0202	5.13
Horiz. Delineation	GSD-AP-MW-19H	10/26/2022	0	0.0112	51.6	0.609	0.958	7.3	0.563	13.9
Horiz. Delineation	GSD-AP-MW-20H	10/26/2022	0	0.0149	76.3	2.03	2.67	18	30.1	15.4

**Notes:**

1. "J" indicates the result was detected above the MDL but below the PQL
2. "<" indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is 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.
4. DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
5. mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
6. NC = value not detected with alkalinity calculation

## Table 6. First Semi-Annual Monitoring Event

### Analytical Results Summary Plant Gadsden Ash Pond 10/25/2022 - 10/26/2022

General Chemistry and MNA Parameters										
Hydraulic Location	Well	Sample Date	Silica mg/L	Silicon mg/L	Chloride mg/L	Nitrate Nitrite mg/L as N	Sulfate mg/L	Carbon, Total Organic mg/L	Alkalinity Total as CaCO3 mg CaCO3/L	Carbonate Alkalinity as CaCO3 mg CaCO3/L
Vert. Delineation	GSD-AP-MW-22VB	10/26/2022	9.82	4.59	1.56	<0.2	3.55	1.38 J	209	5.64
Vert. Delineation	GSD-AP-MW-2VA	10/25/2022	9.31	4.35	6.86	<0.2	2.13	1.11 J	280	9.03
Vert. Delineation	GSD-AP-MW-2VB	10/25/2022	9.84	4.6	49	<0.2	18	4.5	432	13.3
Vert. Delineation	GSD-AP-MW-4V	10/26/2022	20	9.33	5.53	<0.2	2.36	4.36	199	3.83
Horiz. Delineation	GSD-AP-MW-18H	10/26/2022	7.96	3.72	5.44	1.43	37.3	1.59 J	3.9	NC
Horiz. Delineation	GSD-AP-MW-19H	10/26/2022	17.9	8.38	7.04	<0.2	55.1	1.06 J	91.9	NC
Horiz. Delineation	GSD-AP-MW-20H	10/26/2022	8.35	3.9	5.91	<0.2	158	5.86	135	NC

Notes:

1. "J" indicates the result was detected above the MDL but below the PQL
2. "<" indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is 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.
4. DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
5. mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
6. NC = value not detected with alkalinity calculation

## Table 6. First Semi-Annual Monitoring Event

Analytical Results Summary  
Plant Gadsden Ash Pond  
10/25/2022 - 10/26/2022

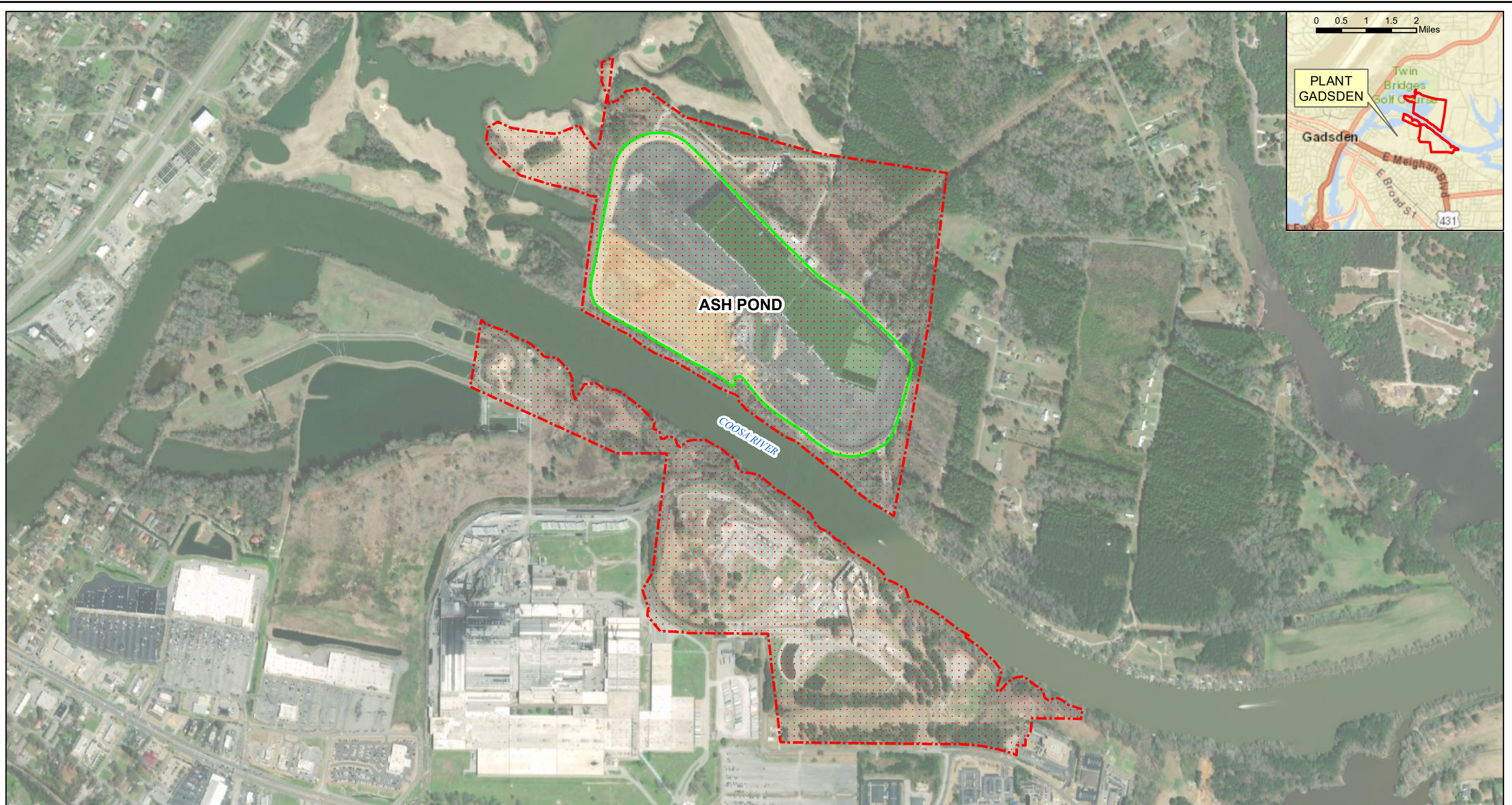
General Chemistry and MNA Parameters			
Hydraulic Location	Well	Sample Date	Bicarbonate Alkalinity as CaCO <sub>3</sub> mg CaCO <sub>3</sub> /L
Vert. Delineation	GSD-AP-MW-22VB	10/26/2022	203
Vert. Delineation	GSD-AP-MW-2VA	10/25/2022	271
Vert. Delineation	GSD-AP-MW-2VB	10/25/2022	419
Vert. Delineation	GSD-AP-MW-4V	10/26/2022	195
Horiz. Delineation	GSD-AP-MW-18H	10/26/2022	3.9
Horiz. Delineation	GSD-AP-MW-19H	10/26/2022	91.8
Horiz. Delineation	GSD-AP-MW-20H	10/26/2022	135

Notes:



1. "J" indicates the result was detected above the MDL but below the PQL
2. "<" indicates the result was not detected above the MDL and is considered a non-detect.
3. U - Radium data is 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.
4. DO - Dissolved Oxygen, ORP - Oxidation Reduction Potential, TDS - Total Dissolved Solids.
5. mg/L - milligrams per liter, mv - millivolts, NTU - nephelometric turbidity unit, C - celsius, SU - standard unit, uS/cm - microseimens per centimeter, pCi/L - picocuries per liter.
6. NC = value not detected with alkalinity calculation


# Figures






**Legend**

-  Property Boundary (Approximate)
-  Ash Pond Boundary





0 500 1,000 2,000 3,000 Feet


SCALE	1:9000
DATE	11/10/2020
DRAWN BY	KAR
TECH REVIEW	KWR
CHECKED BY	GBD

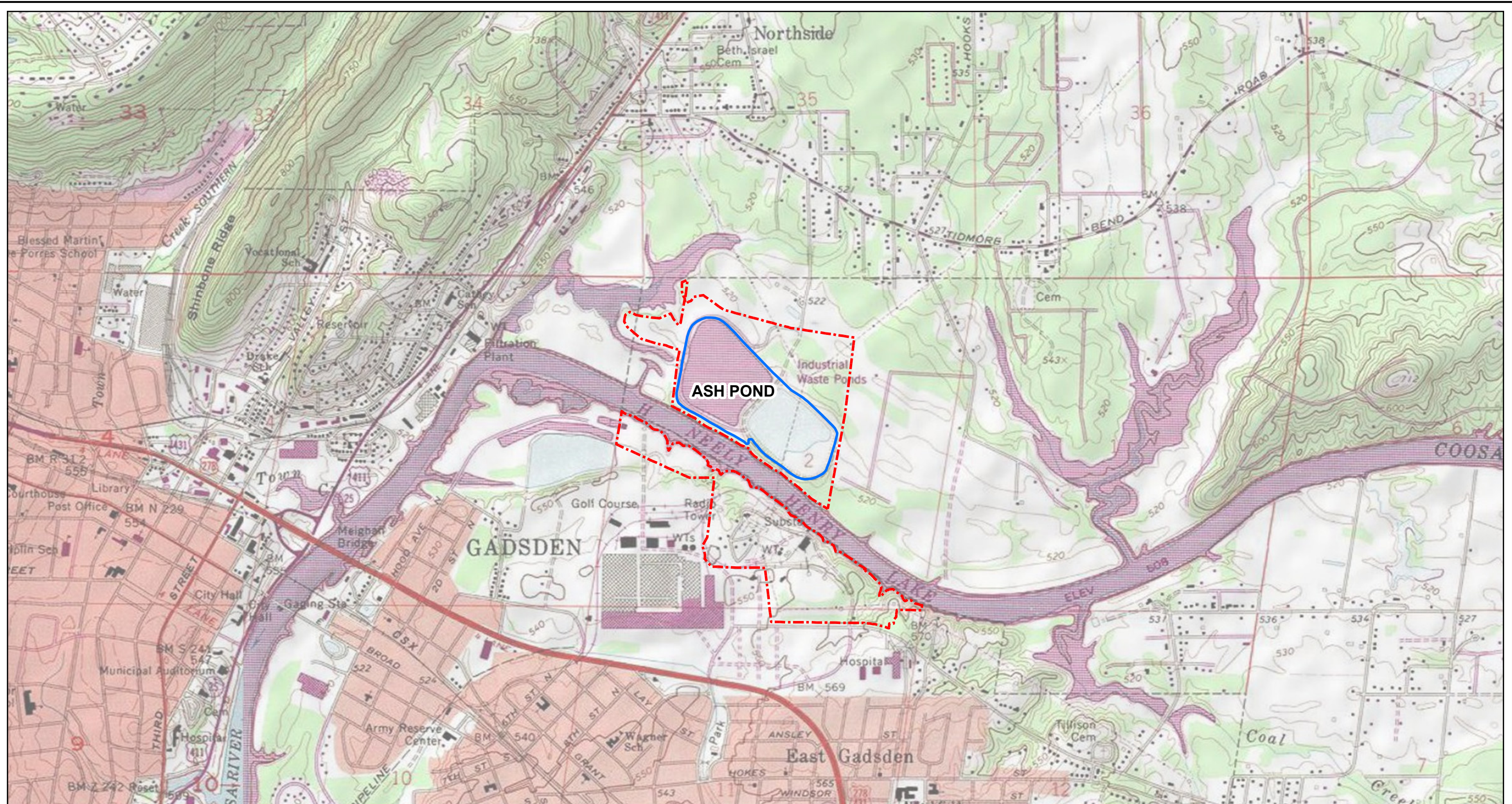
DRAWING TITLE

## SITE LOCATION MAP PLANT GADSDEN ASH POND

FIGURE NO

### FIGURE 1





- Legend**
- Ash Pond Boundary
  - Property Boundary (Approximate)

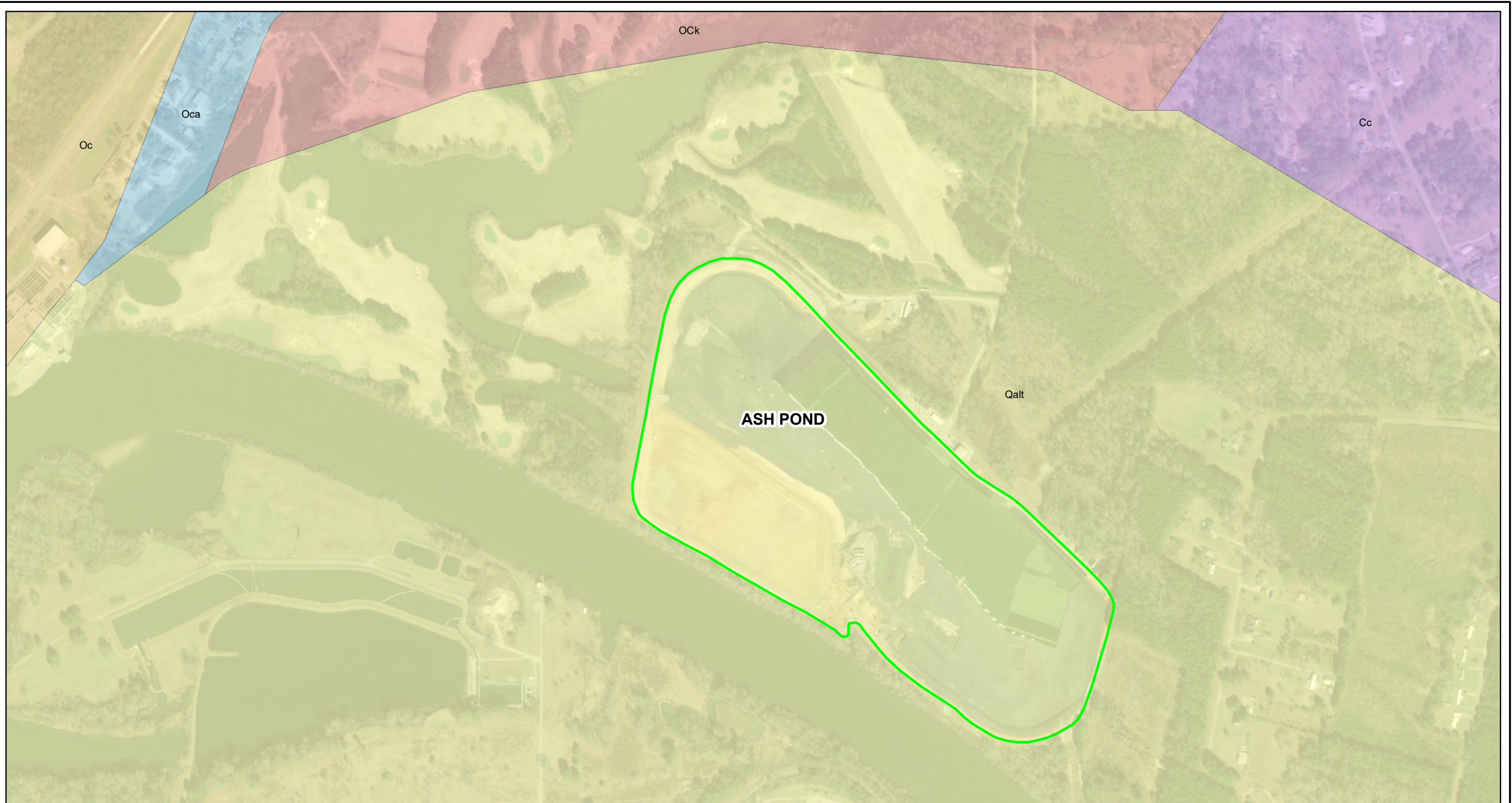


SCALE	1:18000
DATE	11/10/2020
DRAWN BY	KAR
TECH REVIEW	KWR
CHECKED BY	GBD

DRAWING TITLE  
**SITE TOPOGRAPHIC MAP  
 PLANT GADSDEN ASH POND**

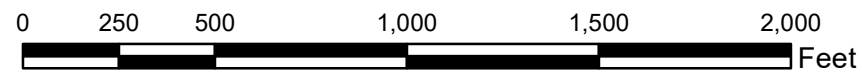
FIGURE NO  
**FIGURE 2**





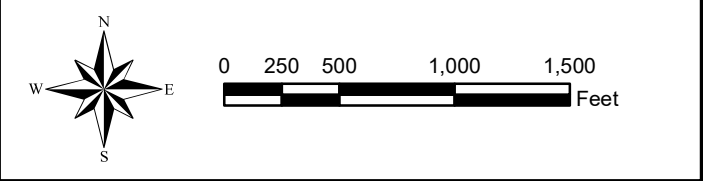
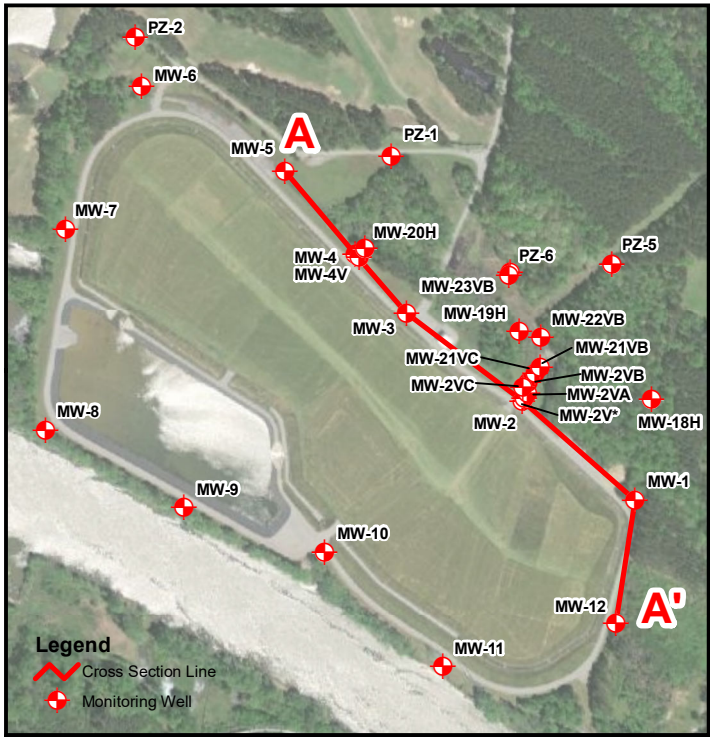
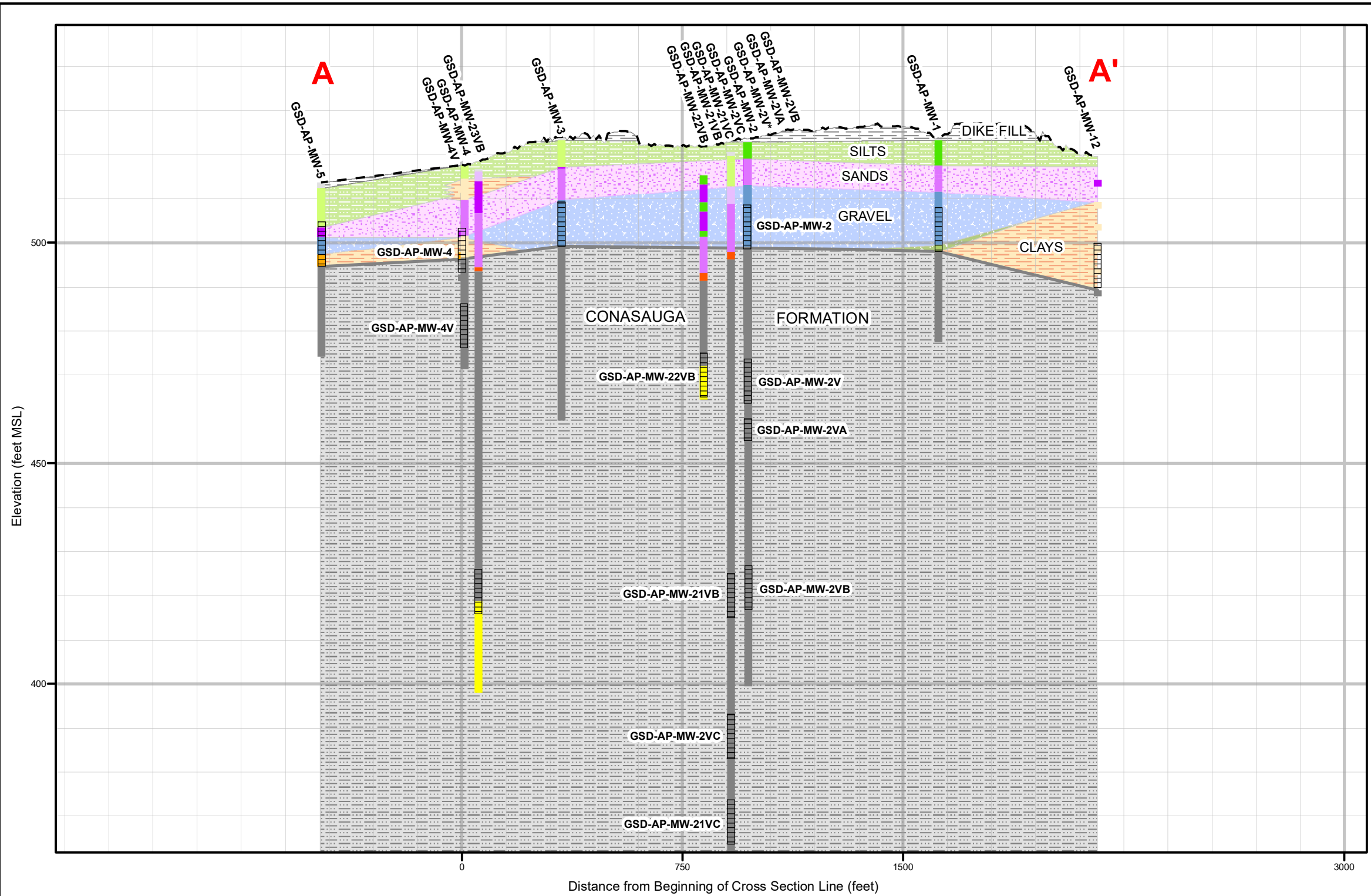
**Legend**

- Ash Pond Boundary
- Geologic Units**
- Alluvial, coastal, and low terrace deposits (Qalt)
- Attalla Chert Conglomerate Member of the Chickamauga Limestone (Oca)
- Chickamauga Limestone (Oc)
- Conasauga Formation (Cc)
- Knox Group undifferentiated (OCK)



SCALE	1:6000
DATE	11/10/2020
DRAWN BY	KAR
TECH REVIEW	KWR
CHECKED BY	GBD

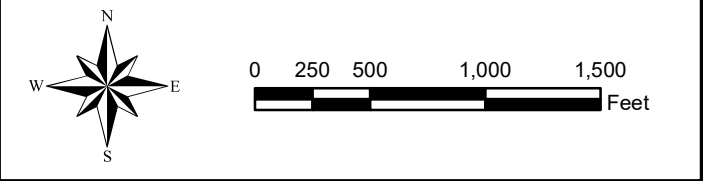
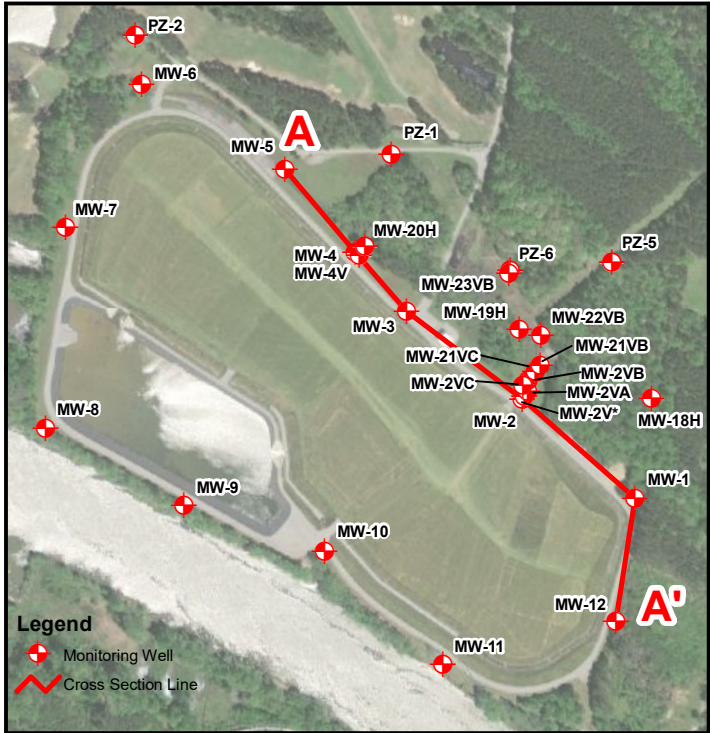
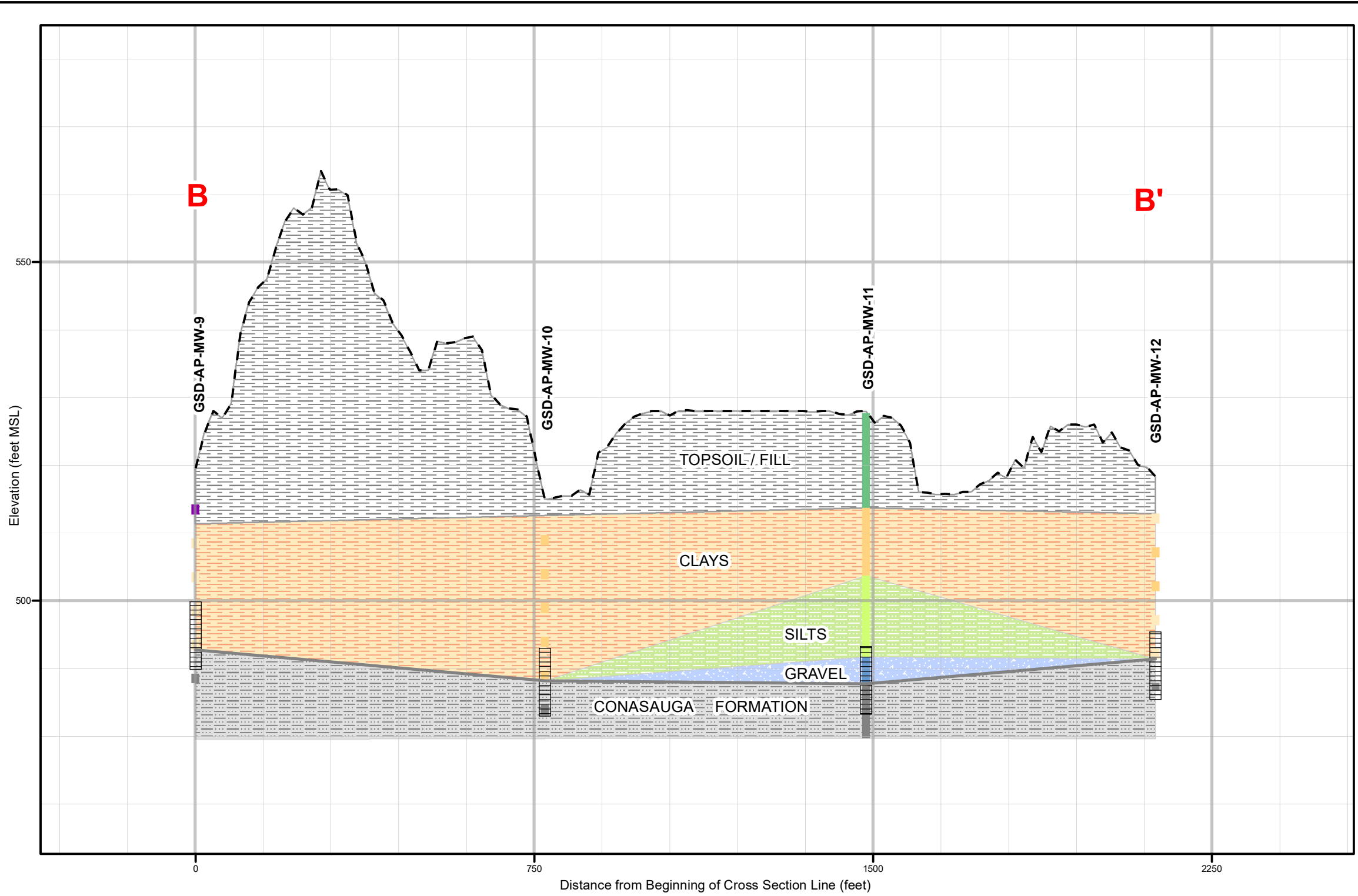
DRAWING TITLE	
<b>SITE GEOLOGIC MAP PLANT GADSDEN ASH POND</b>	
FIGURE NO	<b>FIGURE 3</b>
Southern Company	



- Notes:
1. Stratigraphic layers were correlated using boring data.
  2. Elevation data are reported using feet above Mean Sea Level (MSL).
  3. Vertical exaggeration is 15x.
  4. \*GSD-AP-MW-2V is utilized for water levels only and was not sampled.
  5. The ground surface shown on the cross section was derived from a digital elevation model raster along the cross section line drawn as shown on the inset map. In addition to boring data from wells located directly on the cross section line, boring data from wells located near but not directly on the cross section line were also utilized for lithologic correlation. These wells' boring data are projected onto the cross section line, and, as such, the ground surface shown on the cross section is higher in elevation than what the ground surface actually is at those locations.

Legend		Borehole Descriptions		Geologic Units	
	Screen Interval		Topsoil/Fill		Dike Fill
	Ground Surface Elevation		Lean and Sandy Lean Clay		Clays
	Unit Boundary		Fat Clay		Silt
			Silty Clay		Well-graded Sand
			Silt		Poorly-graded Sands
			Sandy Silt		Clay, Sand, and Gravel Mix
			Silty Sand		Well-graded Gravel
					Mudstone/Shale
					Dolomite or Limestone
					Sands
					Gravel
					Undifferentiated Clay, Sand, and Gravel
					Mudstone/Shale

HORIZONTAL SCALE	1:4600	DRAWING TITLE			
DATE	1/25/2022			GEOLOGIC CROSS-SECTION A - A' PLANT GADSDEN ASH POND	
DRAWN BY	KWR	FIGURE NO			
TECH REVIEW	KAR			FIGURE 4A	
CHECKED BY	GBD				

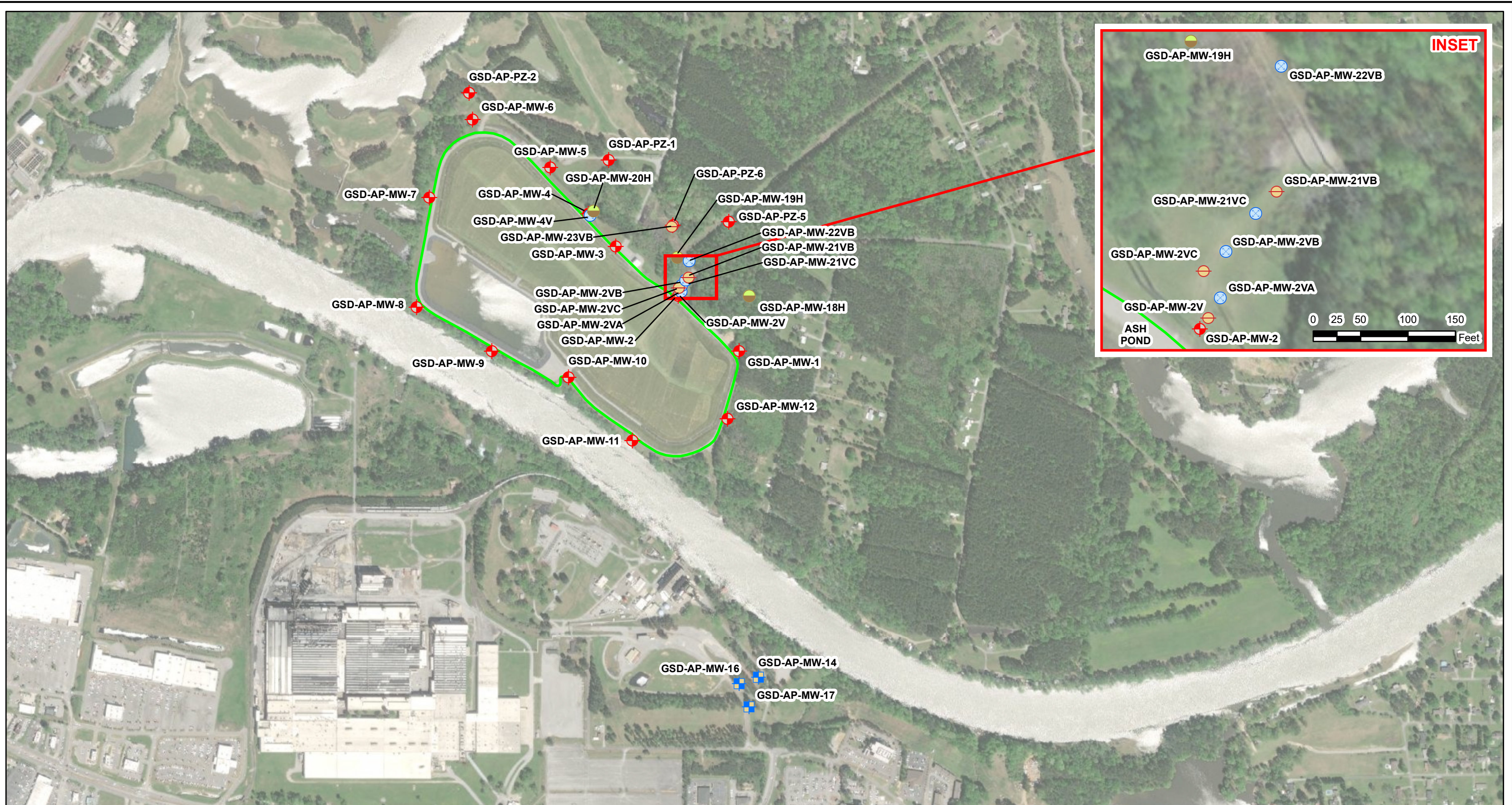


Notes: 1. Stratigraphic layers were correlated using boring data.  
 2. Elevation data are reported using feet above Mean Sea Level (MSL).  
 3. Vertical exaggeration is 15x.

Legend	Borehole Descriptions	Geologic Units
Screen Interval	Clay, Silt, and Gravel Fill	Topsoil/Fill
Ground Surface Elevation	Lean Clays	Clays
Unit Boundary	Fat and Silty Clays	Silts
	Silt	Gravel
	Poorly-graded Gravelly Sand	Siltstone/Shale
	Well-graded Gravel	
	Shale/Siltstone	

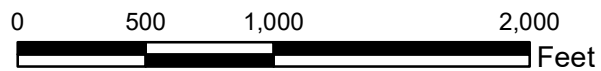
HORIZONTAL SCALE	1:3000
DATE	1/25/2022
DRAWN BY	KAR
CHECKED BY	CTL

DRAWING TITLE	
<b>GEOLOGIC CROSS-SECTION B - B' PLANT GADSDEN ASH POND</b>	
FIGURE NO	<b>FIGURE 4B</b>
Southern Company	



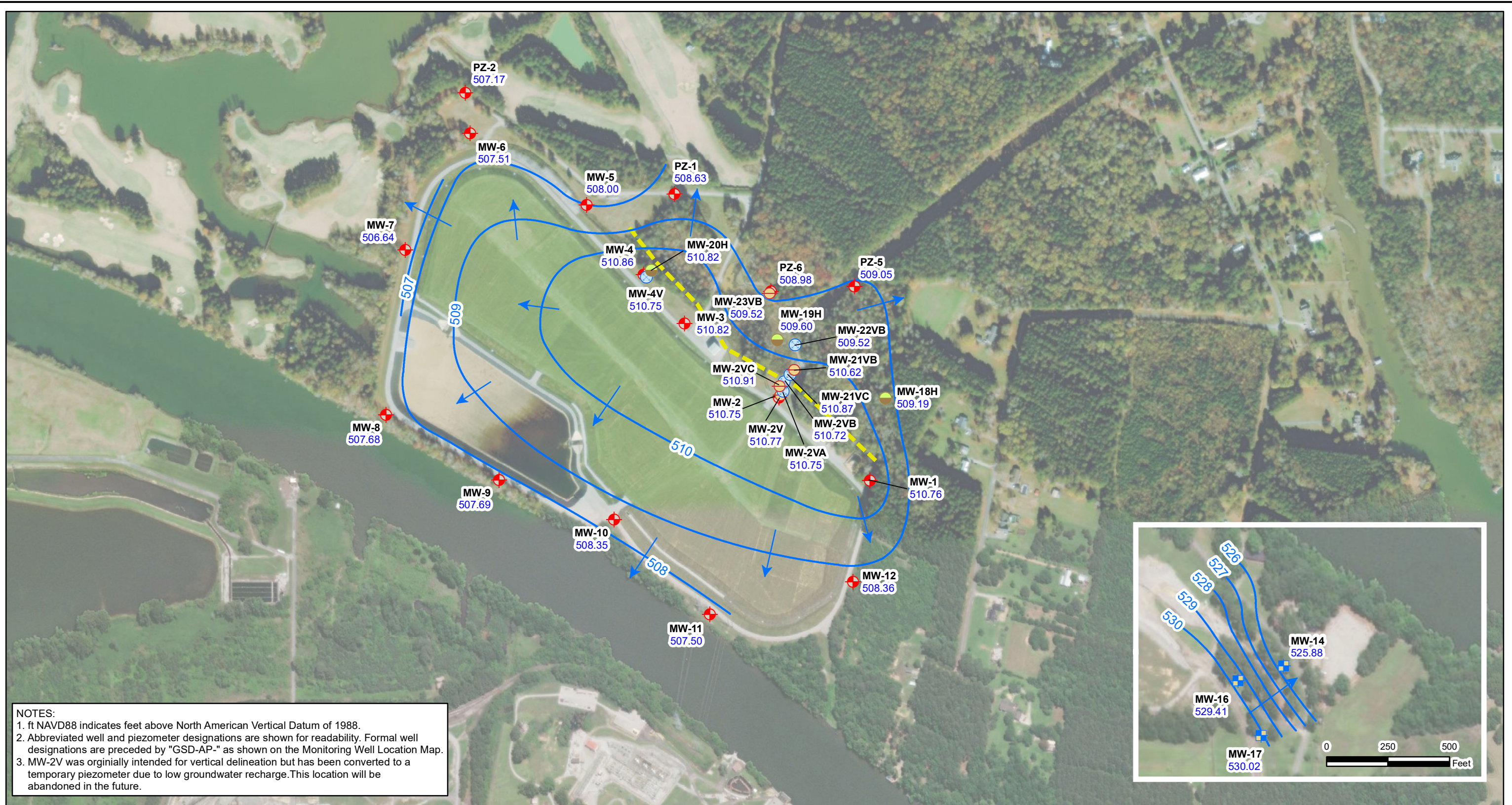
**Legend**

- ⊕ Downgradient Monitoring Well
- ⊗ Vertical Delineation Well
- ⊕ Upgradient Monitoring Well
- ⊖ Piezometer
- Horizontal Delineation Well
- Ash Pond Boundary



SCALE	1:9000
DATE	1/25/2022
DRAWN BY	KAR
TECH REVIEW	KWR
CHECKED BY	GFB

DRAWING TITLE	
<b>MONITORING WELL LOCATION MAP PLANT GADSDEN ASH POND</b>	
FIGURE NO	<b>FIGURE 5</b>
Southern Company	

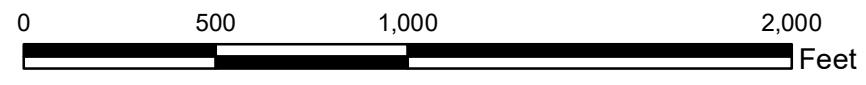


**NOTES:**  
 1. ft NAVD88 indicates feet above North American Vertical Datum of 1988.  
 2. Abbreviated well and piezometer designations are shown for readability. Formal well designations are preceded by "GSD-AP-" as shown on the Monitoring Well Location Map.  
 3. MW-2V was originally intended for vertical delineation but has been converted to a temporary piezometer due to low groundwater recharge. This location will be abandoned in the future.

**Legend**

- Downgradient Monitoring Well
- Horizontal Delineation Well
- Vertical Delineation Well
- Piezometer
- Potentiometric Surface Contour (ft NAVD88)
- Approximate Groundwater Flow Direction
- Groundwater Divide

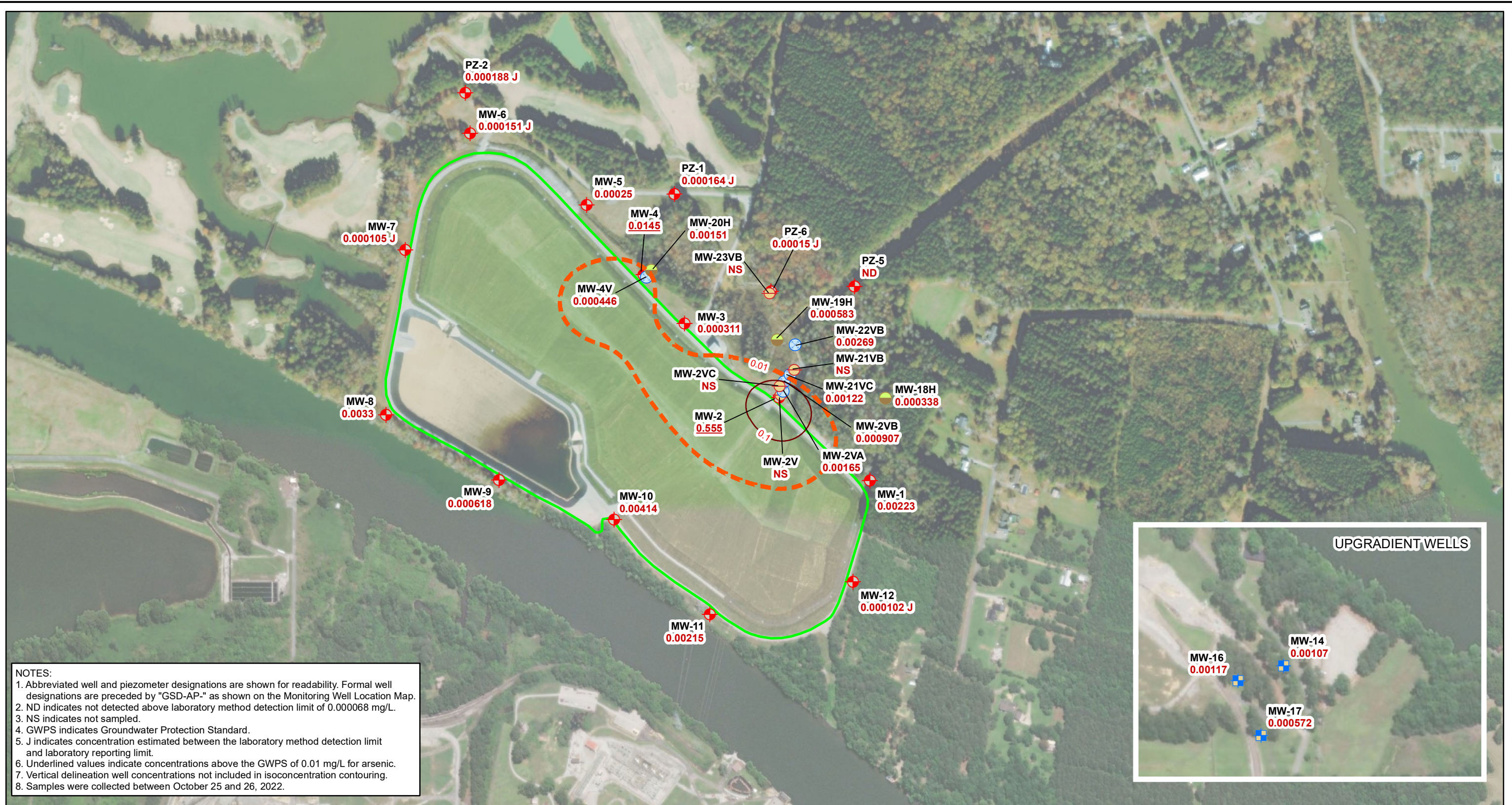
**MW-1** Well ID  
**510.76** Groundwater Elevation



SCALE	1:6000
DATE	12/22/2022
DRAWN BY	KWR
CHECKED BY	GFB

DRAWING TITLE  
**POTENTIOMETRIC SURFACE CONTOUR MAP**  
**OCTOBER 24, 2022**  
**PLANT GADSDEN ASH POND**

FIGURE NO  
**FIGURE 6**



**NOTES:**

- Abbreviated well and piezometer designations are shown for readability. Formal well designations are preceded by "GSD-AP-" as shown on the Monitoring Well Location Map.
- ND indicates not detected above laboratory method detection limit of 0.000068 mg/L.
- NS indicates not sampled.
- GWPS indicates Groundwater Protection Standard.
- J indicates concentration estimated between the laboratory method detection limit and laboratory reporting limit.
- Underlined values indicate concentrations above the GWPS of 0.01 mg/L for arsenic.
- Vertical delineation well concentrations not included in isoconcentration contouring.
- Samples were collected between October 25 and 26, 2022.

**Legend**

- Downgradient Monitoring Well
- Upgradient Monitoring Well
- Horizontal Delineation Well
- Vertical Delineation Well
- Piezometer
- Approximate Arsenic Groundwater Protection Standard Contour (0.01 mg/L)
- Arsenic Concentration Contour (mg/L)
- Ash Pond Boundary

**MW-11** Well ID  
0.00216 Arsenic Concentration (mg/L)

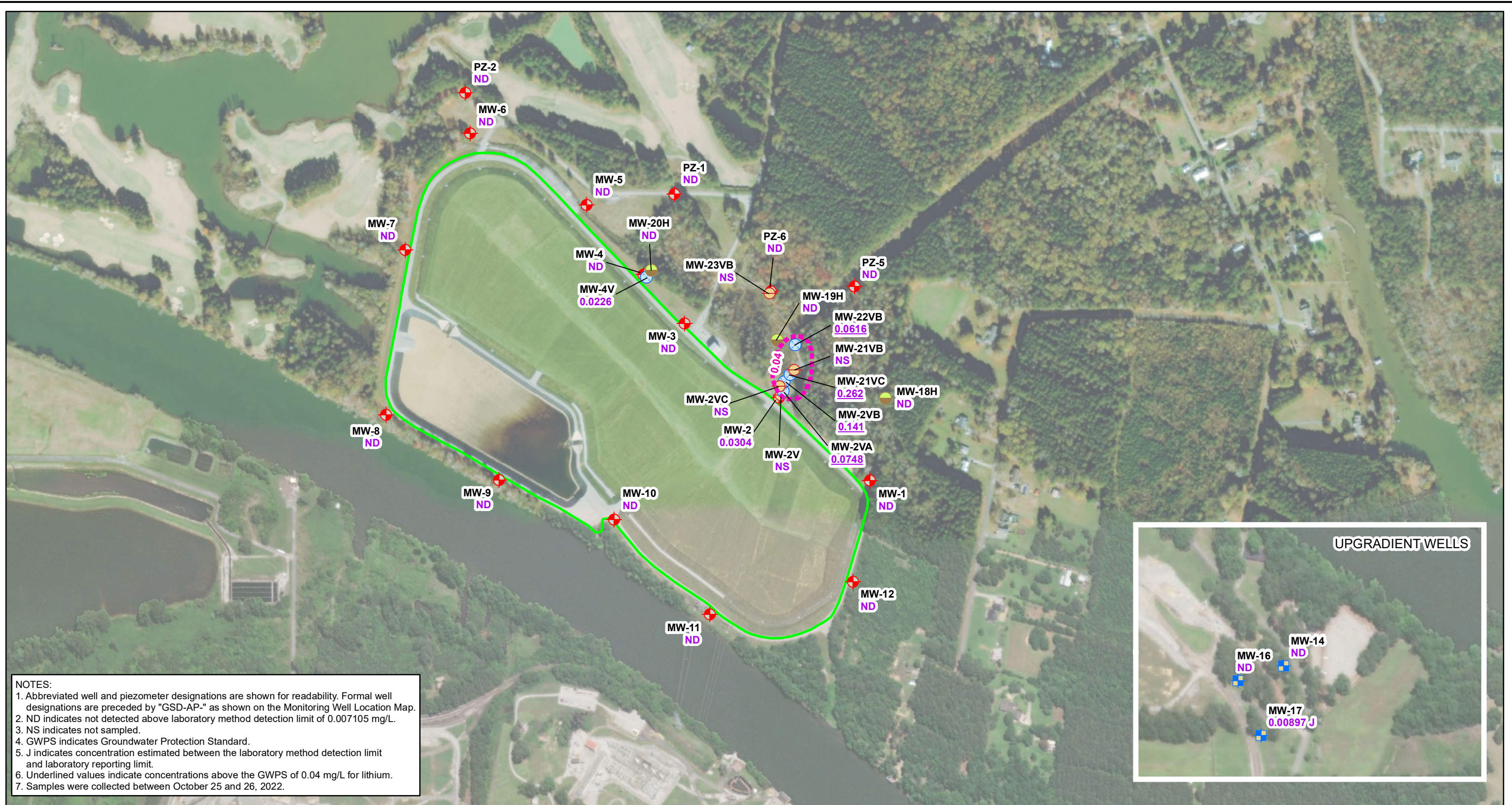


SCALE	1:6000
DATE	12/22/2022
DRAWN BY	KWR
TECH REVIEW	KAR
CHECKED BY	GBD

DRAWING TITLE  
**ARSENIC ISOCONCENTRATION MAP  
 OCTOBER 2022  
 PLANT GADSDEN ASH POND**

FIGURE NO  
**FIGURE 7**





NOTES:  
 1. Abbreviated well and piezometer designations are shown for readability. Formal well designations are preceded by "GSD-AP-" as shown on the Monitoring Well Location Map.  
 2. ND indicates not detected above laboratory method detection limit of 0.007105 mg/L.  
 3. NS indicates not sampled.  
 4. GWPS indicates Groundwater Protection Standard.  
 5. J indicates concentration estimated between the laboratory method detection limit and laboratory reporting limit.  
 6. Underlined values indicate concentrations above the GWPS of 0.04 mg/L for lithium.  
 7. Samples were collected between October 25 and 26, 2022.



**Legend**

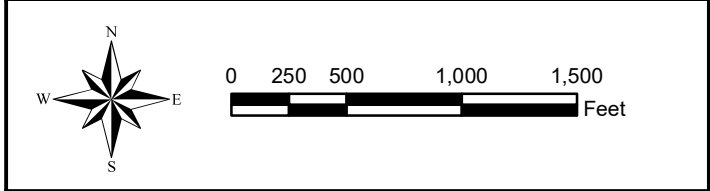
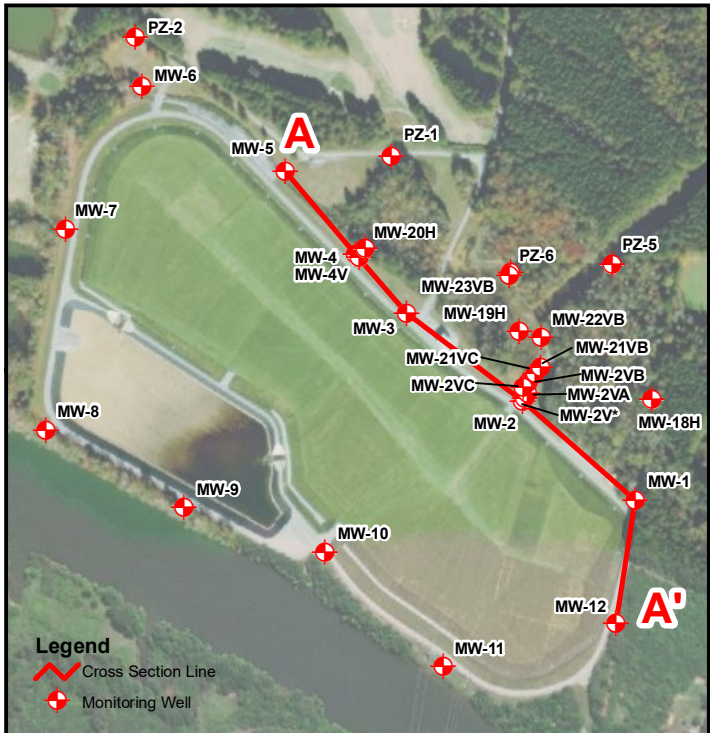
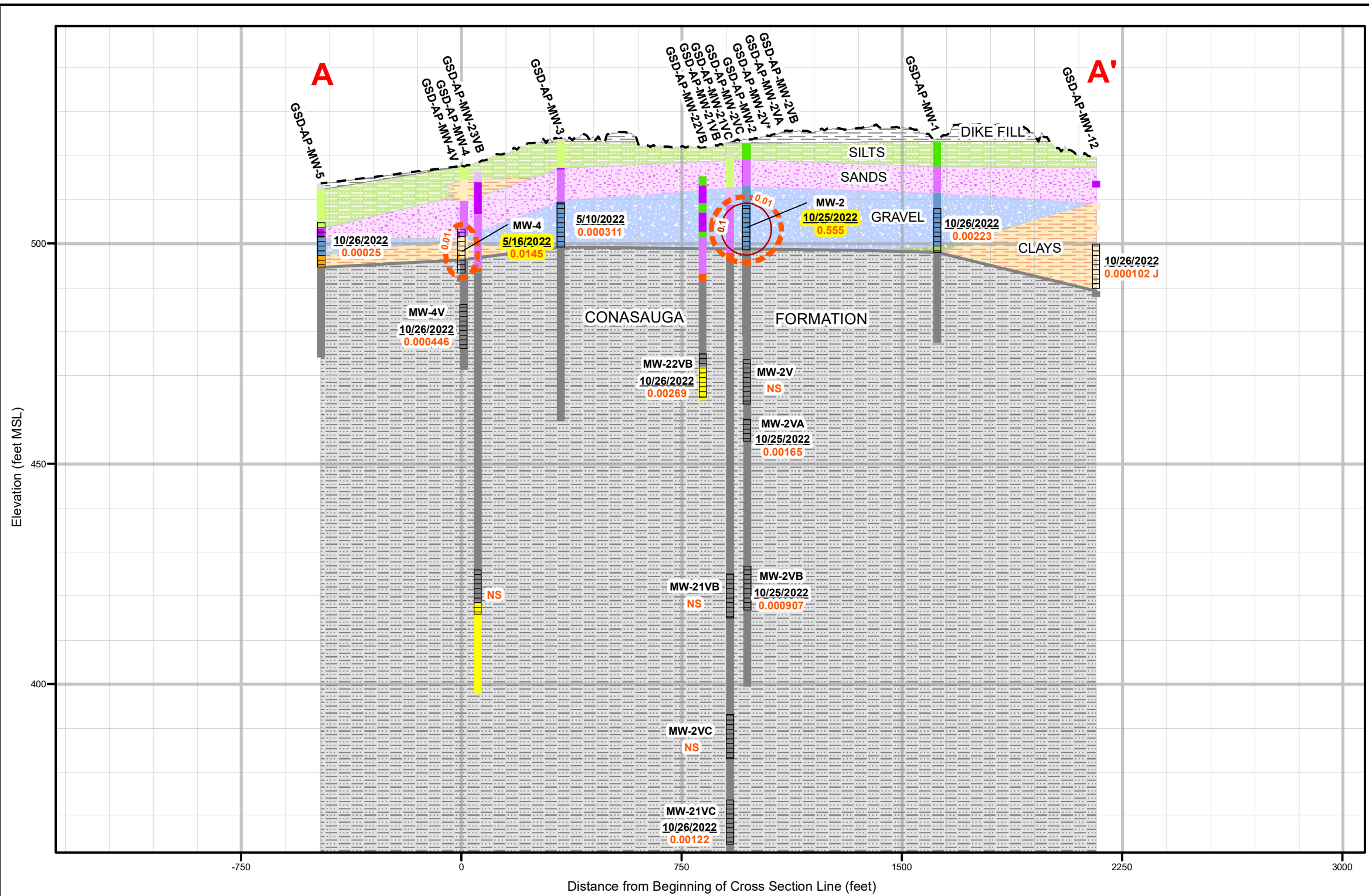
- Downgradient Monitoring Well
- Upgradient Monitoring Well
- Horizontal Delineation Well
- Vertical Delineation Well
- Piezometer
- Approximate Lithium Groundwater Protection Standard Contour (0.04 mg/L)
- Ash Pond Boundary
- MW-2** Well ID  
0.0304 Lithium Concentration (mg/L)



SCALE	1:6000
DATE	12/22/2022
DRAWN BY	KWR
TECH REVIEW	KAR
CHECKED BY	GBD

DRAWING TITLE  
**LITHIUM ISOCONCENTRATION MAP  
 OCTOBER 2022  
 PLANT GADSDEN ASH POND**

FIGURE NO  
**FIGURE 8**

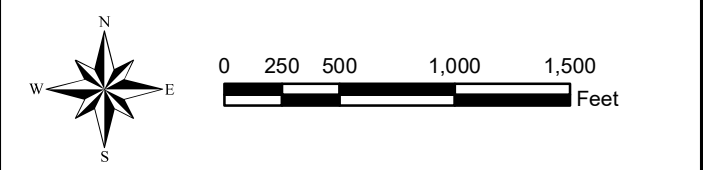
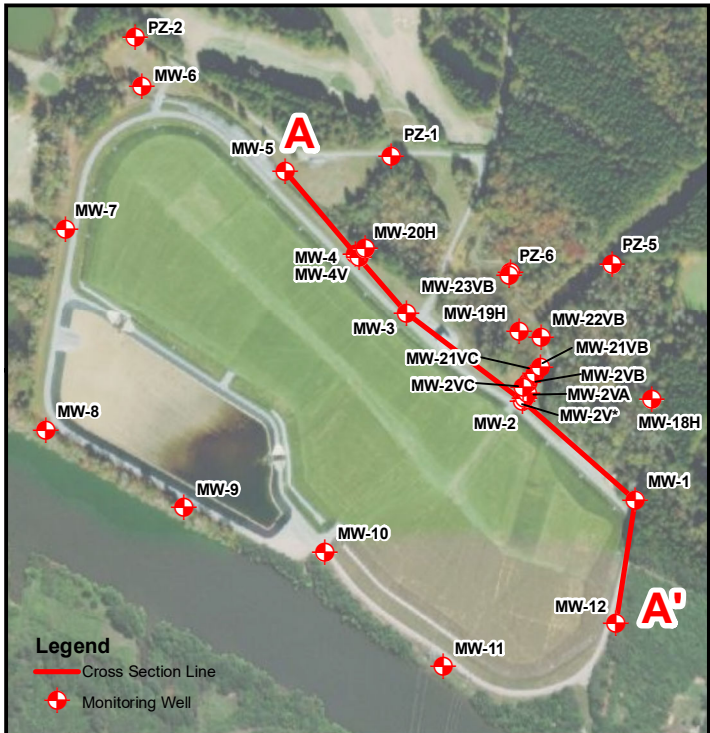
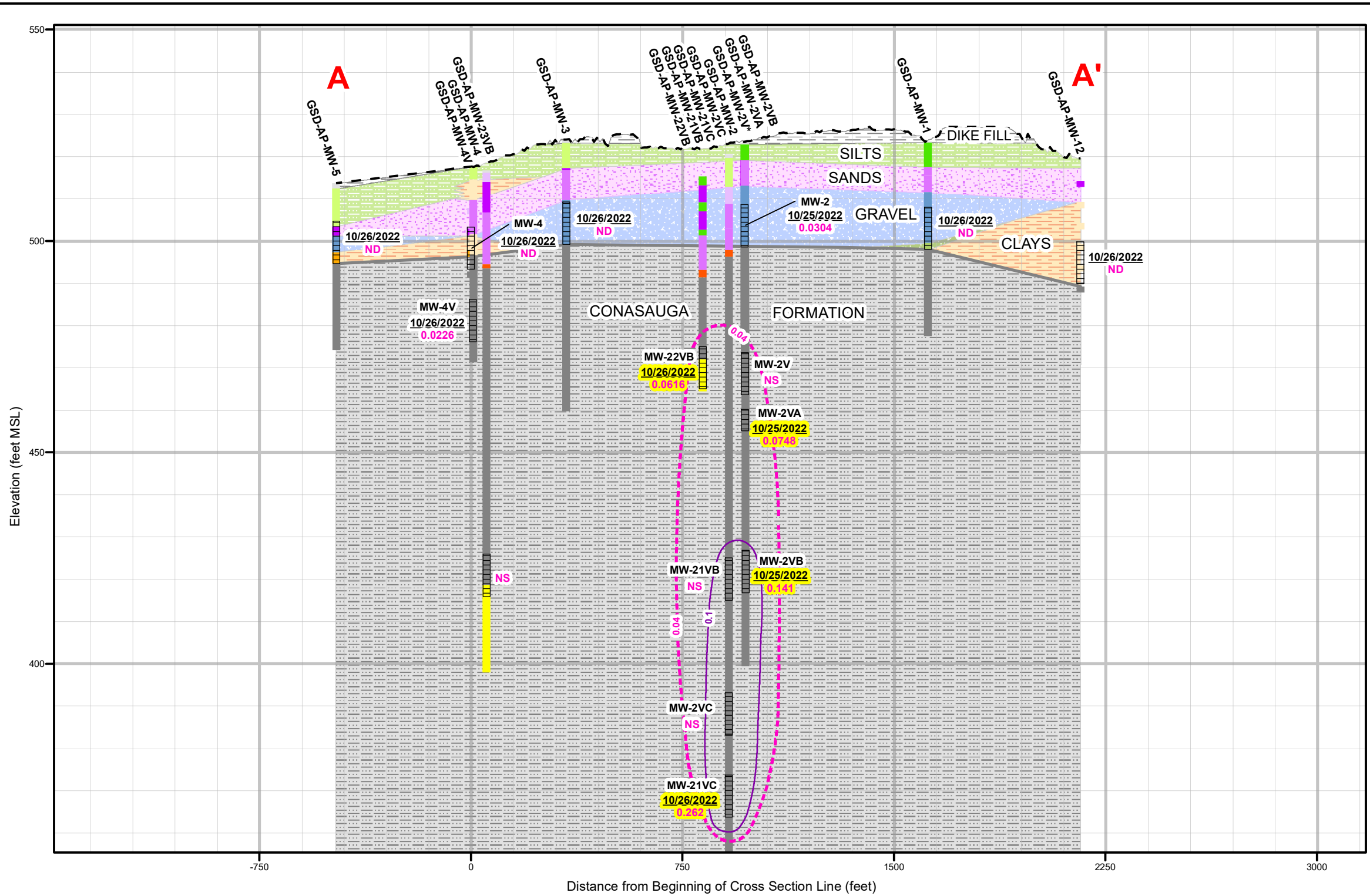


- Notes:
1. Stratigraphic layers were correlated using boring data.
  2. Elevation data are reported using feet above Mean Sea Level (MSL).
  3. Vertical exaggeration is 15x.
  4. \*GSD-AP-MW-2V is utilized for water levels only and was not sampled.
  5. Groundwater samples were collected between October 25 and 26, 2022.
  6. ND indicates not detected above laboratory method detection limit of 0.000068 mg/L.
  7. NS indicates not sampled.
  8. J indicates concentration estimated between the laboratory method detection limit and laboratory reporting limit.
  9. GWPS indicates Groundwater Protection Standard.
  10. Highlighted values indicate concentrations above the GWPS of 0.01 mg/L for arsenic.

Legend		Borehole Descriptions		Geologic Units	
	Approximate Arsenic Groundwater Protection Standard Contour (0.01 mg/L)		Topsoil/Fill		Well-graded Sand
	Arsenic Isoconcentration Contour (mg/L)		Lean and Sandy Lean Clay		Poorly-graded Sands
	Screen Interval		Fat Clay		Clay, Sand, and Gravel Mix
	Ground Surface Elevation		Silty Clay		Well-graded Gravel
	Unit Boundary		Silt		Mudstone/Shale
	0.00122 As Concentration (mg/L)		Sandy Silt		Dolomite or Limestone
			Silty Sand		Gravel
					Silts
					Sands
					Gravel
					Undifferentiated Clay, Sand, and Gravel
					Mudstone/Shale

HORIZONTAL SCALE	1:4600	DRAWING TITLE
DATE	12/20/2022	
DRAWN BY	KWR	
TECH REVIEW	KAR	FIGURE NO
CHECKED BY	GBD	<b>FIGURE 9</b>





- Notes:
1. Stratigraphic layers were correlated using boring data.
  2. Elevation data are reported using feet above Mean Sea Level (MSL).
  3. Vertical exaggeration is 15x.
  4. \*GSD-AP-MW-2V is utilized for water levels only and was not sampled.
  5. Groundwater samples were collected between October 25 and 26, 2022.
  6. ND indicates not detected above laboratory method detection limit of 0.007105 mg/L.
  7. NS indicates not sampled.
  8. J indicates concentration estimated between the laboratory method detection limit and laboratory reporting limit.
  9. GWPS indicates Groundwater Protection Standard.
  10. Highlighted values indicate concentrations above the GWPS of 0.04 mg/L for lithium.

Legend		Borehole Descriptions		Geologic Units		DRAWING TITLE	
Approximate Lithium Groundwater Protection Standard Contour (0.04 mg/L)	Topsoil/Fill	Well-graded Sand	Dike Fill	HORIZONTAL SCALE 1:4800	LITHIUM CONCENTRATIONS ALONG GEOLOGIC CROSS-SECTION A - A' PLANT GADSDEN ASH POND		
Lithium Isoconcentration Contour (mg/L)	Lean and Sandy Lean Clay	Poorly-graded Sands	Clays	DATE 12/22/2022			
Screen Interval	Fat Clay	Clay, Sand, and Gravel Mix	Sands	DRAWN BY KWR	FIGURE NO		
Ground Surface Elevation	Silty Clay	Well-graded Gravel	Gravel	TECH REVIEW KAR			
Unit Boundary	Silt	Mudstone/Shale	Undifferentiated Clay, Sand, and Gravel	CHECKED BY GBD	Southern Company		
0.0616 Lithium Concentration (mg/L)	Sandy Silt	Dolomite or Limestone	Mudstone/Shale				

# Appendix A



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-14										
		06/27/2018	07/18/2018	08/06/2018	09/05/2018	09/24/2018	10/24/2018	12/05/2018	02/05/2019	02/28/2019	08/20/2019	04/16/2020
<b>Appendix III</b>												
Boron	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.03	<0.03
Calcium	mg/L	16.6	15.3	13.8	12.1	11.8	10.2	9.14	15.1	21.4	14.4	20.1
Chloride	mg/L	3.1	3.4	2.8	2.8	3.1	2.8	2.2	3.12	3.45	3.27	3.74
Fluoride	mg/L	0.18	0.23	0.23	0.22	0.2	0.14	0.07 J	<0.05	<0.05	<0.05	<0.06
pH_Field	SU	3.95	4.02	4.07	4.07	4.07	4.1	4.1	4.02	3.94	4	3.93
Sulfate	mg/L	120	120	110	86	80	68	54	126	207	106	191
TDS	mg/L	219	195	175	153	127	125	101	180	287	265	280
<b>Appendix IV</b>												
Antimony	mg/L	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	--	<0.0008	<0.0008
Arsenic	mg/L	0.00165 J	0.00117 J	<0.001	<0.001	0.00148 J	<0.001	<0.001	0.00119 J	--	0.00216 J	0.00483 J
Barium	mg/L	0.0338	0.03	0.0274	0.0275	0.0264	0.0276	0.0256	0.0314	--	0.0274	0.0327
Beryllium	mg/L	0.00134 J	0.00133 J	0.00129 J	0.00106 J	0.000991 J	0.00082 J	0.00141 J	0.0011 J	--	0.00129 J	0.00157 J
Cadmium	mg/L	0.00064 J	0.000679 J	0.000536 J	0.000479 J	0.00039 J	0.000436 J	0.000307 J	0.000515 J	--	0.000622 J	0.00101
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002
Cobalt	mg/L	0.0382	0.0366	0.0308	0.0291	0.0286	0.0269	0.0215	0.0359	--	0.0391	0.056
Combined Radium	pCi/L	0.616	0.859	0.654	0.855	0.787	1.14	0.64	0.873	--	0.774	0.865
Lead	mg/L	0.00158 J	0.00152 J	0.00143 J	0.00118 J	0.00156 J	0.00121 J	0.00117 J	0.00156 J	--	0.00176 J	0.00258 J
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01
Mercury	mg/L	0.000661	0.000398 J	0.00042 J	0.00037 J	0.000329 J	<0.00025	0.000253 J	0.000664	--	0.000301 J	0.000558
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-14					GSD-AP-MW-10					
		08/25/2020	03/22/2021	10/12/2021	05/09/2022	10/26/2022	12/06/2017	02/07/2018	04/24/2018	06/27/2018	08/07/2018	10/22/2018
<b>Appendix III</b>												
Boron	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	0.135	0.12	0.144	0.0903 J	0.106	0.107
Calcium	mg/L	13.1	12.2	11.8	15	8.93	42	47.6	50.1	37.1	37.4	36.3
Chloride	mg/L	3.03	3.15	2.89	3	2.59	6.9	6.1	--	5.6	5.1	5.5
Fluoride	mg/L	<0.06	<0.06	<0.06	<0.06	<0.06	0.09 J	0.08 J	--	0.09 J	0.04 J	0.1
pH_Field	SU	4.03	3.25	4.04	3.6	4.07	6.83	6.82	6.74	6.67	6.72	6.73
Sulfate	mg/L	98.4	83.8	88.9	125	50.7	11	19	--	<1.4	<1.4	<1.4
TDS	mg/L	160	126	132	185	94.7	215	237	242	194	195	184
<b>Appendix IV</b>												
Antimony	mg/L	<0.0008	<0.000507	<0.000508	<0.000508	0.00059 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0008	<0.0008
Arsenic	mg/L	0.002 J	0.00188	0.00137	0.00272	0.00111	0.00247 J	0.00192 J	0.00218 J	0.00419 J	0.00365 J	0.00404 J
Barium	mg/L	0.0291	0.0254	0.0268	0.0333	0.0238	0.308	0.289	0.359	0.307	0.25	0.29
Beryllium	mg/L	0.00117 J	0.000918 J	0.00115	0.00126	0.000777 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Cadmium	mg/L	0.000584 J	0.000407	0.000505	0.000627	0.000245	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Chromium	mg/L	<0.002	0.000771 J	0.00061 J	0.000706 J	0.000345 J	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cobalt	mg/L	0.0365	0.0262	0.0288	0.0383	0.0202	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Combined Radium	pCi/L	0.976	1.04	1.61	1.31	0.457 U	0.585 U	0.474	0.463 U	0.678	0.495 U	0.36 U
Lead	mg/L	0.0018 J	0.00143	0.00156	0.00212	0.00127	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Lithium	mg/L	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mercury	mg/L	<0.0003	0.000363 J	<0.0003	0.00039 J	<0.0003	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Molybdenum	mg/L	<0.002	<6.8e-005	<6.8e-005	<0.000102	<0.000102	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-10										GSD-AP-
		12/04/2018	02/06/2019	02/26/2019	08/22/2019	04/15/2020	08/26/2020	03/23/2021	10/11/2021	05/10/2022	10/26/2022	10/24/2018
<b>Appendix III</b>												
Boron	mg/L	0.103	0.105	0.146	0.0951 J	0.164	0.108	0.188	0.09 J	0.0998 J	0.0868 J	0.0261 J
Calcium	mg/L	42.1	41.3	53.3	38.5	54.1	37.8	57	38.2	42.2	39.5	18
Chloride	mg/L	5.6	6.24	8.28	5.66	6.49	5.39	7.14	5.72	5.72	5.87	3.3
Fluoride	mg/L	0.07 J	0.107	0.0813 J	0.084 J	0.112	0.0997 J	0.101	0.201	0.0918 J	0.0929 J	0.11
pH_Field	SU	6.77	6.67	6.77	6.37	6.85	6.73	6.87	6.72	6.39	6.84	5.27
Sulfate	mg/L	11	16.8	38.4	6.74	50.7	10.5	60.1	7.75	11.6	4.42	44
TDS	mg/L	215	208	252	194	262	186	273	190	199	202	107
<b>Appendix IV</b>												
Antimony	mg/L	<0.0008	<0.0008	--	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	0.000796 J	<0.0008
Arsenic	mg/L	0.00332 J	0.00333 J	--	0.00394 J	0.00236 J	0.00422 J	0.00163	0.0037	0.00307	0.004	<0.001
Barium	mg/L	0.305	0.265	--	0.302	0.35	0.322	0.395	0.292	0.289	0.278	0.0499
Beryllium	mg/L	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.0006
Cadmium	mg/L	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	0.000307 J
Chromium	mg/L	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.00035 J	0.000285 J	0.000305 J	<0.000203	<0.002
Cobalt	mg/L	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.00037	0.000886	0.000907	0.000907	0.0129
Combined Radium	pCi/L	0.407 U	0.537	--	-0.021 U	0.64 U	0.221 U	0.83 U	6.52	0.421 U	0.42 U	0.564
Lead	mg/L	<0.001	<0.001	--	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.001
Lithium	mg/L	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.01
Mercury	mg/L	0.000302 J	<0.0003	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00025
Molybdenum	mg/L	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000204	0.000451	0.000466	0.000452	<0.002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-16										
		11/14/2018	11/28/2018	12/05/2018	12/18/2018	01/03/2019	01/24/2019	02/05/2019	02/28/2019	08/19/2019	04/15/2020	08/25/2020
<b>Appendix III</b>												
Boron	mg/L	0.0209 J	0.0239 J	<0.02	<0.02	--	0.0271 J	0.0245 J	<0.02	<0.03	<0.03	<0.03
Calcium	mg/L	14.9	14.8	14.8	16.4	--	19.6	20.8	21.5	12.8	13.1	12.2
Chloride	mg/L	3.6	3.5	3.3	3.6	3.4	3.91	3.94	4.15	3.42	3.39	2.94
Fluoride	mg/L	0.1	0.1	0.11	0.14	0.16	<0.05	<0.05	<0.05	<0.05	<0.06	0.0863 J
pH_Field	SU	4.99	4.74	4.76	4.57	--	4.45	4.3	4.35	4.57	4.49	4.2
Sulfate	mg/L	44	46	51	76	94	135	183	192	66.6	92.8	74.1
TDS	mg/L	96.7	102	103	126	--	212	269	261	121	155	131
<b>Appendix IV</b>												
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.0008	--	0.000922 J	<0.0008	--	<0.0008	<0.0008	<0.0008
Arsenic	mg/L	<0.001	0.00124 J	0.00113 J	0.00113 J	--	0.00257 J	0.00355 J	--	0.00228 J	0.0034 J	0.00237 J
Barium	mg/L	0.0458	0.0476	0.0475	0.0461	--	0.0485	0.0354	--	0.0314	0.028	0.0261
Beryllium	mg/L	<0.0006	0.00133 J	<0.0006	0.000761 J	--	0.000703 J	0.000711 J	--	<0.0006	<0.0006	<0.0006
Cadmium	mg/L	0.000417 J	0.000387 J	0.000317 J	0.000438 J	--	0.000736 J	0.00101	--	0.000499 J	0.000697 J	0.000507 J
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	--	<0.002	<0.002	<0.002
Cobalt	mg/L	0.0114	0.0168	0.0161	0.0234	--	0.04	0.0538	--	0.0247	0.0373	0.0294
Combined Radium	pCi/L	-0.0027 U	0.222 U	0.288 U	0.822	0.844	0.162 U	0.431 U	--	0.377 U	0.449 U	0.851
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	--	0.00114 J	0.00135 J	--	<0.001	<0.001	0.0011 J
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	--	<0.01	<0.01	<0.01
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	--	0.000411 J	0.000473 J	--	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	--	<0.002	<0.002	<0.002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.





**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-16				GSD-AP-MW-11						
		03/22/2021	10/06/2021	05/17/2022	10/25/2022	12/06/2017	02/07/2018	04/24/2018	06/27/2018	08/08/2018	10/23/2018	12/04/2018
<b>Appendix III</b>												
Boron	mg/L	<0.03	<0.03	<0.03	<0.03	0.12	0.109	0.124	0.111	0.135	0.114	0.124
Calcium	mg/L	18.4	13.4	21.1	8.46	70	72.4	72.3	73.1	76	70.2	74
Chloride	mg/L	3.61	3.17	3.58	3.24	6.3	5.4	--	5.4	5.2	5.4	5.3
Fluoride	mg/L	<0.06	<0.06	<0.06	<0.06	0.06 J	0.05 J	--	0.06 J	0.06 J	0.06 J	<0.032
pH_Field	SU	3.45	4.16	4.34	4.64	6.81	6.74	6.62	6.69	6.67	6.73	6.67
Sulfate	mg/L	128	93.5	139	37.1	83	84	--	95	110	78	97
TDS	mg/L	204	136	226	72.7	312	323	324	333	346	311	343
<b>Appendix IV</b>												
Antimony	mg/L	<0.000507	<0.000508	<0.000508	0.000738 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008
Arsenic	mg/L	0.00614	0.00207	0.00542	0.00117	0.00279 J	0.00252 J	0.00283 J	0.00289 J	0.00265 J	0.00287 J	0.00271 J
Barium	mg/L	0.0278	0.0215	0.0288	0.029	0.349	0.297	0.338	0.338	0.307	0.311	0.331
Beryllium	mg/L	0.000537 J	0.000487 J	0.000606 J	<0.000406	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Cadmium	mg/L	0.000852	0.00068	0.00108	0.000278	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Chromium	mg/L	0.000546 J	0.000455 J	0.000433 J	0.000224 J	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cobalt	mg/L	0.0469	0.0321	0.0563	0.013	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Combined Radium	pCi/L	0.942 U	1.16 U	1.01	0.406 U	0.891 U	0.786	0.935	0.537	1.28	1.3	1.05
Lead	mg/L	0.0016	0.00116	0.00178	0.000634	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Lithium	mg/L	<0.007105	<0.007105	<0.007105	<0.007105	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mercury	mg/L	0.000775	<0.0003	<0.0003	<0.0003	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Molybdenum	mg/L	<6.8e-005	<6.8e-005	<0.000102	<0.000102	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
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5. Radium data is 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.
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**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-11									GSD-AP-MW-12	
		02/06/2019	02/27/2019	08/22/2019	04/14/2020	08/26/2020	03/23/2021	10/12/2021	05/17/2022	10/26/2022	12/06/2017	02/08/2018
<b>Appendix III</b>												
Boron	mg/L	0.112	0.14	0.272	0.154	0.257	0.142	0.125	0.145	0.306	0.0605 J	0.0527 J
Calcium	mg/L	73.1	82.2	133	82.4	111	75.9	78.6	83.9	129	49	50
Chloride	mg/L	5.89	6.2	4.64	5.46	4.74	5.54	5.8	5.92	4.98	6.2	6.1
Fluoride	mg/L	0.0678 J	0.0985 J	<0.05	0.0878 J	<0.06	0.0819 J	0.134	<0.06	0.069 J	<0.032	<0.032
pH_Field	SU	6.58	6.56	6.26	6.63	6.38	6.58	6.66	6.44	6.2	5.6	5.44
Sulfate	mg/L	113	135	305	146	280	135	142	145	278	200	200
TDS	mg/L	317	360	555	372	517	361	352	367	545	371	367
<b>Appendix IV</b>												
Antimony	mg/L	<0.0008	--	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	<0.000508	<0.0006	<0.0006
Arsenic	mg/L	0.00272 J	--	0.00229 J	0.00286 J	0.00246 J	0.00275	0.00272	0.00281	0.00215	<0.001	<0.001
Barium	mg/L	0.286	--	0.214	0.168	0.165	0.169	0.17	0.182	0.117	0.0501	0.0375
Beryllium	mg/L	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.0006	<0.0006
Cadmium	mg/L	<0.0003	--	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	0.000596 J	0.00064 J
Chromium	mg/L	<0.002	--	<0.002	<0.002	<0.002	0.000513 J	0.000267 J	0.000234 J	<0.000203	<0.002	<0.002
Cobalt	mg/L	<0.002	--	0.00756	<0.002	0.00599	0.000388	0.000275	0.000457	0.009	0.00221 J	0.00221 J
Combined Radium	pCi/L	0.779	--	1.34 U	0.922 U	1.28	0.592 U	1.02 U	1.01 U	0.505 U	0.435 U	0.477
Lead	mg/L	<0.001	--	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.001	<0.001
Lithium	mg/L	<0.01	--	<0.01	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.01	<0.01
Mercury	mg/L	<0.0003	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00025	<0.00025
Molybdenum	mg/L	<0.002	--	<0.002	<0.002	<0.002	0.000124 J	0.000152 J	0.000121 J	<0.000102	<0.002	<0.002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-12										
		04/24/2018	06/27/2018	08/08/2018	10/23/2018	12/05/2018	02/06/2019	02/27/2019	08/22/2019	04/14/2020	08/26/2020	03/23/2021
<b>Appendix III</b>												
Boron	mg/L	0.0476 J	0.0539 J	0.0637 J	0.0696 J	0.0652 J	0.051 J	0.0494 J	0.0625 J	0.0377 J	0.0698 J	0.0452 J
Calcium	mg/L	50.5	56.3	65.7	68.3	64.3	52.3	60.2	89.4	40	68.4	42
Chloride	mg/L	--	5.5	5.3	5.8	6	5.92	5.88	6.31	5.74	5.91	6.3
Fluoride	mg/L	--	<0.032	<0.032	0.04 J	<0.032	<0.05	<0.05	<0.05	<0.06	<0.06	<0.06
pH_Field	SU	5.41	5.45	5.46	5.47	5.45	5.31	5.4	5.35	5.39	5.63	5.5
Sulfate	mg/L	--	240	260	280	280	249	257	339	155	282	160
TDS	mg/L	365	421	479	507	479	385	422	501	278	472	286
<b>Appendix IV</b>												
Antimony	mg/L	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	--	<0.0008	<0.0008	<0.0008	<0.000507
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<6.8e-005
Barium	mg/L	0.0405	0.0466	0.0448	0.054	0.0493	0.0357	--	0.0455	0.0279	0.0503	0.0315
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.000406
Cadmium	mg/L	0.000702 J	0.000732 J	0.000587 J	0.000552 J	0.000661 J	0.000601 J	--	0.000755 J	0.000425 J	0.000618 J	0.000405
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000431 J
Cobalt	mg/L	0.00257 J	0.00266 J	0.00251 J	0.00399 J	0.00466 J	0.00475 J	--	0.00658	0.0035 J	0.00547	0.00378
Combined Radium	pCi/L	0.695	0.183 U	0.817	0.796	0.498 U	-0.0241 U	--	0.145 U	0.643 U	1.31	0.565 U
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<6.8e-005
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.007105
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	--	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<6.8e-005

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS											
		GSD-AP-MW-12			GSD-AP-MW-17								
		10/05/2021	05/10/2022	10/26/2022	10/24/2018	11/14/2018	11/28/2018	12/05/2018	12/18/2018	01/03/2019	01/24/2019	02/05/2019	
<b>Appendix III</b>													
Boron	mg/L	0.0661 J	0.066 J	0.0995 J	0.0357 J	0.0348 J	0.0313 J	0.0363 J	0.033 J	--	0.0307 J	0.0306 J	
Calcium	mg/L	55.8	49.7	60.2	28.3	27.5	20.7	25.3	20.9	--	17	17.1	
Chloride	mg/L	6.26	5.64	5.76	4	3.6	3.5	3.2	3.4	3.2	3.15	2.98	
Fluoride	mg/L	<0.06	<0.06	<0.06	0.23	0.2	0.19	0.19	0.15	0.19	0.168	0.192	
pH_Field	SU	5.19	4.78	5.52	7.92	8.23	8.95	8.77	8.99	--	9.42	9.23	
Sulfate	mg/L	195	193	230	16	13	11	12	11	10	10.2	10.4	
TDS	mg/L	378	319	402	184	170	167	185	164	--	137	138	
<b>Appendix IV</b>													
Antimony	mg/L	<0.000508	<0.000508	<0.000508	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	--	<0.0008	<0.0008	
Arsenic	mg/L	<6.8e-005	<8.1e-005	0.000102 J	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	
Barium	mg/L	0.0417	0.0377	0.0376	0.218	0.203	0.191	0.209	0.199	--	0.206	0.168	
Beryllium	mg/L	<0.000406	<0.000406	<0.000406	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	
Cadmium	mg/L	0.000367	0.00029	0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	
Chromium	mg/L	0.000339 J	0.000356 J	0.000238 J	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	
Cobalt	mg/L	0.00448	0.00446	0.00603	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	
Combined Radium	pCi/L	1.48	0.531 U	0.446 U	0.694	0.398 U	0.428 U	0.302 U	0.535 U	0.64	0.331 U	0.307 U	
Lead	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	
Lithium	mg/L	<0.007105	<0.007105	<0.007105	<0.01	<0.01	0.0111 J	0.0124 J	0.0121 J	--	0.0134 J	0.0126 J	
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	--	<0.0003	<0.0003	
Molybdenum	mg/L	<6.8e-005	<0.000102	<0.000102	0.00507 J	0.00358 J	0.00322 J	0.00256 J	0.00215 J	--	0.00211 J	0.00205 J	

**Notes:**

1. mg/L - Milligrams per Liter
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3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-17								GSD-AP-MW-1		
		02/28/2019	08/19/2019	04/16/2020	08/24/2020	03/22/2021	10/06/2021	05/09/2022	10/25/2022	12/06/2017	02/06/2018	04/23/2018
<b>Appendix III</b>												
Boron	mg/L	0.0206 J	0.0341 J	0.0331 J	0.0303 J	0.0333 J	0.0305 J	<0.03	0.0308 J	1.28	1.29	1.21
Calcium	mg/L	18.6	25.3	30.7	30.8	31	31	28.9	29.4	271	275	269
Chloride	mg/L	3.05	2.8	2.93	2.82	2.94	2.98	3.01	2.88	6.2	5.9	--
Fluoride	mg/L	0.182	0.187	0.166	0.163	0.18	0.175	0.191	0.15	0.1	0.08 J	--
pH_Field	SU	9.48	7.93	8.1	8.17	7.85	7.92	7.29	7.97	6.5	6.48	6.36
Sulfate	mg/L	9.86	8.74	11.5	10	10.6	10.2	10	9.25	650	560	--
TDS	mg/L	140	240	166	162	157	182	152	159	1300	1310	1210
<b>Appendix IV</b>												
Antimony	mg/L	--	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	<0.000508	<0.0006	<0.0006	<0.0006
Arsenic	mg/L	--	<0.001	<0.001	<0.001	0.00031	0.000263	0.000222	0.000362	0.00179 J	0.00191 J	0.0023 J
Barium	mg/L	--	0.259	0.257	0.312	0.29	0.307	0.29	0.286	0.0807	0.0546	0.0488
Beryllium	mg/L	--	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.0006	<0.0006	<0.0006
Cadmium	mg/L	--	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	0.000132 J	<0.0002	<0.0003	<0.0003
Chromium	mg/L	--	<0.002	0.00267 J	<0.002	0.000509 J	0.000273 J	0.000283 J	0.000357 J	<0.002	<0.002	<0.002
Cobalt	mg/L	--	<0.002	<0.002	<0.002	0.000133 J	0.000126 J	0.000105 J	0.000311	0.00818 J	0.0123	0.0204
Combined Radium	pCi/L	--	0.683	0.603	0.404 U	0.497 U	2.01	0.56 U	0.776 U	0.694 U	0.641	-0.0527 U
Lead	mg/L	--	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.001	<0.001	<0.001
Lithium	mg/L	--	<0.01	0.0127 J	<0.01	0.0083 J	0.00881 J	0.00859 J	0.00897 J	<0.01	<0.01	<0.01
Mercury	mg/L	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00025	<0.00025	<0.00025
Molybdenum	mg/L	--	<0.002	<0.002	<0.002	0.000723	0.000453	0.000465	0.000466	<0.002	<0.002	<0.002

**Notes:**

1. mg/L - Milligrams per Liter
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5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-1										
		06/26/2018	08/07/2018	10/22/2018	12/04/2018	02/05/2019	02/26/2019	08/21/2019	04/15/2020	08/25/2020	03/16/2021	10/05/2021
<b>Appendix III</b>												
Boron	mg/L	1.25	1.21	1.22	1.08	1.2	1.15	1.24	1.13	1.11	1.08	1.02
Calcium	mg/L	268	259	240	254	292	254	272	231	218	218	198
Chloride	mg/L	5.7	5.3	5.6	5.8	5.8	5.92	5.26	5.5	5.59	6.2	6.1
Fluoride	mg/L	0.08 J	0.07 J	0.07 J	0.04 J	0.0525 J	<0.05	<0.05	<0.06	<0.06	<0.06	0.0601 J
pH_Field	SU	6.32	6.32	6.2	6.31	6.1	6.11	6.01	5.65	6	5.87	5.79
Sulfate	mg/L	670	660	580	580	702	748	708	647	642	593	567
TDS	mg/L	1250	1220	1150	1090	1200	1210	1200	1060	1060	1040	964
<b>Appendix IV</b>												
Antimony	mg/L	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	--	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508
Arsenic	mg/L	0.00306 J	0.00336 J	0.00451 J	0.00471 J	0.00365 J	--	0.00444 J	0.00309 J	0.00435 J	0.0029	0.00356
Barium	mg/L	0.0479	0.0402	0.0427	0.0434	0.0439	--	0.037	0.0329	0.0358	0.0331	0.0304
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003	0.000102 J	0.000102 J
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000376 J	0.000228 J
Cobalt	mg/L	0.0224	0.0193	0.0243	0.0166	0.0264	--	0.0242	0.0178	0.0193	0.0184	0.0169
Combined Radium	pCi/L	0.162 U	0.87	0.691	0.213 U	0.637	--	0.643 U	0.538 U	0.502 U	0.722 U	1.21
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.007105	<0.007105
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<6.8e-005	<6.8e-005

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
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5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-1		GSD-AP-MW-2								
		05/10/2022	10/26/2022	12/06/2017	02/06/2018	04/23/2018	06/27/2018	08/07/2018	10/22/2018	12/04/2018	02/05/2019	02/26/2019
<b>Appendix III</b>												
Boron	mg/L	0.939	0.977	0.758	0.733	0.608	0.619	0.697	0.754	0.737	0.575	0.566
Calcium	mg/L	172	200	128	130	95.9	99.4	107	107	120	80.6	79.6
Chloride	mg/L	5.97	6.02	4.1	3.1	--	2.2	2.6	2.8	4.1	2.56	3.03
Fluoride	mg/L	<0.06	<0.06	0.3	0.27	--	0.28	0.24	0.24	0.15	0.207	0.264
pH_Field	SU	5.77	5.86	6.61	6.66	6.54	6.63	6.57	6.55	6.52	6.47	6.54
Sulfate	mg/L	508	512	210	190	--	130	150	160	170	145	148
TDS	mg/L	786	840	574	572	414	440	485	484	504	366	372
<b>Appendix IV</b>												
Antimony	mg/L	<0.000508	0.000874 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	--
Arsenic	mg/L	0.00208	0.00241	0.809	0.774	0.643	1.01	0.988	1.01	0.553	0.74	--
Barium	mg/L	0.0275	0.0274	0.0842	0.0716	0.0518	0.0578	0.0566	0.0536	0.0589	0.0418	--
Beryllium	mg/L	<0.000406	<0.000406	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--
Cadmium	mg/L	0.000216	0.000132 J	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--
Chromium	mg/L	<0.000203	<0.000203	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Cobalt	mg/L	0.0136	0.0152	0.0246	0.0243	0.0258	0.0362	0.0332	0.0438	0.0252	0.0362	--
Combined Radium	pCi/L	0.761 U	0.38 U	0.772 U	0.679	0.447 U	0.117 U	1.22	0.996	0.739	1.09	--
Lead	mg/L	<6.8e-005	<6.8e-005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--
Lithium	mg/L	<0.007105	<0.007105	0.092	0.0817	0.051	0.0734	0.0764	0.0804	0.0474	0.0545	--
Mercury	mg/L	<0.0003	<0.0003	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	--
Molybdenum	mg/L	<0.000102	0.000198 J	0.0254	0.0239	0.0165	0.0302	0.0209	0.0198	0.0118	0.0196	--

**Notes:**

1. mg/L - Milligrams per Liter
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5. Radium data is 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.
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**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-2							GSD-AP-MW-3			
		08/20/2019	04/15/2020	08/25/2020	03/24/2021	10/11/2021	05/16/2022	10/25/2022	12/06/2017	02/06/2018	04/24/2018	06/27/2018
<b>Appendix III</b>												
Boron	mg/L	0.566	0.461	0.528	0.437	0.459	0.381	0.506	0.959	1.04	0.979	0.982
Calcium	mg/L	92.3	69.2	80.5	61.5	87.1	58.2	86.9	125	110	88.8	80.8
Chloride	mg/L	2.24	2.16	2	2.29	2.43	2.14	2.45	7.6	7.6	--	7.3
Fluoride	mg/L	0.252	0.21	0.273	0.194	0.283	0.151	0.271	0.13	0.08 J	--	0.07 J
pH_Field	SU	6.3	6.45	6.65	6.49	6.59	6.16	6.64	6.54	6.39	6.02	6.07
Sulfate	mg/L	110	116	114	101	112	93.1	111	250	230	--	230
TDS	mg/L	369	300	339	287	337	244	337	628	556	510	486
<b>Appendix IV</b>												
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	0.00113	<0.0006	<0.0006	<0.0006	<0.0006
Arsenic	mg/L	0.825	0.709	0.727	0.489	0.424	0.484	0.555	0.00101 J	<0.001	<0.001	<0.001
Barium	mg/L	0.0685	0.0607	0.0812	0.0676	0.0807	0.0932	0.0888	0.126	0.0721	0.0492	0.0453
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.0006	<0.0006	<0.0006	<0.0006
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	6.88e-005 J	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	<0.0003	<0.0003	<0.0003
Chromium	mg/L	<0.002	<0.002	<0.002	0.00047 J	0.000479 J	0.000342 J	<0.000203	<0.002	<0.002	<0.002	<0.002
Cobalt	mg/L	0.0366	0.0324	0.0298	0.0316	0.0165	0.0352	0.0302	0.0302	0.0371	0.0251	0.0234
Combined Radium	pCi/L	0.553 U	0.182 U	0.43 U	0.769 U	2.38	1.06	0.683 U	0.643 U	0.209 U	0.596	0.363 U
Lead	mg/L	<0.001	<0.001	<0.001	<6.8e-005	9.28e-005 J	<6.8e-005	<6.8e-005	<0.001	<0.001	<0.001	<0.001
Lithium	mg/L	0.0583	0.0406	0.041	0.0318	0.0225	0.029	0.0274	<0.01	<0.01	<0.01	<0.01
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00025	<0.00025	<0.00025	<0.00025
Molybdenum	mg/L	0.027	0.0202	0.0269	0.0164	0.0204	0.0195	0.0201	<0.002	<0.002	<0.002	<0.002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.





**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-3										
		08/07/2018	10/22/2018	12/03/2018	02/05/2019	02/25/2019	08/20/2019	04/13/2020	08/26/2020	03/22/2021	10/05/2021	05/10/2022
<b>Appendix III</b>												
Boron	mg/L	1	1.08	1.05	1.01	1.08	1.06	1.19	1.16	1.13	1.01	0.978
Calcium	mg/L	88.5	92.7	105	68.6	70.6	74.1	69.5	75.7	64.9	65.9	59
Chloride	mg/L	7.6	6.9	6.8	6.95	6.55	6.07	5.95	5.89	5.26	5.09	4.59
Fluoride	mg/L	0.09 J	0.11	0.08 J	0.064 J	<0.05	0.0592 J	<0.06	<0.06	<0.06	<0.06	0.0714 J
pH_Field	SU	6.28	6.3	6.38	5.83	5.93	5.73	5.83	5.87	5.51	5.76	5.95
Sulfate	mg/L	200	190	200	263	246	222	256	246	254	228	215
TDS	mg/L	487	450	492	428	441	416	433	455	427	389	362
<b>Appendix IV</b>												
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.0008	--	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	0.0002 J	0.000207	0.000162 J
Barium	mg/L	0.0431	0.0541	0.0545	0.0363	--	0.0405	0.0349	0.0363	0.0354	0.0344	0.0287
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	0.000438 J	<0.0003	0.00039	0.000213	0.00035
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000293 J	0.000234 J	<0.000203
Cobalt	mg/L	0.0223	0.03	0.0238	0.0232	--	0.0257	0.0209	0.0191	0.0183	0.016	0.0134
Combined Radium	pCi/L	0.788	0.749	0.749	0.299 U	--	0.709 U	0.942 U	0.177 U	0.263 U	3.21	0.189 U
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<6.8e-005
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.007105	<0.007105	<0.007105
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.0003	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<6.8e-005	<6.8e-005	<0.000102

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-	GSD-AP-MW-4									
		10/26/2022	12/07/2017	02/06/2018	04/24/2018	06/26/2018	08/06/2018	10/22/2018	12/03/2018	02/05/2019	02/26/2019	08/20/2019
<b>Appendix III</b>												
Boron	mg/L	0.85	0.515	0.541	0.475	0.444	0.474	0.496	0.51	0.43	0.411	0.399
Calcium	mg/L	62.4	30.1	30.6	27.8	26.2	27.5	27.7	32.3	25.5	26.4	23.5
Chloride	mg/L	4.38	8.5	8.8	--	8.7	11	8.6	9.1	9.81	13	9.62
Fluoride	mg/L	<0.06	0.25	0.24	--	0.22	0.22	0.24	0.22	0.259	0.246	0.197
pH_Field	SU	5.97	6.73	6.76	6.66	6.61	6.68	6.63	6.67	6.63	6.64	6.33
Sulfate	mg/L	206	<1.4	<1.4	--	<1.4	<1.4	<1.4	<1.4	5.38	5.1	7.34
TDS	mg/L	328	189	206	193	180	182	204	168	158	191	164
<b>Appendix IV</b>												
Antimony	mg/L	<0.000508	<0.0006	<0.0006	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	--	<0.0008
Arsenic	mg/L	0.000311	0.0132	0.0105	0.0124	0.0132	0.013	0.0144	0.0119	0.0107	--	0.0141
Barium	mg/L	0.0306	0.239	0.206	0.217	0.208	0.189	0.209	0.214	0.173	--	0.188
Beryllium	mg/L	<0.000406	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006
Cadmium	mg/L	0.000106 J	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003
Chromium	mg/L	0.000276 J	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002
Cobalt	mg/L	0.0132	0.0252	0.0243	0.027	0.0242	0.0205	0.0259	0.0228	0.0263	--	0.0293
Combined Radium	pCi/L	0.551 U	1.04 U	0.989	0.405 U	1.03	0.622	1.06	0.697	0.467 U	--	0.814
Lead	mg/L	<6.8e-005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001
Lithium	mg/L	<0.007105	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--	<0.01
Mercury	mg/L	<0.0003	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	--	<0.0003
Molybdenum	mg/L	<0.000102	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-4						GSD-AP-MW-5				
		04/15/2020	08/26/2020	03/24/2021	10/05/2021	05/16/2022	10/26/2022	12/07/2017	02/06/2018	04/25/2018	06/27/2018	08/07/2018
<b>Appendix III</b>												
Boron	mg/L	0.344	0.398	0.326	0.344	0.374	0.363	0.566	0.614	0.498	0.446	0.442
Calcium	mg/L	22	22.8	23.1	27.8	30.7	31.6	48.2	47.8	41.8	36.9	37.6
Chloride	mg/L	9.27	8.96	8.61	9.3	8.19	7.88	8.7	8.5	--	7.1	6.9
Fluoride	mg/L	0.238	0.251	0.227	0.205	0.17	0.283	0.06 J	0.05 J	--	0.06 J	0.06 J
pH_Field	SU	6.77	6.68	6.86	6.58	6.61	6.67	6.32	6.27	6.14	6.15	6.18
Sulfate	mg/L	17.2	15.5	19.9	37.8	49.4	61.8	19	20	--	18	20
TDS	mg/L	170	168	180	200	218	247	215	204	192	180	183
<b>Appendix IV</b>												
Antimony	mg/L	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	0.000553 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0008
Arsenic	mg/L	0.0121	0.0133	0.011	0.0147	0.0132	0.0149	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	mg/L	0.159	0.181	0.171	0.208	0.23	0.239	0.279	0.195	0.26	0.249	0.216
Beryllium	mg/L	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Cadmium	mg/L	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003
Chromium	mg/L	<0.002	<0.002	0.000323 J	0.000224 J	0.000211 J	<0.000203	<0.002	<0.002	<0.002	<0.002	<0.002
Cobalt	mg/L	0.0252	0.0231	0.0268	0.0236	0.0289	0.0289	0.00331 J	0.00323 J	0.00258 J	0.00218 J	<0.002
Combined Radium	pCi/L	-0.0841 U	0.26 U	0.664 U	1.75	0.978	0.609 U	0.885 U	0.524	0.341 U	0.546	1.09
Lead	mg/L	<0.001	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.001	<0.001	<0.001	<0.001	<0.001
Lithium	mg/L	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.01	<0.01	<0.01	<0.01	<0.01
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Molybdenum	mg/L	<0.002	<0.002	0.00118	0.00109	0.00132	0.00109	<0.002	<0.002	<0.002	<0.002	<0.002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-5										
		10/23/2018	12/05/2018	02/05/2019	02/27/2019	08/20/2019	04/13/2020	08/24/2020	03/16/2021	10/05/2021	05/09/2022	10/26/2022
<b>Appendix III</b>												
Boron	mg/L	0.436	0.456	0.453	0.457	0.378	0.359	0.329	0.328	0.26	0.261	0.23
Calcium	mg/L	35.3	36.3	36.6	39.6	33.7	43	35.5	38.1	35.9	38.4	39.5
Chloride	mg/L	6.7	6.7	7.24	7.38	6.53	6.48	6.64	7.14	6.84	6.81	6.4
Fluoride	mg/L	0.07 J	0.04 J	0.0651 J	0.0578 J	0.0567 J	0.0688 J	0.0607 J	0.065 J	0.122	0.0682 J	0.0845 J
pH_Field	SU	6.15	6.15	6.08	6.11	6.11	6.18	6.11	6.22	6.24	5.43	6.44
Sulfate	mg/L	18	20	24.3	24.7	21.3	21.9	21.2	18.8	14.4	15.5	16.6
TDS	mg/L	169	177	198	185	174	192	175	184	180	174	178
<b>Appendix IV</b>												
Antimony	mg/L	<0.0008	<0.0008	<0.0008	--	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	0.000669 J
Arsenic	mg/L	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	8.17e-005 J	0.000133 J	8.19e-005 J	0.000257
Barium	mg/L	0.26	0.245	0.215	--	0.238	0.241	0.238	0.217	0.229	0.213	0.229
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000397 J	0.000281 J	0.000245 J	<0.000203
Cobalt	mg/L	0.0023 J	0.00233 J	0.0021 J	--	0.00223 J	<0.002	0.00222 J	0.00136	0.00116	0.000886	0.000936
Combined Radium	pCi/L	1.01	0.876	0.551 U	--	0.206 U	1.19	0.482 U	0.709 U	1.44	1.16	0.643 U
Lead	mg/L	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Lithium	mg/L	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105
Mercury	mg/L	<0.00025	<0.00025	<0.0003	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<6.8e-005	0.000142 J	0.000114 J	0.000332

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-6										
		12/07/2017	02/08/2018	04/25/2018	06/26/2018	08/07/2018	10/23/2018	12/03/2018	02/05/2019	02/26/2019	08/20/2019	04/13/2020
<b>Appendix III</b>												
Boron	mg/L	0.063 J	0.0508 J	0.0548 J	0.0571 J	0.0571 J	0.0636 J	0.0568 J	0.0517 J	0.0491 J	0.0608 J	0.0561 J
Calcium	mg/L	29.8	24.3	19.8	17.8	18.3	18.1	16.6	14.4	16	15.1	12.5
Chloride	mg/L	10	9.5	--	9.5	9	9.9	8.7	8.76	8.63	9.55	8.6
Fluoride	mg/L	0.06 J	0.04 J	--	0.05 J	0.05 J	0.06 J	<0.032	0.0583 J	0.0618 J	<0.05	<0.06
pH_Field	SU	6.38	6.29	6.15	6.09	6.16	6.1	6.09	6.04	6.17	5.4	5.82
Sulfate	mg/L	10	11	--	11	12	11	12	13.7	14	12.3	13.9
TDS	mg/L	136	122	102	106	71.3	105	102	86.7	91.3	98.7	90.7
<b>Appendix IV</b>												
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	--	<0.0008	<0.0008
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001
Barium	mg/L	0.0809	0.0566	0.0553	0.0604	0.0542	0.0608	0.0633	0.05	--	0.0731	0.0635
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006
Cadmium	mg/L	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002
Cobalt	mg/L	0.00592 J	0.00297 J	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002
Combined Radium	pCi/L	0.394 U	0.489	-0.0902 U	0.245 U	0.439 U	0.243 U	0.304 U	0.196 U	--	-0.086 U	0.0901 U
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	--	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-6					GSD-AP-MW-7					
		08/26/2020	03/17/2021	10/05/2021	05/10/2022	10/26/2022	12/07/2017	02/08/2018	04/25/2018	06/26/2018	08/08/2018	10/23/2018
<b>Appendix III</b>												
Boron	mg/L	0.0633 J	0.0563 J	0.0649 J	0.068 J	0.0788 J	0.102	0.0787 J	0.0734 J	0.094 J	0.103	0.106
Calcium	mg/L	12.9	11.3	11.4	10.7	12.2	23.4	20.1	17.4	21.8	25.4	25.6
Chloride	mg/L	9.21	8.59	9.09	8.87	9.4	7.9	6.7	--	7.4	7.7	8
Fluoride	mg/L	<0.06	<0.06	<0.06	<0.06	<0.06	0.09 J	0.07 J	--	0.09 J	0.1	0.1
pH_Field	SU	5.96	5.92	5.74	5.51	5.98	6.62	6.39	6.17	6.38	6.56	6.54
Sulfate	mg/L	13.1	13.7	14.2	14.7	12.2	14	10	--	11	13	13
TDS	mg/L	91.3	80	96.7	83.3	91.3	137	124	106	129	142	142
<b>Appendix IV</b>												
Antimony	mg/L	<0.0008	<0.000507	<0.000508	<0.000508	<0.000508	<0.0006	<0.0006	<0.0006	<0.0006	<0.0008	<0.0008
Arsenic	mg/L	<0.001	<6.8e-005	<6.8e-005	<8.1e-005	0.000151 J	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Barium	mg/L	0.0771	0.0656	0.0741	0.0762	0.0702	0.083	0.0756	0.0764	0.0799	0.0791	0.0898
Beryllium	mg/L	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Cadmium	mg/L	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Chromium	mg/L	<0.002	0.000338 J	0.000246 J	<0.000203	0.000222 J	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cobalt	mg/L	<0.002	0.00102	0.00104	0.00104	0.0012	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Combined Radium	pCi/L	0.416 U	0.539 U	1.36	0.0979 U	0.432 U	0.895 U	0.322 U	0.0097 U	0.587	0.364 U	0.703
Lead	mg/L	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Lithium	mg/L	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Molybdenum	mg/L	<0.002	<6.8e-005	<6.8e-005	<0.000102	<0.000102	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-7										GSD-AP-
		12/04/2018	02/06/2019	02/27/2019	08/21/2019	04/15/2020	08/26/2020	03/23/2021	10/05/2021	05/10/2022	10/26/2022	12/07/2017
<b>Appendix III</b>												
Boron	mg/L	0.085 J	0.0733 J	0.0548 J	0.091 J	0.0534 J	0.0665 J	0.0587 J	0.0673 J	0.0384 J	0.0822 J	0.0828 J
Calcium	mg/L	19	16.4	15.6	23.5	14	16.7	12.5	15.9	9.95	20.2	66.1
Chloride	mg/L	6.7	6.84	6.21	7.35	4.99	6.19	4.87	6.43	3.96	7.09	5.2
Fluoride	mg/L	0.06 J	<0.05	0.0824 J	0.068 J	0.0775 J	<0.06	<0.06	0.0933 J	0.0627 J	0.128	0.14
pH_Field	SU	6.33	6.13	6.12	5.97	6.16	6.11	6.04	6.06	5.08	6.44	6.81
Sulfate	mg/L	9.8	10.8	8.98	11.8	7.95	9.19	8.08	9.19	7.13	11.4	6.5
TDS	mg/L	121	108	103	133	102	109	92.7	113	82.7	121	253
<b>Appendix IV</b>												
Antimony	mg/L	<0.0008	<0.0008	--	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	0.000629 J	<0.0006
Arsenic	mg/L	<0.001	<0.001	--	<0.001	<0.001	<0.001	<6.8e-005	6.94e-005 J	<8.1e-005	0.000147 J	0.00313 J
Barium	mg/L	0.0789	0.0685	--	0.0946	0.0653	0.0845	0.0602	0.0716	0.0527	0.0852	0.244
Beryllium	mg/L	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.0006
Cadmium	mg/L	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003	9.7e-005 J	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002
Chromium	mg/L	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000406 J	0.000248 J	0.000245 J	<0.000203	<0.002
Cobalt	mg/L	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.00102	0.000182 J	0.0004	0.00016 J	0.00212 J
Combined Radium	pCi/L	0.325 U	0.0774 U	--	-0.0134 U	0.526 U	0.691 U	0.45 U	1.27	0.599 U	0.559 U	7.45 U
Lead	mg/L	<0.001	<0.001	--	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.001
Lithium	mg/L	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.01
Mercury	mg/L	0.00034 J	<0.0003	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00025
Molybdenum	mg/L	<0.002	<0.002	--	<0.002	<0.002	<0.002	<6.8e-005	9.55e-005 J	<0.000102	0.000154 J	<0.002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-8										
		02/08/2018	04/25/2018	06/26/2018	08/08/2018	10/23/2018	12/04/2018	02/06/2019	02/27/2019	08/21/2019	04/14/2020	08/26/2020
<b>Appendix III</b>												
Boron	mg/L	0.0691 J	0.0571 J	0.0634 J	0.0659 J	0.0666 J	0.0617 J	0.0586 J	0.0428 J	0.0569 J	0.0474 J	0.0501 J
Calcium	mg/L	58	56.3	57.7	51.2	50.9	51.9	55	53.4	71.5	56.2	55.5
Chloride	mg/L	4.1	--	5	4.8	4.4	4.2	5.84	6.52	5.89	5.21	5.16
Fluoride	mg/L	0.11	--	0.1	0.1	0.11	0.08 J	<0.05	0.108	0.0648 J	0.0845 J	0.0732 J
pH_Field	SU	6.73	6.61	6.59	6.6	6.64	6.68	6.62	6.56	6.16	6.49	6.29
Sulfate	mg/L	8.9	--	7.5	7.3	7.8	8.2	9.53	8.25	10.8	12.5	16.1
TDS	mg/L	229	223	232	208	209	213	212	211	226	222	215
<b>Appendix IV</b>												
Antimony	mg/L	<0.0006	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	--	<0.0008	<0.0008	<0.0008
Arsenic	mg/L	0.00247 J	0.00291 J	0.00265 J	0.00203 J	0.00246 J	0.00328 J	0.00325 J	--	0.00302 J	0.00295 J	0.00304 J
Barium	mg/L	0.135	0.224	0.181	0.134	0.17	0.189	0.226	--	0.194	0.262	0.235
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002
Cobalt	mg/L	<0.002	0.00204 J	<0.002	<0.002	<0.002	<0.002	0.00232 J	--	0.00303 J	0.00385 J	0.00388 J
Combined Radium	pCi/L	0.549	0.65	0.436 U	0.486 U	0.319 U	0.875	0.378 U	--	0.552 U	0.641 U	0.339 U
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	0.000284 J	<0.0003	--	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.





**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-8				GSD-AP-MW-9						
		03/23/2021	10/12/2021	05/11/2022	10/26/2022	12/07/2017	02/08/2018	04/25/2018	06/26/2018	08/08/2018	10/23/2018	12/05/2018
<b>Appendix III</b>												
Boron	mg/L	0.0476 J	0.0462 J	0.0374 J	0.0526 J	0.0614 J	0.0531 J	0.0551 J	0.0568 J	0.0524 J	0.0576 J	0.0561 J
Calcium	mg/L	48.9	66.3	57.8	63.7	38.7	38.8	40.3	39.9	42.3	39.8	43.8
Chloride	mg/L	5.3	5.6	5.13	5.72	7	--	--	6.4	5.5	6.7	5.9
Fluoride	mg/L	0.0802 J	0.123	0.0695 J	0.0911 J	0.12	--	--	0.13	0.12	0.13	0.04 J
pH_Field	SU	6.47	6.61	6.25	6.68	6.93	6.96	6.89	6.85	6.94	6.93	6.94
Sulfate	mg/L	9.21	16	11.8	10.1	9	--	--	8.5	6.7	9.4	7.8
TDS	mg/L	200	245	216	226	183	--	180	191	192	185	200
<b>Appendix IV</b>												
Antimony	mg/L	<0.000507	<0.000508	<0.000508	0.000582 J	<0.0006	<0.0006	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008
Arsenic	mg/L	0.00282	0.00287	0.00265	0.0033	0.00112 J	<0.001	<0.001	<0.001	<0.001	<0.001	0.00111 J
Barium	mg/L	0.249	0.203	0.276	0.224	0.187	0.148	0.158	0.16	0.161	0.183	0.186
Beryllium	mg/L	<0.000406	<0.000406	<0.000406	<0.000406	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006
Cadmium	mg/L	8.32e-005 J	<6.8e-005	7.28e-005 J	<6.8e-005	<0.0002	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Chromium	mg/L	0.0003 J	<0.000203	0.000243 J	<0.000203	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Cobalt	mg/L	0.003	0.00298	0.00534	0.00266	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Combined Radium	pCi/L	0.662 U	0.291 U	0.475 U	0.528 U	0.226 U	0.071 U	0.569	0.43 U	0.656	0.395 U	0.52 U
Lead	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001
Lithium	mg/L	<0.007105	<0.007105	<0.007105	<0.007105	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025
Molybdenum	mg/L	0.000357	0.000319	0.000403	0.000422	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-9									GSD-AP-PZ-1	
		02/06/2019	02/27/2019	08/21/2019	04/14/2020	08/26/2020	03/23/2021	10/12/2021	05/11/2022	10/26/2022	06/27/2018	07/18/2018
<b>Appendix III</b>												
Boron	mg/L	0.0627 J	0.0474 J	0.0524 J	0.0562 J	0.0565 J	0.0609 J	0.0632 J	0.0544 J	0.0595 J	<0.02	<0.02
Calcium	mg/L	34.9	42.5	50.9	43.6	43.2	38.1	35.4	38.3	47.7	39.4	38.4
Chloride	mg/L	7.26	6.77	6.16	7.27	6.57	7.42	7.78	7.2	6.99	3.6	3.8
Fluoride	mg/L	<0.05	0.147	0.0984 J	0.133	0.13	0.132	0.147	0.108 J	0.119 J	0.13	0.11
pH_Field	SU	6.73	6.85	6.61	7.02	6.75	6.85	6.9	6.7	7.07	6.79	6.8
Sulfate	mg/L	17	12.4	11.3	15.9	12.9	15.7	18	17.7	13.8	2.2 J	2.5 J
TDS	mg/L	151	186	200	187	192	178	169	181	194	144	156
<b>Appendix IV</b>												
Antimony	mg/L	<0.0008	--	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	0.00095 J	<0.0006	<0.0006
Arsenic	mg/L	<0.001	--	<0.001	0.00118 J	<0.001	0.00063	0.000635	0.000555	0.000649	<0.001	<0.001
Barium	mg/L	0.128	--	0.183	0.186	0.202	0.157	0.147	0.16	0.154	0.115	0.116
Beryllium	mg/L	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.0006	<0.0006
Cadmium	mg/L	<0.0003	--	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0003	<0.0003
Chromium	mg/L	<0.002	--	<0.002	<0.002	<0.002	0.000422 J	0.00031 J	0.00021 J	<0.000203	<0.002	<0.002
Cobalt	mg/L	<0.002	--	<0.002	<0.002	<0.002	0.00103	0.00113	0.000908	0.000812	<0.002	<0.002
Combined Radium	pCi/L	0.244 U	--	1.53 U	0.119 U	1.18	0.694 U	0.311 U	0.605 U	0.572 U	0.188 U	0.314 U
Lead	mg/L	<0.001	--	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.001	<0.001
Lithium	mg/L	<0.01	--	<0.01	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.01	<0.01
Mercury	mg/L	<0.0003	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00025	<0.00025
Molybdenum	mg/L	<0.002	--	<0.002	<0.002	<0.002	0.00027	0.000177 J	0.000216	0.000276	<0.002	<0.002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-PZ-1										
		08/07/2018	09/05/2018	09/24/2018	10/22/2018	12/03/2018	02/05/2019	02/25/2019	08/20/2019	04/13/2020	08/24/2020	03/24/2021
<b>Appendix III</b>												
Boron	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.03	<0.03	<0.03	<0.03
Calcium	mg/L	36.7	43.6	44.5	45	33.7	30.1	25.3	38.3	25.9	29	22.2
Chloride	mg/L	3.3	3.4	3.8	3.3	3.2	3.78	3.75	3.52	3.36	3.35	3.45
Fluoride	mg/L	0.11	0.13	0.13	0.13	0.08 J	0.0934 J	<0.05	0.0889 J	0.103	0.114	0.0725 J
pH_Field	SU	6.73	6.75	6.83	6.76	6.6	6.66	6.6	6.3	6.66	6.64	5.85
Sulfate	mg/L	<1.4	1.4 J	<1.4	1.7 J	2.1 J	3.99	3.86	3.73	3.83	4.16	2.88
TDS	mg/L	140	154	165	148	127	113	107	141	104	114	94
<b>Appendix IV</b>												
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	--	<0.0008	<0.0008	<0.0008	<0.000507
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<6.8e-005
Barium	mg/L	0.0906	0.116	0.125	0.102	0.0784	0.0578	--	0.097	0.0529	0.0733	0.0525
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.000406
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000442 J
Cobalt	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<6.8e-005
Combined Radium	pCi/L	0.279 U	0.589	0.772	0.621	0.188 U	0.274 U	--	0.663	-0.129 U	0.177 U	0.245 U
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	<6.8e-005
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.007105
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	--	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	9.88e-005 J

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-PZ-1			GSD-AP-PZ-2						GSD-AP-PZ-5	
		10/05/2021	05/09/2022	10/26/2022	04/13/2020	08/24/2020	03/17/2021	10/05/2021	05/09/2022	10/26/2022	06/27/2018	07/18/2018
<b>Appendix III</b>												
Boron	mg/L	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.02	<0.02
Calcium	mg/L	25.4	18.9	23.1	16.1	24.8	5.21	17.6	8.06	27.5	4.56	3.92
Chloride	mg/L	3.23	3.46	3.39	5.42	5.46	5.53	5.79	5.51	5.09	4.2	4.1
Fluoride	mg/L	<0.06	0.0824 J	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	0.05 J	0.04 J
pH_Field	SU	6.46	6.03	6.66	5.84	6	5.34	5.72	4.35	6.16	5.81	5.74
Sulfate	mg/L	2.17	2.51	3.43	1.48	3.88	1.64	5.29	1.15 J	3.32	<1.4	<1.4
TDS	mg/L	108	85.3	96	88	115	53.3	101	53.3	119	48.7	46
<b>Appendix IV</b>												
Antimony	mg/L	<0.000508	<0.000508	0.000694 J	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	0.000762 J	<0.0006	<0.0006
Arsenic	mg/L	<6.8e-005	<8.1e-005	0.000164 J	<0.001	<0.001	8.26e-005 J	9.28e-005 J	0.000101 J	0.000188 J	<0.001	<0.001
Barium	mg/L	0.0811	0.0561	0.0682	0.0832	0.132	0.045	0.118	0.0582	0.133	0.154	0.15
Beryllium	mg/L	<0.000406	<0.000406	<0.000406	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.0006	<0.0006
Cadmium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	0.000304 J	<0.0003
Chromium	mg/L	0.000352 J	0.000211 J	<0.000203	<0.002	<0.002	0.000764 J	0.000346 J	0.000617 J	<0.000203	<0.002	<0.002
Cobalt	mg/L	0.000436	<6.8e-005	<6.8e-005	0.00489 J	0.00237 J	0.00616	0.00287	0.00691	0.0021	0.00341 J	0.00341 J
Combined Radium	pCi/L	2.07	0.784 U	0.561 U	0.472 U	-0.00312 U	0.756 U	1.13	0.352 U	0.391 U	0.259 U	0.434
Lead	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<0.001	<0.001	0.000191 J	0.000121 J	<6.8e-005	<6.8e-005	<0.001	<0.001
Lithium	mg/L	<0.007105	<0.007105	<0.007105	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	<0.01	<0.01
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.00025	<0.00025
Molybdenum	mg/L	7.3e-005 J	0.000103 J	<0.000102	<0.002	<0.002	<6.8e-005	0.00028	<0.000102	0.00021	<0.002	<0.002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-PZ-5										
		08/08/2018	09/05/2018	09/24/2018	10/23/2018	12/03/2018	02/07/2019	02/25/2019	08/21/2019	04/15/2020	08/24/2020	03/16/2021
<b>Appendix III</b>												
Boron	mg/L	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.03	<0.03	<0.03	<0.03
Calcium	mg/L	3.74	3.38	3.25	3.37	3.67	2.89	2.95	3.04	2.93	2.94	2.9
Chloride	mg/L	3.3	3.7	3.9	4	3.6	3.72	3.95	3.85	3.83	3.96	3.98
Fluoride	mg/L	0.04 J	0.04 J	0.04 J	0.04 J	<0.032	<0.05	<0.05	<0.05	<0.06	<0.06	<0.06
pH_Field	SU	5.7	5.61	5.59	5.6	5.73	5.44	5.46	5.13	5.31	4.65	5.47
Sulfate	mg/L	<1.4	<1.4	<1.4	<1.4	<1.4	0.639 J	<0.5	1.21	0.554 J	<0.5	1.02
TDS	mg/L	48	47.3	44.7	35.3	48.7	42.7	40.7	46	41.3	42.7	42
<b>Appendix IV</b>												
Antimony	mg/L	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	0.00114 J	--	<0.0008	<0.0008	<0.0008	<0.000507
Arsenic	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	8.08e-005 J
Barium	mg/L	0.119	0.123	0.112	0.125	0.126	0.0602	--	0.085	0.0535	0.0565	0.0553
Beryllium	mg/L	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	--	<0.0006	<0.0006	<0.0006	<0.000406
Cadmium	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003	<6.8e-005
Chromium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	0.000534 J
Cobalt	mg/L	0.00221 J	0.00202 J	<0.002	<0.002	0.00227 J	<0.002	--	0.00225 J	<0.002	<0.002	0.000384
Combined Radium	pCi/L	0.763	0.631	0.588	0.383 U	0.736	0.0202 U	--	0.442 U	0.432 U	0.454 U	0.32 U
Lead	mg/L	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	--	<0.001	<0.001	<0.001	0.00013 J
Lithium	mg/L	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	--	<0.01	<0.01	<0.01	<0.007105
Mercury	mg/L	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	--	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<6.8e-005

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
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5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS											
		GSD-AP-PZ-5			GSD-AP-PZ-6								
		10/12/2021	05/10/2022	10/26/2022	06/27/2018	07/18/2018	08/08/2018	09/05/2018	09/24/2018	10/23/2018	12/03/2018	02/07/2019	
<b>Appendix III</b>													
Boron	mg/L	<0.03	<0.03	<0.03	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	
Calcium	mg/L	2.94	2.87	3.09	3.89	3.8	3.89	3.78	3.73	3.79	3.79	3.75	
Chloride	mg/L	4.07	4.12	4.03	4.1	4.3	3.8	3.9	4.2	4.1	3.8	4.15	
Fluoride	mg/L	<0.06	<0.06	<0.06	0.04 J	0.04 J	0.04 J	0.04 J	0.04 J	0.04 J	<0.032	<0.05	
pH_Field	SU	5.33	5.38	5.31	5.44	5.58	5.55	5.56	5.57	5.55	5.6	5.51	
Sulfate	mg/L	0.895 J	1.02 J	0.992 J	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	<1.4	1.69	
TDS	mg/L	38.7	33.3	45.3	44	42.7	46	67.3	49.3	31.3	46	32.7	
<b>Appendix IV</b>													
Antimony	mg/L	<0.000508	<0.000508	0.000862 J	<0.0006	<0.0006	<0.0008	<0.0008	<0.0008	<0.0008	<0.0008	0.00181 J	
Arsenic	mg/L	<6.8e-005	<8.1e-005	0.000163 J	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Barium	mg/L	0.0494	0.0497	0.0474	0.0298	0.0312	0.0265	0.0291	0.029	0.0298	0.0307	0.028	
Beryllium	mg/L	<0.000406	<0.000406	<0.000406	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	<0.0006	
Cadmium	mg/L	8.42e-005 J	<6.8e-005	<6.8e-005	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	
Chromium	mg/L	0.000337 J	0.000383 J	0.000231 J	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
Cobalt	mg/L	8.08e-005 J	0.00015 J	<6.8e-005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	
Combined Radium	pCi/L	0.963 U	0.659 U	1.08	0.231 U	0.676	0.496	0.62	-0.12 U	0.352 U	0.238 U	0.395 U	
Lead	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	
Lithium	mg/L	<0.007105	<0.007105	<0.007105	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	<0.01	
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.00025	<0.0003	
Molybdenum	mg/L	<6.8e-005	<0.000102	<0.000102	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
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5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-PZ-6								GSD-AP-MW-2VA		
		02/25/2019	08/21/2019	04/15/2020	08/24/2020	03/16/2021	10/12/2021	05/10/2022	10/26/2022	04/15/2020	07/01/2020	08/25/2020
<b>Appendix III</b>												
Boron	mg/L	<0.02	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03	0.587	--	0.552
Calcium	mg/L	3.81	3.71	3.56	3.45	3.44	3.29	3.22	3.28	5	--	4.97
Chloride	mg/L	4.2	4	3.71	3.59	3.66	3.68	3.68	3.5	6.47	--	6.4
Fluoride	mg/L	<0.05	<0.05	<0.06	<0.06	<0.06	<0.06	<0.06	<0.06	2.51	--	2.4
pH_Field	SU	5.54	5.44	5.52	5.38	5.56	5.41	5.57	5.43	8.6	8.36	8.43
Sulfate	mg/L	1.53	1.62	1.68	1.31	1.7	1.34	1.28 J	1.7 J	4.18	--	4.83
TDS	mg/L	31.3	42.7	37.3	37.3	41.3	35.3	33.3	38	324	--	321
<b>Appendix IV</b>												
Antimony	mg/L	--	<0.0008	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	0.000778 J	<0.0008	--	<0.0008
Arsenic	mg/L	--	<0.001	<0.001	<0.001	<6.8e-005	<6.8e-005	<8.1e-005	0.00015 J	<0.001	--	0.00135 J
Barium	mg/L	--	0.0312	0.0296	0.031	0.0293	0.0303	0.0309	0.0282	0.2	--	0.135
Beryllium	mg/L	--	<0.0006	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406	<0.0006	--	<0.0006
Cadmium	mg/L	--	<0.0003	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0003	--	<0.0003
Chromium	mg/L	--	<0.002	<0.002	<0.002	0.000534 J	0.000307 J	0.000234 J	<0.000203	<0.002	--	<0.002
Cobalt	mg/L	--	<0.002	<0.002	<0.002	0.000108 J	0.000142 J	7.1e-005 J	7.79e-005 J	<0.002	--	<0.002
Combined Radium	pCi/L	--	-0.00256 U	0.000738 U	0.404 U	0.589 U	1.57	0.468 U	0.283 U	0.231 U	--	0.807
Lead	mg/L	--	<0.001	<0.001	<0.001	8.35e-005 J	0.000119 J	0.000118 J	<6.8e-005	<0.001	--	<0.001
Lithium	mg/L	--	<0.01	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105	0.0783	0.069	0.0666
Mercury	mg/L	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	0.00286	<0.0003	<0.0003	--	<0.0003
Molybdenum	mg/L	--	<0.002	<0.002	<0.002	<6.8e-005	<6.8e-005	<0.000102	<0.000102	<0.002	--	0.00323 J

**Notes:**

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**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-2VA				GSD-AP-MW-2VB				GSD-AP-MW-4V		
		03/22/2021	10/06/2021	05/16/2022	10/25/2022	03/30/2021	10/12/2021	05/16/2022	10/25/2022	04/15/2020	08/26/2020	03/24/2021
<b>Appendix III</b>												
Boron	mg/L	0.537	0.54	0.566	0.555	0.605	0.617	0.622	0.628	0.0634 J	0.0611 J	0.0618 J
Calcium	mg/L	5.71	5.38	5.47	5.52	3.71	3.96	4.09	4.99	23.9	23.5	22.9
Chloride	mg/L	6.65	6.82	6.86	6.86	32	38	43.4	49	5.16	5.37	5.55
Fluoride	mg/L	2.33	2.56	2.59	2.41	6.09	5.97	6.14	5.77	0.218	0.217	0.212
pH_Field	SU	8.34	8.36	8.1	8.33	8.52	8.62	8.48	8.33	7.93	7.83	8.01
Sulfate	mg/L	2.04	2.44	0.723 J	2.13	10.3	15.2	7.94	18	1.25	1.21	1.39
TDS	mg/L	314	317	316	330	528	536	508	588	218	239	222
<b>Appendix IV</b>												
Antimony	mg/L	<0.000507	<0.000508	<0.000508	0.00102	<0.000507	<0.000508	<0.000508	<0.000508	<0.0008	<0.0008	<0.000507
Arsenic	mg/L	0.00145	0.00139	0.00115	0.00165	0.000278	0.000426	0.000393	0.000907	<0.001	<0.001	0.00034
Barium	mg/L	0.114	0.12	0.128	0.137	0.313	0.242	0.322	0.346	0.457	0.534	0.477
Beryllium	mg/L	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.0006	<0.0006	<0.000406
Cadmium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0003	<0.0003	<6.8e-005
Chromium	mg/L	0.000433 J	0.00025 J	0.000221 J	<0.000203	0.00112	0.000353 J	0.000264 J	<0.000203	<0.002	<0.002	0.000402 J
Cobalt	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	0.000116 J	<6.8e-005	<6.8e-005	<6.8e-005	<0.002	<0.002	8.16e-005 J
Combined Radium	pCi/L	0.58 U	0.746 U	0.285 U	0.849	0.185 U	0.323 U	0.253 U	0.529 U	0.329 U	0.839	0.725 U
Lead	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.001	<0.001	<6.8e-005
Lithium	mg/L	0.0666	0.0685	0.0701	0.0643	0.13	0.129	0.121	0.141	0.0219	0.0203	0.0203
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	0.00386	0.00363	0.00357	0.00324	0.000673	0.00156	0.00105	0.00132	<0.002	<0.002	0.00188

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.





**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-4V			GSD-AP-MW-21VC			GSD-AP-MW-22VB			GSD-AP-MW-18H	
		10/11/2021	05/11/2022	10/26/2022	10/06/2021	05/17/2022	10/26/2022	10/11/2021	05/17/2022	10/26/2022	04/15/2020	08/25/2020
<b>Appendix III</b>												
Boron	mg/L	0.0596 J	0.0531 J	0.0618 J	0.532	0.548	0.559	0.378	0.382	0.4	0.124	0.105
Calcium	mg/L	23	22.6	22.1	3.46	3.3	3.6	9.35	10.5	9.75	19.1	14.9
Chloride	mg/L	5.65	5.48	5.53	166	188	181	1.72	1.69	1.56	6	5.79
Fluoride	mg/L	0.23	0.175	0.164	8.34	8.22	7.57	1.43	1.27	1.36	<0.06	<0.06
pH_Field	SU	7.82	7.91	7.92	8.53	8.31	8.31	8.13	8.29	8.11	5.1	5.13
Sulfate	mg/L	1.7	1.73 J	2.36	8.35	19.1	23.9	13.8	6.55	3.55	67.1	52.6
TDS	mg/L	220	220	221	864	921	952	230	238	239	126	107
<b>Appendix IV</b>												
Antimony	mg/L	<0.000508	<0.000508	0.000565 J	0.00051 J	0.000508 J	0.00114	0.00167	<0.000508	<0.000508	<0.0008	<0.0008
Arsenic	mg/L	0.000366	0.000283	0.000453	0.00162	0.00121	0.00122	0.00408	0.00275	0.00253	<0.001	<0.001
Barium	mg/L	0.483	0.525	0.474	0.374	0.435	0.431	0.238	0.262	0.257	0.0389	0.0388
Beryllium	mg/L	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.000406	<0.0006	<0.0006
Cadmium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0003	<0.0003
Chromium	mg/L	0.000314 J	0.000236 J	0.000214 J	0.00111	0.000224 J	<0.000203	0.000412 J	0.000231 J	<0.000203	<0.002	<0.002
Cobalt	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	0.000205	0.000193 J	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.002	<0.002
Combined Radium	pCi/L	1.58	0.576 U	0.725 U	1.78	0.4 U	0.755 U	1.29	0.306 U	0.426 U	0.419 U	1.45
Lead	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	0.000225	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.001	<0.001
Lithium	mg/L	0.0198 J	0.0187 J	0.0226	0.227	0.196	0.262	0.0544	0.0499	0.0616	<0.01	<0.01
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	0.00173	0.00135	0.00114	0.00107	0.00194	0.00258	0.00538	0.00263	0.00175	<0.002	<0.002

**Notes:**

1. mg/L - Milligrams per Liter
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5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-18H				GSD-AP-MW-19H						
		03/16/2021	10/12/2021	05/10/2022	10/26/2022	04/14/2020	06/01/2020	08/26/2020	03/23/2021	10/11/2021	05/16/2022	10/26/2022
<b>Appendix III</b>												
Boron	mg/L	0.0545 J	0.0717 J	0.0883 J	0.0784 J	0.448	--	0.39	0.41	0.328	0.336	0.327
Calcium	mg/L	5.77	10.3	12.6	10	32.9	--	39.3	31.7	40	29.2	46.5
Chloride	mg/L	3.85	4.59	6.38	5.44	7.35	--	7.03	7.11	7.04	7.1	7.01
Fluoride	mg/L	<0.06	<0.06	<0.06	<0.06	<0.06	--	<0.06	<0.06	0.0779 J	<0.06	<0.06
pH_Field	SU	5.08	5.12	4.87	4.81	5.79	--	6.33	5.88	6.08	5.24	6.25
Sulfate	mg/L	18.5	36.7	42.1	37.3	75.3	--	72.9	71.8	61.7	59.1	55.1
TDS	mg/L	52	78.7	90	82.7	190	--	202	174	202	107	202
<b>Appendix IV</b>												
Antimony	mg/L	<0.000507	<0.000508	<0.000508	0.000785 J	<0.0008	--	<0.0008	<0.000507	<0.000508	<0.000508	0.000817 J
Arsenic	mg/L	0.000136 J	0.00019 J	0.000154 J	0.000323	<0.001	--	<0.001	0.000512	0.000846	0.000187 J	0.000598
Barium	mg/L	0.0243	0.0298	0.0331	0.0349	0.153	--	0.201	0.148	0.17	0.119	0.159
Beryllium	mg/L	<0.000406	<0.000406	<0.000406	<0.000406	<0.0006	--	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0003	--	<0.0003	<6.8e-005	0.000124 J	0.000135 J	<6.8e-005
Chromium	mg/L	0.000363 J	0.000209 J	0.00025 J	<0.000203	<0.002	--	<0.002	0.000404 J	0.000475 J	<0.000203	<0.000203
Cobalt	mg/L	0.000577	0.000615	0.000268	0.000452	0.00886	--	0.0101	0.00674	0.00579	0.00484	0.00292
Combined Radium	pCi/L	0.405 U	0.383 U	0.576 U	0.165 U	42.6	0.215 U	0.265 U	0.562 U	0.202 U	0.471 U	0.401 U
Lead	mg/L	<6.8e-005	<6.8e-005	0.000126 J	<6.8e-005	<0.001	--	<0.001	0.000201 J	0.000155 J	<6.8e-005	<6.8e-005
Lithium	mg/L	<0.007105	<0.007105	<0.007105	<0.007105	<0.01	--	<0.01	<0.007105	<0.007105	<0.007105	<0.007105
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	--	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<6.8e-005	<6.8e-005	<0.000102	<0.000102	<0.002	--	<0.002	<6.8e-005	0.000118 J	<0.000102	0.00017 J

**Notes:**

1. mg/L - Milligrams per Liter
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4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS					
		GSD-AP-MW-20H					
		04/14/2020	08/26/2020	03/23/2021	10/11/2021	05/17/2022	10/26/2022
<b>Appendix III</b>							
Boron	mg/L	0.308	0.308	0.419	0.504	0.628	0.595
Calcium	mg/L	51.5	47.6	57.6	63.4	74.7	61.7
Chloride	mg/L	6.64	6.73	6.33	6.37	6.22	5.91
Fluoride	mg/L	0.125	0.103	0.108	0.127	<0.06	0.121 J
pH_Field	SU	6.02	6.36	6.38	6.36	5.74	6.36
Sulfate	mg/L	135	112	168	174	187	158
TDS	mg/L	323	310	385	384	401	364
<b>Appendix IV</b>							
Antimony	mg/L	<0.0008	<0.0008	<0.000507	<0.000508	<0.000508	0.000514 J
Arsenic	mg/L	0.00287 J	0.00186 J	0.00226	0.00191	0.002	0.00151
Barium	mg/L	0.189	0.197	0.217	0.134	0.115	0.0967
Beryllium	mg/L	<0.0006	<0.0006	<0.000406	<0.000406	<0.000406	<0.000406
Cadmium	mg/L	<0.0003	<0.0003	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005
Chromium	mg/L	<0.002	<0.002	0.000417 J	0.000246 J	0.000215 J	<0.000203
Cobalt	mg/L	0.0122	0.0104	0.0125	0.00995	0.0102	0.00924
Combined Radium	pCi/L	0.0962 U	0.413 U	0.847 U	1.09 U	0.551 U	0.958 U
Lead	mg/L	<0.001	<0.001	<6.8e-005	8.19e-005 J	<6.8e-005	<6.8e-005
Lithium	mg/L	<0.01	<0.01	<0.007105	<0.007105	<0.007105	<0.007105
Mercury	mg/L	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003	<0.0003
Molybdenum	mg/L	<0.002	<0.002	0.000481	0.000312	0.000366	0.00033

**Notes:**

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4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

**Notes:**

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**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-14										
		06/27/2018	07/18/2018	08/06/2018	09/05/2018	09/24/2018	10/24/2018	12/05/2018	02/05/2019	02/28/2019	08/20/2019	04/16/2020
<b>Appendix IV</b>												
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	0.00208 J	0.00387 J	--	0.00328 J	0.00608 J
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002

**Notes:**

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3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
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**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-14					GSD-AP-MW-10					
		08/25/2020	03/22/2021	10/12/2021	05/09/2022	10/26/2022	12/06/2017	02/07/2018	04/24/2018	06/27/2018	08/07/2018	10/22/2018
<b>Appendix IV</b>												
Selenium	mg/L	0.00247 J	0.00488	0.00291	0.00505	0.0012	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Thallium	mg/L	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
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**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-10										GSD-AP-
		12/04/2018	02/06/2019	02/26/2019	08/22/2019	04/15/2020	08/26/2020	03/23/2021	10/11/2021	05/10/2022	10/26/2022	10/24/2018
<b>Appendix IV</b>												
Selenium	mg/L	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.002
Thallium	mg/L	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
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**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-16										
		11/14/2018	11/28/2018	12/05/2018	12/18/2018	01/03/2019	01/24/2019	02/05/2019	02/28/2019	08/19/2019	04/15/2020	08/25/2020
<b>Appendix IV</b>												
Selenium	mg/L	<0.002	<0.002	0.00349 J	0.00395 J	--	0.00707 J	0.00938 J	--	0.00316 J	0.00434 J	0.00262 J
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
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5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.





**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-16				GSD-AP-MW-11						
		03/22/2021	10/06/2021	05/17/2022	10/25/2022	12/06/2017	02/07/2018	04/24/2018	06/27/2018	08/08/2018	10/23/2018	12/04/2018
<b>Appendix IV</b>												
Selenium	mg/L	0.0134	0.00262	0.00936	0.0014	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Thallium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-11									GSD-AP-MW-12	
		02/06/2019	02/27/2019	08/22/2019	04/14/2020	08/26/2020	03/23/2021	10/12/2021	05/17/2022	10/26/2022	12/06/2017	02/08/2018
<b>Appendix IV</b>												
Selenium	mg/L	<0.002	--	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.002	<0.002
Thallium	mg/L	<0.0002	--	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	<0.0002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-12										
		04/24/2018	06/27/2018	08/08/2018	10/23/2018	12/05/2018	02/06/2019	02/27/2019	08/22/2019	04/14/2020	08/26/2020	03/23/2021
<b>Appendix IV</b>												
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.000507
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	<6.8e-005

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS											
		GSD-AP-MW-12			GSD-AP-MW-17								
		10/05/2021	05/10/2022	10/26/2022	10/24/2018	11/14/2018	11/28/2018	12/05/2018	12/18/2018	01/03/2019	01/24/2019	02/05/2019	
<b>Appendix IV</b>													
Selenium	mg/L	<0.000508	<0.000508	<0.000508	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	
Thallium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-17								GSD-AP-MW-1		
		02/28/2019	08/19/2019	04/16/2020	08/24/2020	03/22/2021	10/06/2021	05/09/2022	10/25/2022	12/06/2017	02/06/2018	04/23/2018
<b>Appendix IV</b>												
Selenium	mg/L	--	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.002	<0.002	<0.002
Thallium	mg/L	--	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	7.03e-005 J	<0.0002	<0.0002	<0.0002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-1										
		06/26/2018	08/07/2018	10/22/2018	12/04/2018	02/05/2019	02/26/2019	08/21/2019	04/15/2020	08/25/2020	03/16/2021	10/05/2021
<b>Appendix IV</b>												
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.000507	<0.000508
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	0.000112 J	<6.8e-005

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-1		GSD-AP-MW-2								
		05/10/2022	10/26/2022	12/06/2017	02/06/2018	04/23/2018	06/27/2018	08/07/2018	10/22/2018	12/04/2018	02/05/2019	02/26/2019
<b>Appendix IV</b>												
Selenium	mg/L	<0.000508	<0.000508	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--
Thallium	mg/L	0.00012 J	<6.8e-005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	0.000213 J	<0.0002	0.000256 J	--

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-2							GSD-AP-MW-3			
		08/20/2019	04/15/2020	08/25/2020	03/24/2021	10/11/2021	05/16/2022	10/25/2022	12/06/2017	02/06/2018	04/24/2018	06/27/2018
<b>Appendix IV</b>												
Selenium	mg/L	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.002	<0.002	<0.002	<0.002
Thallium	mg/L	0.000322 J	0.000318 J	0.000347 J	0.00037	0.000294	0.000396	0.000377	<0.0002	<0.0002	<0.0002	<0.0002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.





**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-3										
		08/07/2018	10/22/2018	12/03/2018	02/05/2019	02/25/2019	08/20/2019	04/13/2020	08/26/2020	03/22/2021	10/05/2021	05/10/2022
<b>Appendix IV</b>												
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	0.000121 J	0.000136 J	0.000114 J

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-	GSD-AP-MW-4									
		10/26/2022	12/07/2017	02/06/2018	04/24/2018	06/26/2018	08/06/2018	10/22/2018	12/03/2018	02/05/2019	02/26/2019	08/20/2019
<b>Appendix IV</b>												
Selenium	mg/L	<0.000508	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002
Thallium	mg/L	0.000103 J	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-4						GSD-AP-MW-5				
		04/15/2020	08/26/2020	03/24/2021	10/05/2021	05/16/2022	10/26/2022	12/07/2017	02/06/2018	04/25/2018	06/27/2018	08/07/2018
<b>Appendix IV</b>												
Selenium	mg/L	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.002	<0.002	<0.002	<0.002	<0.002
Thallium	mg/L	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-5										
		10/23/2018	12/05/2018	02/05/2019	02/27/2019	08/20/2019	04/13/2020	08/24/2020	03/16/2021	10/05/2021	05/09/2022	10/26/2022
<b>Appendix IV</b>												
Selenium	mg/L	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508
Thallium	mg/L	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-6										
		12/07/2017	02/08/2018	04/25/2018	06/26/2018	08/07/2018	10/23/2018	12/03/2018	02/05/2019	02/26/2019	08/20/2019	04/13/2020
<b>Appendix IV</b>												
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-6					GSD-AP-MW-7					
		08/26/2020	03/17/2021	10/05/2021	05/10/2022	10/26/2022	12/07/2017	02/08/2018	04/25/2018	06/26/2018	08/08/2018	10/23/2018
<b>Appendix IV</b>												
Selenium	mg/L	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Thallium	mg/L	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-7										GSD-AP-
		12/04/2018	02/06/2019	02/27/2019	08/21/2019	04/15/2020	08/26/2020	03/23/2021	10/05/2021	05/10/2022	10/26/2022	12/07/2017
<b>Appendix IV</b>												
Selenium	mg/L	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.002
Thallium	mg/L	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-8										
		02/08/2018	04/25/2018	06/26/2018	08/08/2018	10/23/2018	12/04/2018	02/06/2019	02/27/2019	08/21/2019	04/14/2020	08/26/2020
<b>Appendix IV</b>												
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.





**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-8				GSD-AP-MW-9						
		03/23/2021	10/12/2021	05/11/2022	10/26/2022	12/07/2017	02/08/2018	04/25/2018	06/26/2018	08/08/2018	10/23/2018	12/05/2018
<b>Appendix IV</b>												
Selenium	mg/L	<0.000507	<0.000508	<0.000508	<0.000508	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Thallium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-9									GSD-AP-PZ-1	
		02/06/2019	02/27/2019	08/21/2019	04/14/2020	08/26/2020	03/23/2021	10/12/2021	05/11/2022	10/26/2022	06/27/2018	07/18/2018
<b>Appendix IV</b>												
Selenium	mg/L	<0.002	--	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.002	<0.002
Thallium	mg/L	<0.0002	--	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	<0.0002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-PZ-1										
		08/07/2018	09/05/2018	09/24/2018	10/22/2018	12/03/2018	02/05/2019	02/25/2019	08/20/2019	04/13/2020	08/24/2020	03/24/2021
<b>Appendix IV</b>												
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.000507
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	<6.8e-005

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-PZ-1			GSD-AP-PZ-2						GSD-AP-PZ-5	
		10/05/2021	05/09/2022	10/26/2022	04/13/2020	08/24/2020	03/17/2021	10/05/2021	05/09/2022	10/26/2022	06/27/2018	07/18/2018
<b>Appendix IV</b>												
Selenium	mg/L	<0.000508	<0.000508	<0.000508	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.002	<0.002
Thallium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	<0.0002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-PZ-5										
		08/08/2018	09/05/2018	09/24/2018	10/23/2018	12/03/2018	02/07/2019	02/25/2019	08/21/2019	04/15/2020	08/24/2020	03/16/2021
<b>Appendix IV</b>												
Selenium	mg/L	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	--	<0.002	<0.002	<0.002	<0.000507
Thallium	mg/L	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	--	<0.0002	<0.0002	<0.0002	<6.8e-005

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-PZ-5			GSD-AP-PZ-6							
		10/12/2021	05/10/2022	10/26/2022	06/27/2018	07/18/2018	08/08/2018	09/05/2018	09/24/2018	10/23/2018	12/03/2018	02/07/2019
<b>Appendix IV</b>												
Selenium	mg/L	<0.000508	<0.000508	<0.000508	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002
Thallium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002	<0.0002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-PZ-6								GSD-AP-MW-2VA		
		02/25/2019	08/21/2019	04/15/2020	08/24/2020	03/16/2021	10/12/2021	05/10/2022	10/26/2022	04/15/2020	07/01/2020	08/25/2020
<b>Appendix IV</b>												
Selenium	mg/L	--	<0.002	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508	<0.002	--	<0.002
Thallium	mg/L	--	<0.0002	<0.0002	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	--	<0.0002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-2VA				GSD-AP-MW-2VB				GSD-AP-MW-4V		
		03/22/2021	10/06/2021	05/16/2022	10/25/2022	03/30/2021	10/12/2021	05/16/2022	10/25/2022	04/15/2020	08/26/2020	03/24/2021
<b>Appendix IV</b>												
Selenium	mg/L	<0.000507	<0.000508	<0.000508	<0.000508	<0.000507	<0.000508	<0.000508	<0.000508	<0.002	<0.002	<0.000507
Thallium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	<0.0002	<6.8e-005

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.





**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-4V			GSD-AP-MW-21VC			GSD-AP-MW-22VB			GSD-AP-MW-18H	
		10/11/2021	05/11/2022	10/26/2022	10/06/2021	05/17/2022	10/26/2022	10/11/2021	05/17/2022	10/26/2022	04/15/2020	08/25/2020
<b>Appendix IV</b>												
Selenium	mg/L	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.000508	<0.002	<0.002
Thallium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	<0.0002

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS										
		GSD-AP-MW-18H				GSD-AP-MW-19H						
		03/16/2021	10/12/2021	05/10/2022	10/26/2022	04/14/2020	06/01/2020	08/26/2020	03/23/2021	10/11/2021	05/16/2022	10/26/2022
<b>Appendix IV</b>												
Selenium	mg/L	0.000935 J	0.000679 J	0.000919 J	0.00117	<0.002	--	<0.002	<0.000507	<0.000508	<0.000508	<0.000508
Thallium	mg/L	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005	<0.0002	--	<0.0002	<6.8e-005	<6.8e-005	<6.8e-005	<6.8e-005

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

Analyte	Units	GROUNDWATER MONITORING WELLS					
		GSD-AP-MW-20H					
		04/14/2020	08/26/2020	03/23/2021	10/11/2021	05/17/2022	10/26/2022
<b>Appendix IV</b>							
Selenium	mg/L	<0.002	<0.002	<0.000507	<0.000508	<0.000508	<0.000508
Thallium	mg/L	<0.0002	<0.0002	0.000145 J	0.00013 J	0.000131 J	0.000135 J

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
4. < - Constituent was analyzed for, but was not detected above the MDL and is considered a non-detect. Value is displayed as less than the PQL.
5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.



**ANALYTICAL DATA SUMMARY**  
**Ash Pond (12/06/2017 - 10/26/2022)**  
**APC Plant Gadsden**  
**Gadsden County Alabama**

**Notes:**

1. mg/L - Milligrams per Liter
2. pCi/L - picocuries per Liter
3. J - Result is an estimated value. The result is greater than or equal to the Method Detection Limit (MDL) and less than the Practical Quantitation Limit (PQL). Values are displayed as less than the PQL with a J.
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5. Radium data is 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.
6. Annual sampling for Appendix IV constituents only was completed following initiation of assessment monitoring. Appendix III constituents were not required during this monitoring event.

# Appendix B



## Appendix B. Historical Groundwater Elevations Summary

Plant Gadsden Ash Pond  
06/25/2018 - 10/24/2022

Well	Hydraulic Location	Geologic Unit	Measure Date													
			06/25/18	08/06/18	10/22/18	12/03/18	02/04/19	02/25/19	06/10/19	06/17/19	08/19/19	04/13/20	08/24/20	03/15/21	05/05/22	10/24/22
GSD-AP-MW-14	Upgradient	Alluvium	526.46	526.24	525.80	526.19	527.65	528.41	527.07	526.95	526.25	528.26	526.07	527.24	527.40	525.88
GSD-AP-MW-16	Upgradient	Alluvium			529.67	529.75	531.32	531.98	530.55	530.43	529.71	531.91	529.60	530.64	530.93	529.41
GSD-AP-MW-17	Upgradient	Alluvium			531.30	530.77	532.25	534.03	531.23	531.08	530.30	532.80	530.65	531.68	531.70	530.02

Notes:  
(1) Groundwater elevations measured in vertical feet relative to the North American Vertical Datum (NAVD)1988.



## Appendix B. Historical Groundwater Elevations Summary

Plant Gadsden Ash Pond  
12/04/2017 - 10/24/2022

Well	Hydraulic Location	Geologic Unit	Measure Date																
			12/04/17	02/06/18	04/23/18	04/25/18	06/25/18	08/06/18	10/22/18	12/03/18	02/04/19	02/25/19	06/10/19	06/17/19	08/19/19	04/13/20	08/24/20	03/15/21	10/04/21
GSD-AP-MW-10	Downgradient	Alluvium	509.82	509.66	509.75	509.95	509.54	509.79	508.95	509.64	509.91	511.85	509.34	509.22	508.72	509.73	509.13	508.82	
GSD-AP-MW-11	Downgradient	Alluvium	507.46	507.93	508.66	509.31	508.09	508.26	507.53	509.29	509.06	511.67	508.12	508.07	507.59	509.18	507.99	507.92	
GSD-AP-MW-12	Downgradient	Alluvium	511.62	513.11	514.13	514.06	510.80	510.99	509.64	512.76	514.11	515.43	511.29	510.97	508.94	514.20	509.66	513.06	
GSD-AP-MW-1	Downgradient	Alluvium	513.72	514.90	517.40	517.34	513.69	512.90	511.57	513.12	517.76	519.26	514.50	514.19	511.97	517.91	512.36	516.98	513.76
GSD-AP-MW-2	Downgradient	Alluvium	513.78	514.70	516.38	516.33	513.63	513.03	511.73	513.15	516.64	518.15	514.30	514.01	512.01	516.67	512.37	516.10	513.65
GSD-AP-MW-3	Downgradient	Alluvium	513.81	514.75	516.19	515.79	513.55	513.09	511.90	513.50	515.98	517.38	514.21	512.85	512.03	516.42	512.48	515.58	
GSD-AP-MW-4	Downgradient	Alluvium	513.76	514.69	516.05	515.63	513.46	513.08	511.89	513.54	515.78	517.13	514.13	513.76	512.00	515.99	512.57	515.41	
GSD-AP-MW-5	Downgradient	Alluvium	510.81	511.80	512.49	512.17	510.60	510.60	509.64	511.52	512.09	513.01	511.13	510.89	508.72	512.38	510.36	511.63	
GSD-AP-MW-6	Downgradient	Alluvium	509.89	510.60	511.08	510.78	509.72	509.85	509.05	510.58	510.70	511.64	510.02	509.87	507.89	511.28	509.81	510.32	
GSD-AP-MW-7	Downgradient	Alluvium	507.66	508.62	509.52	509.68	507.90	507.96	507.54	509.41	509.82	513.85	508.34	508.20	506.95	510.09	507.64	508.87	
GSD-AP-MW-8	Downgradient	Alluvium	506.85	506.90	508.02	508.88	507.88	507.98	507.37	508.98	508.46	511.45	507.78	507.86	507.62	509.16	507.98	507.18	
GSD-AP-MW-9	Downgradient	Alluvium	505.87	506.86	507.85	508.67	507.90	508.06	507.39	508.69	508.46	511.42	507.83	508.02	507.61	508.71	508.06	507.19	
GSD-AP-PZ-1	Downgradient	Alluvium	512.46	514.52	517.21	517.14	512.36	511.31	509.79	512.92	517.22	518.98	513.54	513.10	510.07	517.30	510.78	516.46	513.04
GSD-AP-PZ-2	Downgradient	Alluvium	506.92	507.81	508.58	509.21	507.98	508.19	507.51	509.29	509.02	511.33	508.15	508.11	507.31	509.12	508.13	507.85	
GSD-AP-PZ-5	Downgradient	Alluvium			517.67	517.52	512.60	511.42	509.93	512.73	517.72	519.28	513.81	513.36	510.37	518.21	511.00	516.90	
GSD-AP-PZ-6	Downgradient	Alluvium			517.39	517.27	512.57	511.44	509.95	513.05	517.43	518.72	513.82	513.32	510.30	517.75	510.99	516.73	

Notes:  
(1) Groundwater elevations measured in vertical feet relative to the North American Vertical Datum (NAVD)1988.



## Appendix B. Historical Groundwater Elevations Summary

Plant Gadsden Ash Pond  
12/04/2017 - 10/24/2022

Well	Hydraulic Location	Geologic Unit	Measure Date	
			05/05/22	10/24/22
GSD-AP-MW-10	Downgradient	Alluvium	509.05	508.35
GSD-AP-MW-11	Downgradient	Alluvium	508.32	507.50
GSD-AP-MW-12	Downgradient	Alluvium	512.20	508.36
GSD-AP-MW-1	Downgradient	Alluvium	516.18	510.76
GSD-AP-MW-2	Downgradient	Alluvium	515.54	510.75
GSD-AP-MW-3	Downgradient	Alluvium	515.04	510.82
GSD-AP-MW-4	Downgradient	Alluvium	514.94	510.86
GSD-AP-MW-5	Downgradient	Alluvium	511.48	508.00
GSD-AP-MW-6	Downgradient	Alluvium	510.16	507.51
GSD-AP-MW-7	Downgradient	Alluvium	508.75	506.64
GSD-AP-MW-8	Downgradient	Alluvium	507.97	507.68
GSD-AP-MW-9	Downgradient	Alluvium	507.98	507.70
GSD-AP-PZ-1	Downgradient	Alluvium	515.45	508.63
GSD-AP-PZ-2	Downgradient	Alluvium	508.25	507.17
GSD-AP-PZ-5	Downgradient	Alluvium	515.92	509.05
GSD-AP-PZ-6	Downgradient	Alluvium	515.77	508.98

Notes:  
(1) Groundwater elevations measured in vertical feet relative to the North American Vertical Datum (NAVD)1988.





## Appendix B. Historical Groundwater Elevations Summary

Plant Gadsden Ash Pond  
04/13/2020 - 10/24/2022

Well	Hydraulic Location	Geologic Unit	Measure Date					
			04/13/20	08/24/20	03/15/21	10/04/21	05/05/22	10/24/22
GSD-AP-MW-2VA	Vertical Delineation	Conasauga Formation	519.33	512.43	516.13	513.65	515.56	510.75
GSD-AP-MW-2VB	Vertical Delineation	Conasauga Formation			516.15	513.51	515.59	510.72
GSD-AP-MW-4V	Vertical Delineation	Conasauga Formation	516.09	512.39	515.31		514.81	510.75
GSD-AP-MW-21VC	Vertical Delineation	Conasauga - Knox Contact (Fault Zone)					515.83	510.87
GSD-AP-MW-22VB	Vertical Delineation	Conasauga - Knox Contact (Fault Zone)					515.68	509.52
GSD-AP-MW-18H	Horizontal Delineation	Alluvium	518.59	511.07	517.02		516.01	509.19
GSD-AP-MW-19H	Horizontal Delineation	Alluvium	516.97	511.36	516.29		515.58	509.60
GSD-AP-MW-20H	Horizontal Delineation	Alluvium	516.28	512.47	515.39		514.90	510.82

Notes:  
(1) Groundwater elevations measured in vertical feet relative to the North American Vertical Datum (NAVD)1988.

# Appendix C

Alabama Power General Test Laboratory  
744 County Road 87, GSC#8  
Calera, AL 35040  
(205) 664-6032 or 6171  
FAX (205) 257-1654

## ***Field Case Narrative***



# **Plant Gadsden Ash Pond**

## **2022 Compliance Event 2**

All samples were collected using methods defined in Alabama Power's Water Field Group Low-Flow Groundwater Sampling Procedure and the associated site-specific Sampling and Analysis Plan (SAP).

Field quality control procedures were performed as follows:

- Blanks and Sample Duplicates were collected as described in the SAP.
- Calibration verification for all required field parameters were performed daily, before and after sample collection.
  - The DO sensor for the Aquatroll quit working after samples for wells MW-16 and MW-17 had been collected. Sampling with this instrument ceased for the day, but no final DO LCS data was able to be acquired. Customer approved the use of the DO field data as representative of the above wells mentioned.





**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-2	COND	Conductivity	10/25/2022 8:37	536.09	uS/cm
APCO-GSD-AP-MW-2	DO	DO	10/25/2022 8:37	0.19	mg/L
APCO-GSD-AP-MW-2	DTW	Depth to Water Detail	10/25/2022 8:37	15.45	ft
APCO-GSD-AP-MW-2	ORP	Oxidation Reduction Potention	10/25/2022 8:37	-67.41	mv
APCO-GSD-AP-MW-2	PH	pH	10/25/2022 8:37	6.65	SU
APCO-GSD-AP-MW-2	TEMP	Temperature	10/25/2022 8:37	20.3	C
APCO-GSD-AP-MW-2	TURB	Turbidity	10/25/2022 8:37	90.1	NTU
APCO-GSD-AP-MW-2	COND	Conductivity	10/25/2022 8:42	547.28	uS/cm
APCO-GSD-AP-MW-2	DO	DO	10/25/2022 8:42	0.17	mg/L
APCO-GSD-AP-MW-2	DTW	Depth to Water Detail	10/25/2022 8:42	15.45	ft
APCO-GSD-AP-MW-2	ORP	Oxidation Reduction Potention	10/25/2022 8:42	-64.16	mv
APCO-GSD-AP-MW-2	PH	pH	10/25/2022 8:42	6.65	SU
APCO-GSD-AP-MW-2	TEMP	Temperature	10/25/2022 8:42	20.29	C
APCO-GSD-AP-MW-2	TURB	Turbidity	10/25/2022 8:42	87	NTU
APCO-GSD-AP-MW-2	COND	Conductivity	10/25/2022 8:47	562.83	uS/cm
APCO-GSD-AP-MW-2	DO	DO	10/25/2022 8:47	0.15	mg/L
APCO-GSD-AP-MW-2	DTW	Depth to Water Detail	10/25/2022 8:47	15.45	ft
APCO-GSD-AP-MW-2	ORP	Oxidation Reduction Potention	10/25/2022 8:47	-61.98	mv
APCO-GSD-AP-MW-2	PH	pH	10/25/2022 8:47	6.65	SU
APCO-GSD-AP-MW-2	TEMP	Temperature	10/25/2022 8:47	20.31	C
APCO-GSD-AP-MW-2	TURB	Turbidity	10/25/2022 8:47	26.5	NTU
APCO-GSD-AP-MW-2	COND	Conductivity	10/25/2022 8:52	583.69	uS/cm
APCO-GSD-AP-MW-2	DO	DO	10/25/2022 8:52	0.13	mg/L
APCO-GSD-AP-MW-2	DTW	Depth to Water Detail	10/25/2022 8:52	15.45	ft
APCO-GSD-AP-MW-2	ORP	Oxidation Reduction Potention	10/25/2022 8:52	-59.08	mv
APCO-GSD-AP-MW-2	PH	pH	10/25/2022 8:52	6.62	SU
APCO-GSD-AP-MW-2	TEMP	Temperature	10/25/2022 8:52	20.3	C
APCO-GSD-AP-MW-2	TURB	Turbidity	10/25/2022 8:52	13.5	NTU
APCO-GSD-AP-MW-2	COND	Conductivity	10/25/2022 8:57	589.7	uS/cm
APCO-GSD-AP-MW-2	DO	DO	10/25/2022 8:57	0.11	mg/L
APCO-GSD-AP-MW-2	DTW	Depth to Water Detail	10/25/2022 8:57	15.45	ft
APCO-GSD-AP-MW-2	ORP	Oxidation Reduction Potention	10/25/2022 8:57	-58.47	mv
APCO-GSD-AP-MW-2	PH	pH	10/25/2022 8:57	6.62	SU
APCO-GSD-AP-MW-2	TEMP	Temperature	10/25/2022 8:57	20.31	C
APCO-GSD-AP-MW-2	TURB	Turbidity	10/25/2022 8:57	11.4	NTU
APCO-GSD-AP-MW-2	COND	Conductivity	10/25/2022 9:02	589.06	uS/cm
APCO-GSD-AP-MW-2	DO	DO	10/25/2022 9:02	0.11	mg/L
APCO-GSD-AP-MW-2	DTW	Depth to Water Detail	10/25/2022 9:02	15.45	ft
APCO-GSD-AP-MW-2	ORP	Oxidation Reduction Potention	10/25/2022 9:02	-58.57	mv
APCO-GSD-AP-MW-2	PH	pH	10/25/2022 9:02	6.64	SU
APCO-GSD-AP-MW-2	TEMP	Temperature	10/25/2022 9:02	20.31	C
APCO-GSD-AP-MW-2	TURB	Turbidity	10/25/2022 9:02	9.29	NTU
APCO-GSD-AP-MW-2	COND	Conductivity	10/25/2022 9:07	592.22	uS/cm
APCO-GSD-AP-MW-2	DO	DO	10/25/2022 9:07	0.1	mg/L
APCO-GSD-AP-MW-2	DTW	Depth to Water Detail	10/25/2022 9:07	15.45	ft
APCO-GSD-AP-MW-2	ORP	Oxidation Reduction Potention	10/25/2022 9:07	-57.86	mv
APCO-GSD-AP-MW-2	PH	pH	10/25/2022 9:07	6.63	SU
APCO-GSD-AP-MW-2	TEMP	Temperature	10/25/2022 9:07	20.31	C
APCO-GSD-AP-MW-2	TURB	Turbidity	10/25/2022 9:07	6.65	NTU
APCO-GSD-AP-MW-2	COND	Conductivity	10/25/2022 9:12	594.44	uS/cm

**Plant Gadsden Ash Pond  
Field Parameter Summary**

<b>WELL ID</b>	<b>PARAMETER</b>	<b>DESCRIPTION</b>	<b>TIME OF READING</b>	<b>VALUE</b>	<b>UNIT</b>
APCO-GSD-AP-MW-2	DO	DO	10/25/2022 9:12	0.1	mg/L
APCO-GSD-AP-MW-2	DTW	Depth to Water Detail	10/25/2022 9:12	15.45	ft
APCO-GSD-AP-MW-2	ORP	Oxidation Reduction Potention	10/25/2022 9:12	-57.73	mv
APCO-GSD-AP-MW-2	PH	pH	10/25/2022 9:12	6.64	SU
APCO-GSD-AP-MW-2	SULFIDE	Sulfide	10/25/2022 9:12	0	mg/L
APCO-GSD-AP-MW-2	TEMP	Temperature	10/25/2022 9:12	20.34	C
APCO-GSD-AP-MW-2	TURB	Turbidity	10/25/2022 9:12	6.21	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-14	COND	Conductivity	10/26/2022 8:03	168.3	uS/cm
APCO-GSD-AP-MW-14	DO	DO	10/26/2022 8:03	4.09	mg/L
APCO-GSD-AP-MW-14	DTW	Depth to Water Detail	10/26/2022 8:03	22.53	ft
APCO-GSD-AP-MW-14	ORP	Oxidation Reduction Potention	10/26/2022 8:03	265.88	mv
APCO-GSD-AP-MW-14	PH	pH	10/26/2022 8:03	4.07	SU
APCO-GSD-AP-MW-14	TEMP	Temperature	10/26/2022 8:03	18.77	C
APCO-GSD-AP-MW-14	TURB	Turbidity	10/26/2022 8:03	4.5	NTU
APCO-GSD-AP-MW-14	COND	Conductivity	10/26/2022 8:08	173.46	uS/cm
APCO-GSD-AP-MW-14	DO	DO	10/26/2022 8:08	4.06	mg/L
APCO-GSD-AP-MW-14	DTW	Depth to Water Detail	10/26/2022 8:08	22.53	ft
APCO-GSD-AP-MW-14	ORP	Oxidation Reduction Potention	10/26/2022 8:08	264.94	mv
APCO-GSD-AP-MW-14	PH	pH	10/26/2022 8:08	4.08	SU
APCO-GSD-AP-MW-14	TEMP	Temperature	10/26/2022 8:08	18.81	C
APCO-GSD-AP-MW-14	TURB	Turbidity	10/26/2022 8:08	3.21	NTU
APCO-GSD-AP-MW-14	COND	Conductivity	10/26/2022 8:13	177.62	uS/cm
APCO-GSD-AP-MW-14	DO	DO	10/26/2022 8:13	4.08	mg/L
APCO-GSD-AP-MW-14	DTW	Depth to Water Detail	10/26/2022 8:13	22.53	ft
APCO-GSD-AP-MW-14	ORP	Oxidation Reduction Potention	10/26/2022 8:13	286.52	mv
APCO-GSD-AP-MW-14	PH	pH	10/26/2022 8:13	4.07	SU
APCO-GSD-AP-MW-14	TEMP	Temperature	10/26/2022 8:13	18.66	C
APCO-GSD-AP-MW-14	TURB	Turbidity	10/26/2022 8:13	2.47	NTU
APCO-GSD-AP-MW-14	COND	Conductivity	10/26/2022 8:18	178.64	uS/cm
APCO-GSD-AP-MW-14	DO	DO	10/26/2022 8:18	4.05	mg/L
APCO-GSD-AP-MW-14	DTW	Depth to Water Detail	10/26/2022 8:18	22.53	ft
APCO-GSD-AP-MW-14	ORP	Oxidation Reduction Potention	10/26/2022 8:18	301.57	mv
APCO-GSD-AP-MW-14	PH	pH	10/26/2022 8:18	4.07	SU
APCO-GSD-AP-MW-14	SULFIDE	Sulfide	10/26/2022 8:18	0	mg/L
APCO-GSD-AP-MW-14	TEMP	Temperature	10/26/2022 8:18	18.74	C
APCO-GSD-AP-MW-14	TURB	Turbidity	10/26/2022 8:18	2.21	NTU



**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-11	COND	Conductivity	10/26/2022 13:44	785.02	uS/cm
APCO-GSD-AP-MW-11	DO	DO	10/26/2022 13:44	0.09	mg/L
APCO-GSD-AP-MW-11	DTW	Depth to Water Detail	10/26/2022 13:44	10.15	ft
APCO-GSD-AP-MW-11	ORP	Oxidation Reduction Potention	10/26/2022 13:44	25.37	mv
APCO-GSD-AP-MW-11	PH	pH	10/26/2022 13:44	6.18	SU
APCO-GSD-AP-MW-11	TEMP	Temperature	10/26/2022 13:44	20.08	C
APCO-GSD-AP-MW-11	TURB	Turbidity	10/26/2022 13:44	4.21	NTU
APCO-GSD-AP-MW-11	COND	Conductivity	10/26/2022 13:49	785.93	uS/cm
APCO-GSD-AP-MW-11	DO	DO	10/26/2022 13:49	0.07	mg/L
APCO-GSD-AP-MW-11	DTW	Depth to Water Detail	10/26/2022 13:49	10.15	ft
APCO-GSD-AP-MW-11	ORP	Oxidation Reduction Potention	10/26/2022 13:49	20.48	mv
APCO-GSD-AP-MW-11	PH	pH	10/26/2022 13:49	6.19	SU
APCO-GSD-AP-MW-11	TEMP	Temperature	10/26/2022 13:49	20.06	C
APCO-GSD-AP-MW-11	TURB	Turbidity	10/26/2022 13:49	5.8	NTU
APCO-GSD-AP-MW-11	COND	Conductivity	10/26/2022 13:54	789.86	uS/cm
APCO-GSD-AP-MW-11	DO	DO	10/26/2022 13:54	0.07	mg/L
APCO-GSD-AP-MW-11	DTW	Depth to Water Detail	10/26/2022 13:54	10.15	ft
APCO-GSD-AP-MW-11	ORP	Oxidation Reduction Potention	10/26/2022 13:54	17.18	mv
APCO-GSD-AP-MW-11	PH	pH	10/26/2022 13:54	6.2	SU
APCO-GSD-AP-MW-11	TEMP	Temperature	10/26/2022 13:54	20.04	C
APCO-GSD-AP-MW-11	TURB	Turbidity	10/26/2022 13:54	6.6	NTU
APCO-GSD-AP-MW-11	COND	Conductivity	10/26/2022 13:59	793.94	uS/cm
APCO-GSD-AP-MW-11	DO	DO	10/26/2022 13:59	0.06	mg/L
APCO-GSD-AP-MW-11	DTW	Depth to Water Detail	10/26/2022 13:59	10.15	ft
APCO-GSD-AP-MW-11	ORP	Oxidation Reduction Potention	10/26/2022 13:59	14.54	mv
APCO-GSD-AP-MW-11	PH	pH	10/26/2022 13:59	6.2	SU
APCO-GSD-AP-MW-11	SULFIDE	Sulfide	10/26/2022 13:59	0	mg/L
APCO-GSD-AP-MW-11	TEMP	Temperature	10/26/2022 13:59	20.1	C
APCO-GSD-AP-MW-11	TURB	Turbidity	10/26/2022 13:59	5.04	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-12	COND	Conductivity	10/26/2022 14:35	478.39	uS/cm
APCO-GSD-AP-MW-12	DO	DO	10/26/2022 14:35	0.14	mg/L
APCO-GSD-AP-MW-12	DTW	Depth to Water Detail	10/26/2022 14:35	13.6	ft
APCO-GSD-AP-MW-12	ORP	Oxidation Reduction Potention	10/26/2022 14:35	194.19	mv
APCO-GSD-AP-MW-12	PH	pH	10/26/2022 14:35	5.54	SU
APCO-GSD-AP-MW-12	TEMP	Temperature	10/26/2022 14:35	19.16	C
APCO-GSD-AP-MW-12	TURB	Turbidity	10/26/2022 14:35	2.73	NTU
APCO-GSD-AP-MW-12	COND	Conductivity	10/26/2022 14:40	561.6	uS/cm
APCO-GSD-AP-MW-12	DO	DO	10/26/2022 14:40	0.11	mg/L
APCO-GSD-AP-MW-12	DTW	Depth to Water Detail	10/26/2022 14:40	13.6	ft
APCO-GSD-AP-MW-12	ORP	Oxidation Reduction Potention	10/26/2022 14:40	186.14	mv
APCO-GSD-AP-MW-12	PH	pH	10/26/2022 14:40	5.54	SU
APCO-GSD-AP-MW-12	TEMP	Temperature	10/26/2022 14:40	19.01	C
APCO-GSD-AP-MW-12	TURB	Turbidity	10/26/2022 14:40	2.79	NTU
APCO-GSD-AP-MW-12	COND	Conductivity	10/26/2022 14:45	584.7	uS/cm
APCO-GSD-AP-MW-12	DO	DO	10/26/2022 14:45	0.1	mg/L
APCO-GSD-AP-MW-12	DTW	Depth to Water Detail	10/26/2022 14:45	13.6	ft
APCO-GSD-AP-MW-12	ORP	Oxidation Reduction Potention	10/26/2022 14:45	186.29	mv
APCO-GSD-AP-MW-12	PH	pH	10/26/2022 14:45	5.52	SU
APCO-GSD-AP-MW-12	TEMP	Temperature	10/26/2022 14:45	19.06	C
APCO-GSD-AP-MW-12	TURB	Turbidity	10/26/2022 14:45	2.35	NTU
APCO-GSD-AP-MW-12	COND	Conductivity	10/26/2022 14:50	586.4	uS/cm
APCO-GSD-AP-MW-12	DO	DO	10/26/2022 14:50	0.09	mg/L
APCO-GSD-AP-MW-12	DTW	Depth to Water Detail	10/26/2022 14:50	13.6	ft
APCO-GSD-AP-MW-12	ORP	Oxidation Reduction Potention	10/26/2022 14:50	192.4	mv
APCO-GSD-AP-MW-12	PH	pH	10/26/2022 14:50	5.52	SU
APCO-GSD-AP-MW-12	SULFIDE	Sulfide	10/26/2022 14:50	0	mg/L
APCO-GSD-AP-MW-12	TEMP	Temperature	10/26/2022 14:50	19.08	C
APCO-GSD-AP-MW-12	TURB	Turbidity	10/26/2022 14:50	2.52	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-20H	COND	Conductivity	10/26/2022 12:46	597.96	uS/cm
APCO-GSD-AP-MW-20H	DO	DO	10/26/2022 12:46	0.06	mg/L
APCO-GSD-AP-MW-20H	DTW	Depth to Water Detail	10/26/2022 12:46	5.95	ft
APCO-GSD-AP-MW-20H	ORP	Oxidation Reduction Potention	10/26/2022 12:46	34.19	mv
APCO-GSD-AP-MW-20H	PH	pH	10/26/2022 12:46	6.36	SU
APCO-GSD-AP-MW-20H	TEMP	Temperature	10/26/2022 12:46	18.89	C
APCO-GSD-AP-MW-20H	TURB	Turbidity	10/26/2022 12:46	28.2	NTU
APCO-GSD-AP-MW-20H	COND	Conductivity	10/26/2022 12:51	598.66	uS/cm
APCO-GSD-AP-MW-20H	DO	DO	10/26/2022 12:51	0.04	mg/L
APCO-GSD-AP-MW-20H	DTW	Depth to Water Detail	10/26/2022 12:51	5.95	ft
APCO-GSD-AP-MW-20H	ORP	Oxidation Reduction Potention	10/26/2022 12:51	34.14	mv
APCO-GSD-AP-MW-20H	PH	pH	10/26/2022 12:51	6.34	SU
APCO-GSD-AP-MW-20H	TEMP	Temperature	10/26/2022 12:51	18.88	C
APCO-GSD-AP-MW-20H	TURB	Turbidity	10/26/2022 12:51	10.88	NTU
APCO-GSD-AP-MW-20H	COND	Conductivity	10/26/2022 12:56	599.27	uS/cm
APCO-GSD-AP-MW-20H	DO	DO	10/26/2022 12:56	0.04	mg/L
APCO-GSD-AP-MW-20H	DTW	Depth to Water Detail	10/26/2022 12:56	5.95	ft
APCO-GSD-AP-MW-20H	ORP	Oxidation Reduction Potention	10/26/2022 12:56	33.36	mv
APCO-GSD-AP-MW-20H	PH	pH	10/26/2022 12:56	6.34	SU
APCO-GSD-AP-MW-20H	TEMP	Temperature	10/26/2022 12:56	18.89	C
APCO-GSD-AP-MW-20H	TURB	Turbidity	10/26/2022 12:56	6.78	NTU
APCO-GSD-AP-MW-20H	COND	Conductivity	10/26/2022 13:01	599.74	uS/cm
APCO-GSD-AP-MW-20H	DO	DO	10/26/2022 13:01	0.04	mg/L
APCO-GSD-AP-MW-20H	DTW	Depth to Water Detail	10/26/2022 13:01	5.95	ft
APCO-GSD-AP-MW-20H	ORP	Oxidation Reduction Potention	10/26/2022 13:01	32.17	mv
APCO-GSD-AP-MW-20H	PH	pH	10/26/2022 13:01	6.32	SU
APCO-GSD-AP-MW-20H	TEMP	Temperature	10/26/2022 13:01	18.91	C
APCO-GSD-AP-MW-20H	TURB	Turbidity	10/26/2022 13:01	5.28	NTU
APCO-GSD-AP-MW-20H	COND	Conductivity	10/26/2022 13:06	600.06	uS/cm
APCO-GSD-AP-MW-20H	DO	DO	10/26/2022 13:06	0.04	mg/L
APCO-GSD-AP-MW-20H	DTW	Depth to Water Detail	10/26/2022 13:06	5.95	ft
APCO-GSD-AP-MW-20H	ORP	Oxidation Reduction Potention	10/26/2022 13:06	30.46	mv
APCO-GSD-AP-MW-20H	PH	pH	10/26/2022 13:06	6.36	SU
APCO-GSD-AP-MW-20H	SULFIDE	Sulfide	10/26/2022 13:06	0	mg/L
APCO-GSD-AP-MW-20H	TEMP	Temperature	10/26/2022 13:06	18.9	C
APCO-GSD-AP-MW-20H	TURB	Turbidity	10/26/2022 13:06	4.82	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-3	COND	Conductivity	10/26/2022 9:28	494.68	uS/cm
APCO-GSD-AP-MW-3	DO	DO	10/26/2022 9:28	0.12	mg/L
APCO-GSD-AP-MW-3	DTW	Depth to Water Detail	10/26/2022 9:28	16.02	ft
APCO-GSD-AP-MW-3	ORP	Oxidation Reduction Potention	10/26/2022 9:28	153.47	mv
APCO-GSD-AP-MW-3	PH	pH	10/26/2022 9:28	5.97	SU
APCO-GSD-AP-MW-3	TEMP	Temperature	10/26/2022 9:28	20.62	C
APCO-GSD-AP-MW-3	TURB	Turbidity	10/26/2022 9:28	1.66	NTU
APCO-GSD-AP-MW-3	COND	Conductivity	10/26/2022 9:33	508.16	uS/cm
APCO-GSD-AP-MW-3	DO	DO	10/26/2022 9:33	0.09	mg/L
APCO-GSD-AP-MW-3	DTW	Depth to Water Detail	10/26/2022 9:33	16.02	ft
APCO-GSD-AP-MW-3	ORP	Oxidation Reduction Potention	10/26/2022 9:33	162.66	mv
APCO-GSD-AP-MW-3	PH	pH	10/26/2022 9:33	5.96	SU
APCO-GSD-AP-MW-3	TEMP	Temperature	10/26/2022 9:33	20.59	C
APCO-GSD-AP-MW-3	TURB	Turbidity	10/26/2022 9:33	1.7	NTU
APCO-GSD-AP-MW-3	COND	Conductivity	10/26/2022 9:38	516.23	uS/cm
APCO-GSD-AP-MW-3	DO	DO	10/26/2022 9:38	0.08	mg/L
APCO-GSD-AP-MW-3	DTW	Depth to Water Detail	10/26/2022 9:38	16.02	ft
APCO-GSD-AP-MW-3	ORP	Oxidation Reduction Potention	10/26/2022 9:38	165	mv
APCO-GSD-AP-MW-3	PH	pH	10/26/2022 9:38	5.98	SU
APCO-GSD-AP-MW-3	TEMP	Temperature	10/26/2022 9:38	20.56	C
APCO-GSD-AP-MW-3	TURB	Turbidity	10/26/2022 9:38	1.67	NTU
APCO-GSD-AP-MW-3	COND	Conductivity	10/26/2022 9:43	514.86	uS/cm
APCO-GSD-AP-MW-3	DO	DO	10/26/2022 9:43	0.07	mg/L
APCO-GSD-AP-MW-3	DTW	Depth to Water Detail	10/26/2022 9:43	16.02	ft
APCO-GSD-AP-MW-3	ORP	Oxidation Reduction Potention	10/26/2022 9:43	167.33	mv
APCO-GSD-AP-MW-3	PH	pH	10/26/2022 9:43	5.97	SU
APCO-GSD-AP-MW-3	SULFIDE	Sulfide	10/26/2022 9:43	0	mg/L
APCO-GSD-AP-MW-3	TEMP	Temperature	10/26/2022 9:43	20.51	C
APCO-GSD-AP-MW-3	TURB	Turbidity	10/26/2022 9:43	1.58	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-4	COND	Conductivity	10/26/2022 11:40	440.52	uS/cm
APCO-GSD-AP-MW-4	DO	DO	10/26/2022 11:40	0.11	mg/L
APCO-GSD-AP-MW-4	DTW	Depth to Water Detail	10/26/2022 11:40	9.85	ft
APCO-GSD-AP-MW-4	ORP	Oxidation Reduction Potention	10/26/2022 11:40	-79.23	mv
APCO-GSD-AP-MW-4	PH	pH	10/26/2022 11:40	6.62	SU
APCO-GSD-AP-MW-4	TEMP	Temperature	10/26/2022 11:40	20.13	C
APCO-GSD-AP-MW-4	TURB	Turbidity	10/26/2022 11:40	14.4	NTU
APCO-GSD-AP-MW-4	COND	Conductivity	10/26/2022 11:45	441.63	uS/cm
APCO-GSD-AP-MW-4	DO	DO	10/26/2022 11:45	0.08	mg/L
APCO-GSD-AP-MW-4	DTW	Depth to Water Detail	10/26/2022 11:45	9.85	ft
APCO-GSD-AP-MW-4	ORP	Oxidation Reduction Potention	10/26/2022 11:45	-83.51	mv
APCO-GSD-AP-MW-4	PH	pH	10/26/2022 11:45	6.64	SU
APCO-GSD-AP-MW-4	TEMP	Temperature	10/26/2022 11:45	20.11	C
APCO-GSD-AP-MW-4	TURB	Turbidity	10/26/2022 11:45	10.73	NTU
APCO-GSD-AP-MW-4	COND	Conductivity	10/26/2022 11:50	441.16	uS/cm
APCO-GSD-AP-MW-4	DO	DO	10/26/2022 11:50	0.07	mg/L
APCO-GSD-AP-MW-4	DTW	Depth to Water Detail	10/26/2022 11:50	9.85	ft
APCO-GSD-AP-MW-4	ORP	Oxidation Reduction Potention	10/26/2022 11:50	-85.9	mv
APCO-GSD-AP-MW-4	PH	pH	10/26/2022 11:50	6.65	SU
APCO-GSD-AP-MW-4	TEMP	Temperature	10/26/2022 11:50	20.09	C
APCO-GSD-AP-MW-4	TURB	Turbidity	10/26/2022 11:50	6.88	NTU
APCO-GSD-AP-MW-4	COND	Conductivity	10/26/2022 11:55	441.17	uS/cm
APCO-GSD-AP-MW-4	DO	DO	10/26/2022 11:55	0.11	mg/L
APCO-GSD-AP-MW-4	DTW	Depth to Water Detail	10/26/2022 11:55	9.85	ft
APCO-GSD-AP-MW-4	ORP	Oxidation Reduction Potention	10/26/2022 11:55	-85.38	mv
APCO-GSD-AP-MW-4	PH	pH	10/26/2022 11:55	6.68	SU
APCO-GSD-AP-MW-4	TEMP	Temperature	10/26/2022 11:55	20.05	C
APCO-GSD-AP-MW-4	TURB	Turbidity	10/26/2022 11:55	7.22	NTU
APCO-GSD-AP-MW-4	COND	Conductivity	10/26/2022 12:00	440.51	uS/cm
APCO-GSD-AP-MW-4	DO	DO	10/26/2022 12:00	0.1	mg/L
APCO-GSD-AP-MW-4	DTW	Depth to Water Detail	10/26/2022 12:00	9.85	ft
APCO-GSD-AP-MW-4	ORP	Oxidation Reduction Potention	10/26/2022 12:00	-84.81	mv
APCO-GSD-AP-MW-4	PH	pH	10/26/2022 12:00	6.63	SU
APCO-GSD-AP-MW-4	TEMP	Temperature	10/26/2022 12:00	20.06	C
APCO-GSD-AP-MW-4	TURB	Turbidity	10/26/2022 12:00	6.35	NTU
APCO-GSD-AP-MW-4	COND	Conductivity	10/26/2022 12:05	439.59	uS/cm
APCO-GSD-AP-MW-4	DO	DO	10/26/2022 12:05	0.1	mg/L
APCO-GSD-AP-MW-4	DTW	Depth to Water Detail	10/26/2022 12:05	9.85	ft
APCO-GSD-AP-MW-4	ORP	Oxidation Reduction Potention	10/26/2022 12:05	-84.85	mv
APCO-GSD-AP-MW-4	PH	pH	10/26/2022 12:05	6.67	SU
APCO-GSD-AP-MW-4	TEMP	Temperature	10/26/2022 12:05	20.1	C
APCO-GSD-AP-MW-4	TURB	Turbidity	10/26/2022 12:05	5.71	NTU
APCO-GSD-AP-MW-4	COND	Conductivity	10/26/2022 12:10	440.05	uS/cm
APCO-GSD-AP-MW-4	DO	DO	10/26/2022 12:10	0.1	mg/L
APCO-GSD-AP-MW-4	DTW	Depth to Water Detail	10/26/2022 12:10	9.85	ft
APCO-GSD-AP-MW-4	ORP	Oxidation Reduction Potention	10/26/2022 12:10	-85.14	mv
APCO-GSD-AP-MW-4	PH	pH	10/26/2022 12:10	6.67	SU
APCO-GSD-AP-MW-4	TEMP	Temperature	10/26/2022 12:10	20.1	C
APCO-GSD-AP-MW-4	TURB	Turbidity	10/26/2022 12:10	5.05	NTU
APCO-GSD-AP-MW-4	COND	Conductivity	10/26/2022 12:15	439.89	uS/cm

**Plant Gadsden Ash Pond  
Field Parameter Summary**

<b>WELL ID</b>	<b>PARAMETER</b>	<b>DESCRIPTION</b>	<b>TIME OF READING</b>	<b>VALUE</b>	<b>UNIT</b>
APCO-GSD-AP-MW-4	DO	DO	10/26/2022 12:15	0.1	mg/L
APCO-GSD-AP-MW-4	DTW	Depth to Water Detail	10/26/2022 12:15	9.85	ft
APCO-GSD-AP-MW-4	ORP	Oxidation Reduction Potention	10/26/2022 12:15	-85.64	mv
APCO-GSD-AP-MW-4	PH	pH	10/26/2022 12:15	6.67	SU
APCO-GSD-AP-MW-4	SULFIDE	Sulfide	10/26/2022 12:15	0	mg/L
APCO-GSD-AP-MW-4	TEMP	Temperature	10/26/2022 12:15	20.14	C
APCO-GSD-AP-MW-4	TURB	Turbidity	10/26/2022 12:15	5.32	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-4V	COND	Conductivity	10/26/2022 10:23	381.49	uS/cm
APCO-GSD-AP-MW-4V	DO	DO	10/26/2022 10:23	0.16	mg/L
APCO-GSD-AP-MW-4V	DTW	Depth to Water Detail	10/26/2022 10:23	9.65	ft
APCO-GSD-AP-MW-4V	ORP	Oxidation Reduction Potention	10/26/2022 10:23	-71	mv
APCO-GSD-AP-MW-4V	PH	pH	10/26/2022 10:23	7.82	SU
APCO-GSD-AP-MW-4V	TEMP	Temperature	10/26/2022 10:23	18.92	C
APCO-GSD-AP-MW-4V	TURB	Turbidity	10/26/2022 10:23	2.6	NTU
APCO-GSD-AP-MW-4V	COND	Conductivity	10/26/2022 10:28	382.04	uS/cm
APCO-GSD-AP-MW-4V	DO	DO	10/26/2022 10:28	0.13	mg/L
APCO-GSD-AP-MW-4V	DTW	Depth to Water Detail	10/26/2022 10:28	17.1	ft
APCO-GSD-AP-MW-4V	ORP	Oxidation Reduction Potention	10/26/2022 10:28	-138.1	mv
APCO-GSD-AP-MW-4V	PH	pH	10/26/2022 10:28	7.83	SU
APCO-GSD-AP-MW-4V	TEMP	Temperature	10/26/2022 10:28	18.88	C
APCO-GSD-AP-MW-4V	TURB	Turbidity	10/26/2022 10:28	1.99	NTU
APCO-GSD-AP-MW-4V	COND	Conductivity	10/26/2022 10:33	393.24	uS/cm
APCO-GSD-AP-MW-4V	DO	DO	10/26/2022 10:33	0.15	mg/L
APCO-GSD-AP-MW-4V	DTW	Depth to Water Detail	10/26/2022 10:33	17.65	ft
APCO-GSD-AP-MW-4V	ORP	Oxidation Reduction Potention	10/26/2022 10:33	-130.11	mv
APCO-GSD-AP-MW-4V	PH	pH	10/26/2022 10:33	7.59	SU
APCO-GSD-AP-MW-4V	TEMP	Temperature	10/26/2022 10:33	18.79	C
APCO-GSD-AP-MW-4V	TURB	Turbidity	10/26/2022 10:33	2.93	NTU
APCO-GSD-AP-MW-4V	COND	Conductivity	10/26/2022 10:38	393.48	uS/cm
APCO-GSD-AP-MW-4V	DO	DO	10/26/2022 10:38	0.13	mg/L
APCO-GSD-AP-MW-4V	DTW	Depth to Water Detail	10/26/2022 10:38	19.1	ft
APCO-GSD-AP-MW-4V	ORP	Oxidation Reduction Potention	10/26/2022 10:38	-145.14	mv
APCO-GSD-AP-MW-4V	PH	pH	10/26/2022 10:38	7.79	SU
APCO-GSD-AP-MW-4V	TEMP	Temperature	10/26/2022 10:38	18.83	C
APCO-GSD-AP-MW-4V	TURB	Turbidity	10/26/2022 10:38	1.91	NTU
APCO-GSD-AP-MW-4V	COND	Conductivity	10/26/2022 10:43	393.69	uS/cm
APCO-GSD-AP-MW-4V	DO	DO	10/26/2022 10:43	0.17	mg/L
APCO-GSD-AP-MW-4V	DTW	Depth to Water Detail	10/26/2022 10:43	19.45	ft
APCO-GSD-AP-MW-4V	ORP	Oxidation Reduction Potention	10/26/2022 10:43	-150.08	mv
APCO-GSD-AP-MW-4V	PH	pH	10/26/2022 10:43	7.85	SU
APCO-GSD-AP-MW-4V	TEMP	Temperature	10/26/2022 10:43	18.72	C
APCO-GSD-AP-MW-4V	TURB	Turbidity	10/26/2022 10:43	2.63	NTU
APCO-GSD-AP-MW-4V	COND	Conductivity	10/26/2022 10:48	393.22	uS/cm
APCO-GSD-AP-MW-4V	DO	DO	10/26/2022 10:48	0.16	mg/L
APCO-GSD-AP-MW-4V	DTW	Depth to Water Detail	10/26/2022 10:48	19.6	ft
APCO-GSD-AP-MW-4V	ORP	Oxidation Reduction Potention	10/26/2022 10:48	-155.16	mv
APCO-GSD-AP-MW-4V	PH	pH	10/26/2022 10:48	7.92	SU
APCO-GSD-AP-MW-4V	TEMP	Temperature	10/26/2022 10:48	18.72	C
APCO-GSD-AP-MW-4V	TURB	Turbidity	10/26/2022 10:48	2.16	NTU
APCO-GSD-AP-MW-4V	COND	Conductivity	10/26/2022 10:53	392.99	uS/cm
APCO-GSD-AP-MW-4V	DO	DO	10/26/2022 10:53	0.15	mg/L
APCO-GSD-AP-MW-4V	DTW	Depth to Water Detail	10/26/2022 10:53	19.75	ft
APCO-GSD-AP-MW-4V	ORP	Oxidation Reduction Potention	10/26/2022 10:53	-158.67	mv
APCO-GSD-AP-MW-4V	PH	pH	10/26/2022 10:53	7.91	SU
APCO-GSD-AP-MW-4V	TEMP	Temperature	10/26/2022 10:53	18.68	C
APCO-GSD-AP-MW-4V	TURB	Turbidity	10/26/2022 10:53	2.18	NTU
APCO-GSD-AP-MW-4V	COND	Conductivity	10/26/2022 10:58	391.47	uS/cm

**Plant Gadsden Ash Pond  
Field Parameter Summary**

<b>WELL ID</b>	<b>PARAMETER</b>	<b>DESCRIPTION</b>	<b>TIME OF READING</b>	<b>VALUE</b>	<b>UNIT</b>
APCO-GSD-AP-MW-4V	DO	DO	10/26/2022 10:58	0.3	mg/L
APCO-GSD-AP-MW-4V	DTW	Depth to Water Detail	10/26/2022 10:58	19.15	ft
APCO-GSD-AP-MW-4V	ORP	Oxidation Reduction Potention	10/26/2022 10:58	-154.36	mv
APCO-GSD-AP-MW-4V	PH	pH	10/26/2022 10:58	7.92	SU
APCO-GSD-AP-MW-4V	SULFIDE	Sulfide	10/26/2022 10:58	0	mg/L
APCO-GSD-AP-MW-4V	TEMP	Temperature	10/26/2022 10:58	18.65	C
APCO-GSD-AP-MW-4V	TURB	Turbidity	10/26/2022 10:58	2.19	NTU



**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-1	COND	Conductivity	10/26/2022 13:53	1076.64	uS/cm
APCO-GSD-AP-MW-1	DO	DO	10/26/2022 13:53	0.12	mg/L
APCO-GSD-AP-MW-1	DTW	Depth to Water Detail	10/26/2022 13:53	15.66	ft
APCO-GSD-AP-MW-1	ORP	Oxidation Reduction Potention	10/26/2022 13:53	131.74	mv
APCO-GSD-AP-MW-1	PH	pH	10/26/2022 13:53	5.82	SU
APCO-GSD-AP-MW-1	TEMP	Temperature	10/26/2022 13:53	18.43	C
APCO-GSD-AP-MW-1	TURB	Turbidity	10/26/2022 13:53	7.38	NTU
APCO-GSD-AP-MW-1	COND	Conductivity	10/26/2022 13:58	1081.67	uS/cm
APCO-GSD-AP-MW-1	DO	DO	10/26/2022 13:58	0.1	mg/L
APCO-GSD-AP-MW-1	DTW	Depth to Water Detail	10/26/2022 13:58	15.66	ft
APCO-GSD-AP-MW-1	ORP	Oxidation Reduction Potention	10/26/2022 13:58	127.55	mv
APCO-GSD-AP-MW-1	PH	pH	10/26/2022 13:58	5.84	SU
APCO-GSD-AP-MW-1	TEMP	Temperature	10/26/2022 13:58	18.43	C
APCO-GSD-AP-MW-1	TURB	Turbidity	10/26/2022 13:58	1.95	NTU
APCO-GSD-AP-MW-1	COND	Conductivity	10/26/2022 14:03	1082.36	uS/cm
APCO-GSD-AP-MW-1	DO	DO	10/26/2022 14:03	0.09	mg/L
APCO-GSD-AP-MW-1	DTW	Depth to Water Detail	10/26/2022 14:03	15.66	ft
APCO-GSD-AP-MW-1	ORP	Oxidation Reduction Potention	10/26/2022 14:03	124.89	mv
APCO-GSD-AP-MW-1	PH	pH	10/26/2022 14:03	5.85	SU
APCO-GSD-AP-MW-1	TEMP	Temperature	10/26/2022 14:03	18.41	C
APCO-GSD-AP-MW-1	TURB	Turbidity	10/26/2022 14:03	1.48	NTU
APCO-GSD-AP-MW-1	COND	Conductivity	10/26/2022 14:08	1082.91	uS/cm
APCO-GSD-AP-MW-1	DO	DO	10/26/2022 14:08	0.08	mg/L
APCO-GSD-AP-MW-1	DTW	Depth to Water Detail	10/26/2022 14:08	15.66	ft
APCO-GSD-AP-MW-1	ORP	Oxidation Reduction Potention	10/26/2022 14:08	122.63	mv
APCO-GSD-AP-MW-1	PH	pH	10/26/2022 14:08	5.86	SU
APCO-GSD-AP-MW-1	SULFIDE	Sulfide	10/26/2022 14:08	0	mg/L
APCO-GSD-AP-MW-1	TEMP	Temperature	10/26/2022 14:08	18.47	C
APCO-GSD-AP-MW-1	TURB	Turbidity	10/26/2022 14:08	1.15	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-2VA	COND	Conductivity	10/25/2022 9:55	586.66	uS/cm
APCO-GSD-AP-MW-2VA	DO	DO	10/25/2022 9:55	0.15	mg/L
APCO-GSD-AP-MW-2VA	DTW	Depth to Water Detail	10/25/2022 9:55	18.68	ft
APCO-GSD-AP-MW-2VA	ORP	Oxidation Reduction Potention	10/25/2022 9:55	-144.96	mv
APCO-GSD-AP-MW-2VA	PH	pH	10/25/2022 9:55	8.16	SU
APCO-GSD-AP-MW-2VA	TEMP	Temperature	10/25/2022 9:55	19.05	C
APCO-GSD-AP-MW-2VA	TURB	Turbidity	10/25/2022 9:55	2.65	NTU
APCO-GSD-AP-MW-2VA	COND	Conductivity	10/25/2022 10:00	583.37	uS/cm
APCO-GSD-AP-MW-2VA	DO	DO	10/25/2022 10:00	0.16	mg/L
APCO-GSD-AP-MW-2VA	DTW	Depth to Water Detail	10/25/2022 10:00	22.53	ft
APCO-GSD-AP-MW-2VA	ORP	Oxidation Reduction Potention	10/25/2022 10:00	-156.36	mv
APCO-GSD-AP-MW-2VA	PH	pH	10/25/2022 10:00	8.18	SU
APCO-GSD-AP-MW-2VA	TEMP	Temperature	10/25/2022 10:00	19.04	C
APCO-GSD-AP-MW-2VA	TURB	Turbidity	10/25/2022 10:00	2.21	NTU
APCO-GSD-AP-MW-2VA	COND	Conductivity	10/25/2022 10:05	582.49	uS/cm
APCO-GSD-AP-MW-2VA	DO	DO	10/25/2022 10:05	0.15	mg/L
APCO-GSD-AP-MW-2VA	DTW	Depth to Water Detail	10/25/2022 10:05	25.28	ft
APCO-GSD-AP-MW-2VA	ORP	Oxidation Reduction Potention	10/25/2022 10:05	-163.8	mv
APCO-GSD-AP-MW-2VA	PH	pH	10/25/2022 10:05	8.21	SU
APCO-GSD-AP-MW-2VA	TEMP	Temperature	10/25/2022 10:05	19.16	C
APCO-GSD-AP-MW-2VA	TURB	Turbidity	10/25/2022 10:05	2.05	NTU
APCO-GSD-AP-MW-2VA	COND	Conductivity	10/25/2022 10:10	582.67	uS/cm
APCO-GSD-AP-MW-2VA	DO	DO	10/25/2022 10:10	0.13	mg/L
APCO-GSD-AP-MW-2VA	DTW	Depth to Water Detail	10/25/2022 10:10	28.76	ft
APCO-GSD-AP-MW-2VA	ORP	Oxidation Reduction Potention	10/25/2022 10:10	-168.75	mv
APCO-GSD-AP-MW-2VA	PH	pH	10/25/2022 10:10	8.23	SU
APCO-GSD-AP-MW-2VA	TEMP	Temperature	10/25/2022 10:10	19.24	C
APCO-GSD-AP-MW-2VA	TURB	Turbidity	10/25/2022 10:10	2.11	NTU
APCO-GSD-AP-MW-2VA	COND	Conductivity	10/25/2022 10:15	586.49	uS/cm
APCO-GSD-AP-MW-2VA	DO	DO	10/25/2022 10:15	0.38	mg/L
APCO-GSD-AP-MW-2VA	DTW	Depth to Water Detail	10/25/2022 10:15	29.19	ft
APCO-GSD-AP-MW-2VA	ORP	Oxidation Reduction Potention	10/25/2022 10:15	-167.26	mv
APCO-GSD-AP-MW-2VA	PH	pH	10/25/2022 10:15	8.22	SU
APCO-GSD-AP-MW-2VA	TEMP	Temperature	10/25/2022 10:15	20.62	C
APCO-GSD-AP-MW-2VA	TURB	Turbidity	10/25/2022 10:15	1.96	NTU
APCO-GSD-AP-MW-2VA	COND	Conductivity	10/25/2022 10:20	587.54	uS/cm
APCO-GSD-AP-MW-2VA	DO	DO	10/25/2022 10:20	0.48	mg/L
APCO-GSD-AP-MW-2VA	DTW	Depth to Water Detail	10/25/2022 10:20	29.29	ft
APCO-GSD-AP-MW-2VA	ORP	Oxidation Reduction Potention	10/25/2022 10:20	-168.31	mv
APCO-GSD-AP-MW-2VA	PH	pH	10/25/2022 10:20	8.27	SU
APCO-GSD-AP-MW-2VA	TEMP	Temperature	10/25/2022 10:20	20.69	C
APCO-GSD-AP-MW-2VA	TURB	Turbidity	10/25/2022 10:20	1.8	NTU
APCO-GSD-AP-MW-2VA	COND	Conductivity	10/25/2022 10:25	587.02	uS/cm
APCO-GSD-AP-MW-2VA	DO	DO	10/25/2022 10:25	0.56	mg/L
APCO-GSD-AP-MW-2VA	DTW	Depth to Water Detail	10/25/2022 10:25	29.38	ft
APCO-GSD-AP-MW-2VA	ORP	Oxidation Reduction Potention	10/25/2022 10:25	-169.61	mv
APCO-GSD-AP-MW-2VA	PH	pH	10/25/2022 10:25	8.33	SU
APCO-GSD-AP-MW-2VA	SULFIDE	Sulfide	10/25/2022 10:25	0	mg/L
APCO-GSD-AP-MW-2VA	TEMP	Temperature	10/25/2022 10:25	20.78	C
APCO-GSD-AP-MW-2VA	TURB	Turbidity	10/25/2022 10:25	1.82	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-2VB	COND	Conductivity	10/25/2022 11:16	1162.86	uS/cm
APCO-GSD-AP-MW-2VB	DO	DO	10/25/2022 11:16	0.13	mg/L
APCO-GSD-AP-MW-2VB	DTW	Depth to Water Detail	10/25/2022 11:16	15.68	ft
APCO-GSD-AP-MW-2VB	ORP	Oxidation Reduction Potention	10/25/2022 11:16	-157.07	mv
APCO-GSD-AP-MW-2VB	PH	pH	10/25/2022 11:16	8.22	SU
APCO-GSD-AP-MW-2VB	TEMP	Temperature	10/25/2022 11:16	19.14	C
APCO-GSD-AP-MW-2VB	TURB	Turbidity	10/25/2022 11:16	0.94	NTU
APCO-GSD-AP-MW-2VB	COND	Conductivity	10/25/2022 11:21	1029.41	uS/cm
APCO-GSD-AP-MW-2VB	DO	DO	10/25/2022 11:21	0.13	mg/L
APCO-GSD-AP-MW-2VB	DTW	Depth to Water Detail	10/25/2022 11:21	19.11	ft
APCO-GSD-AP-MW-2VB	ORP	Oxidation Reduction Potention	10/25/2022 11:21	-170.97	mv
APCO-GSD-AP-MW-2VB	PH	pH	10/25/2022 11:21	8.18	SU
APCO-GSD-AP-MW-2VB	TEMP	Temperature	10/25/2022 11:21	19.06	C
APCO-GSD-AP-MW-2VB	TURB	Turbidity	10/25/2022 11:21	1.26	NTU
APCO-GSD-AP-MW-2VB	COND	Conductivity	10/25/2022 11:26	1000.66	uS/cm
APCO-GSD-AP-MW-2VB	DO	DO	10/25/2022 11:26	0.15	mg/L
APCO-GSD-AP-MW-2VB	DTW	Depth to Water Detail	10/25/2022 11:26	22.48	ft
APCO-GSD-AP-MW-2VB	ORP	Oxidation Reduction Potention	10/25/2022 11:26	-178.07	mv
APCO-GSD-AP-MW-2VB	PH	pH	10/25/2022 11:26	8.18	SU
APCO-GSD-AP-MW-2VB	TEMP	Temperature	10/25/2022 11:26	18.99	C
APCO-GSD-AP-MW-2VB	TURB	Turbidity	10/25/2022 11:26	0.88	NTU
APCO-GSD-AP-MW-2VB	COND	Conductivity	10/25/2022 11:31	991.07	uS/cm
APCO-GSD-AP-MW-2VB	DO	DO	10/25/2022 11:31	0.18	mg/L
APCO-GSD-AP-MW-2VB	DTW	Depth to Water Detail	10/25/2022 11:31	25.73	ft
APCO-GSD-AP-MW-2VB	ORP	Oxidation Reduction Potention	10/25/2022 11:31	-177.23	mv
APCO-GSD-AP-MW-2VB	PH	pH	10/25/2022 11:31	8.15	SU
APCO-GSD-AP-MW-2VB	TEMP	Temperature	10/25/2022 11:31	18.9	C
APCO-GSD-AP-MW-2VB	TURB	Turbidity	10/25/2022 11:31	0.72	NTU
APCO-GSD-AP-MW-2VB	COND	Conductivity	10/25/2022 11:36	992.96	uS/cm
APCO-GSD-AP-MW-2VB	DO	DO	10/25/2022 11:36	0.35	mg/L
APCO-GSD-AP-MW-2VB	DTW	Depth to Water Detail	10/25/2022 11:36	26.63	ft
APCO-GSD-AP-MW-2VB	ORP	Oxidation Reduction Potention	10/25/2022 11:36	-180.47	mv
APCO-GSD-AP-MW-2VB	PH	pH	10/25/2022 11:36	8.2	SU
APCO-GSD-AP-MW-2VB	TEMP	Temperature	10/25/2022 11:36	20.22	C
APCO-GSD-AP-MW-2VB	TURB	Turbidity	10/25/2022 11:36	0.75	NTU
APCO-GSD-AP-MW-2VB	COND	Conductivity	10/25/2022 11:41	1013.78	uS/cm
APCO-GSD-AP-MW-2VB	DO	DO	10/25/2022 11:41	0.36	mg/L
APCO-GSD-AP-MW-2VB	DTW	Depth to Water Detail	10/25/2022 11:41	26.92	ft
APCO-GSD-AP-MW-2VB	ORP	Oxidation Reduction Potention	10/25/2022 11:41	-180.81	mv
APCO-GSD-AP-MW-2VB	PH	pH	10/25/2022 11:41	8.23	SU
APCO-GSD-AP-MW-2VB	TEMP	Temperature	10/25/2022 11:41	20.36	C
APCO-GSD-AP-MW-2VB	TURB	Turbidity	10/25/2022 11:41	0.78	NTU
APCO-GSD-AP-MW-2VB	COND	Conductivity	10/25/2022 11:46	1018.98	uS/cm
APCO-GSD-AP-MW-2VB	DO	DO	10/25/2022 11:46	0.36	mg/L
APCO-GSD-AP-MW-2VB	DTW	Depth to Water Detail	10/25/2022 11:46	27.07	ft
APCO-GSD-AP-MW-2VB	ORP	Oxidation Reduction Potention	10/25/2022 11:46	-183.15	mv
APCO-GSD-AP-MW-2VB	PH	pH	10/25/2022 11:46	8.31	SU
APCO-GSD-AP-MW-2VB	TEMP	Temperature	10/25/2022 11:46	20.36	C
APCO-GSD-AP-MW-2VB	TURB	Turbidity	10/25/2022 11:46	0.7	NTU
APCO-GSD-AP-MW-2VB	COND	Conductivity	10/25/2022 11:51	1018.66	uS/cm

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-2VB	DO	DO	10/25/2022 11:51	0.36	mg/L
APCO-GSD-AP-MW-2VB	DTW	Depth to Water Detail	10/25/2022 11:51	27.26	ft
APCO-GSD-AP-MW-2VB	ORP	Oxidation Reduction Potention	10/25/2022 11:51	-182.81	mv
APCO-GSD-AP-MW-2VB	PH	pH	10/25/2022 11:51	8.32	SU
APCO-GSD-AP-MW-2VB	TEMP	Temperature	10/25/2022 11:51	20.65	C
APCO-GSD-AP-MW-2VB	TURB	Turbidity	10/25/2022 11:51	0.96	NTU
APCO-GSD-AP-MW-2VB	COND	Conductivity	10/25/2022 11:56	1011.73	uS/cm
APCO-GSD-AP-MW-2VB	DO	DO	10/25/2022 11:56	0.48	mg/L
APCO-GSD-AP-MW-2VB	DTW	Depth to Water Detail	10/25/2022 11:56	27.32	ft
APCO-GSD-AP-MW-2VB	ORP	Oxidation Reduction Potention	10/25/2022 11:56	-181.45	mv
APCO-GSD-AP-MW-2VB	PH	pH	10/25/2022 11:56	8.33	SU
APCO-GSD-AP-MW-2VB	TEMP	Temperature	10/25/2022 11:56	21.26	C
APCO-GSD-AP-MW-2VB	TURB	Turbidity	10/25/2022 11:56	0.8	NTU
APCO-GSD-AP-MW-2VB	COND	Conductivity	10/25/2022 12:01	1015.36	uS/cm
APCO-GSD-AP-MW-2VB	DO	DO	10/25/2022 12:01	0.48	mg/L
APCO-GSD-AP-MW-2VB	DTW	Depth to Water Detail	10/25/2022 12:01	27.39	ft
APCO-GSD-AP-MW-2VB	ORP	Oxidation Reduction Potention	10/25/2022 12:01	-180.1	mv
APCO-GSD-AP-MW-2VB	PH	pH	10/25/2022 12:01	8.33	SU
APCO-GSD-AP-MW-2VB	SULFIDE	Sulfide	10/25/2022 12:01	0	mg/L
APCO-GSD-AP-MW-2VB	TEMP	Temperature	10/25/2022 12:01	22.14	C
APCO-GSD-AP-MW-2VB	TURB	Turbidity	10/25/2022 12:01	0.77	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-18H	COND	Conductivity	10/26/2022 12:52	132.56	uS/cm
APCO-GSD-AP-MW-18H	DO	DO	10/26/2022 12:52	8.3	mg/L
APCO-GSD-AP-MW-18H	DTW	Depth to Water Detail	10/26/2022 12:52	15.32	ft
APCO-GSD-AP-MW-18H	ORP	Oxidation Reduction Potention	10/26/2022 12:52	360.89	mv
APCO-GSD-AP-MW-18H	PH	pH	10/26/2022 12:52	4.68	SU
APCO-GSD-AP-MW-18H	TEMP	Temperature	10/26/2022 12:52	17.23	C
APCO-GSD-AP-MW-18H	TURB	Turbidity	10/26/2022 12:52	1.34	NTU
APCO-GSD-AP-MW-18H	COND	Conductivity	10/26/2022 12:57	145.04	uS/cm
APCO-GSD-AP-MW-18H	DO	DO	10/26/2022 12:57	8.11	mg/L
APCO-GSD-AP-MW-18H	DTW	Depth to Water Detail	10/26/2022 12:57	15.32	ft
APCO-GSD-AP-MW-18H	ORP	Oxidation Reduction Potention	10/26/2022 12:57	362.3	mv
APCO-GSD-AP-MW-18H	PH	pH	10/26/2022 12:57	4.82	SU
APCO-GSD-AP-MW-18H	TEMP	Temperature	10/26/2022 12:57	17.2	C
APCO-GSD-AP-MW-18H	TURB	Turbidity	10/26/2022 12:57	0.8	NTU
APCO-GSD-AP-MW-18H	COND	Conductivity	10/26/2022 13:02	152.68	uS/cm
APCO-GSD-AP-MW-18H	DO	DO	10/26/2022 13:02	8.03	mg/L
APCO-GSD-AP-MW-18H	DTW	Depth to Water Detail	10/26/2022 13:02	15.32	ft
APCO-GSD-AP-MW-18H	ORP	Oxidation Reduction Potention	10/26/2022 13:02	366.9	mv
APCO-GSD-AP-MW-18H	PH	pH	10/26/2022 13:02	4.82	SU
APCO-GSD-AP-MW-18H	TEMP	Temperature	10/26/2022 13:02	17.23	C
APCO-GSD-AP-MW-18H	TURB	Turbidity	10/26/2022 13:02	0.91	NTU
APCO-GSD-AP-MW-18H	COND	Conductivity	10/26/2022 13:07	165.1	uS/cm
APCO-GSD-AP-MW-18H	DO	DO	10/26/2022 13:07	7.82	mg/L
APCO-GSD-AP-MW-18H	DTW	Depth to Water Detail	10/26/2022 13:07	15.32	ft
APCO-GSD-AP-MW-18H	ORP	Oxidation Reduction Potention	10/26/2022 13:07	370.65	mv
APCO-GSD-AP-MW-18H	PH	pH	10/26/2022 13:07	4.83	SU
APCO-GSD-AP-MW-18H	TEMP	Temperature	10/26/2022 13:07	17.21	C
APCO-GSD-AP-MW-18H	TURB	Turbidity	10/26/2022 13:07	0.92	NTU
APCO-GSD-AP-MW-18H	COND	Conductivity	10/26/2022 13:12	172.6	uS/cm
APCO-GSD-AP-MW-18H	DO	DO	10/26/2022 13:12	7.76	mg/L
APCO-GSD-AP-MW-18H	DTW	Depth to Water Detail	10/26/2022 13:12	15.32	ft
APCO-GSD-AP-MW-18H	ORP	Oxidation Reduction Potention	10/26/2022 13:12	372.63	mv
APCO-GSD-AP-MW-18H	PH	pH	10/26/2022 13:12	4.84	SU
APCO-GSD-AP-MW-18H	TEMP	Temperature	10/26/2022 13:12	17.24	C
APCO-GSD-AP-MW-18H	TURB	Turbidity	10/26/2022 13:12	0.77	NTU
APCO-GSD-AP-MW-18H	COND	Conductivity	10/26/2022 13:17	174.44	uS/cm
APCO-GSD-AP-MW-18H	DO	DO	10/26/2022 13:17	7.73	mg/L
APCO-GSD-AP-MW-18H	DTW	Depth to Water Detail	10/26/2022 13:17	15.32	ft
APCO-GSD-AP-MW-18H	ORP	Oxidation Reduction Potention	10/26/2022 13:17	373.3	mv
APCO-GSD-AP-MW-18H	PH	pH	10/26/2022 13:17	4.83	SU
APCO-GSD-AP-MW-18H	TEMP	Temperature	10/26/2022 13:17	17.24	C
APCO-GSD-AP-MW-18H	TURB	Turbidity	10/26/2022 13:17	0.75	NTU
APCO-GSD-AP-MW-18H	COND	Conductivity	10/26/2022 13:22	181.38	uS/cm
APCO-GSD-AP-MW-18H	DO	DO	10/26/2022 13:22	7.7	mg/L
APCO-GSD-AP-MW-18H	DTW	Depth to Water Detail	10/26/2022 13:22	15.32	ft
APCO-GSD-AP-MW-18H	ORP	Oxidation Reduction Potention	10/26/2022 13:22	370.67	mv
APCO-GSD-AP-MW-18H	PH	pH	10/26/2022 13:22	4.83	SU
APCO-GSD-AP-MW-18H	TEMP	Temperature	10/26/2022 13:22	17.25	C
APCO-GSD-AP-MW-18H	TURB	Turbidity	10/26/2022 13:22	0.72	NTU
APCO-GSD-AP-MW-18H	COND	Conductivity	10/26/2022 13:27	181.03	uS/cm

**Plant Gadsden Ash Pond  
Field Parameter Summary**

<b>WELL ID</b>	<b>PARAMETER</b>	<b>DESCRIPTION</b>	<b>TIME OF READING</b>	<b>VALUE</b>	<b>UNIT</b>
APCO-GSD-AP-MW-18H	DO	DO	10/26/2022 13:27	7.68	mg/L
APCO-GSD-AP-MW-18H	DTW	Depth to Water Detail	10/26/2022 13:27	15.32	ft
APCO-GSD-AP-MW-18H	ORP	Oxidation Reduction Potention	10/26/2022 13:27	369	mv
APCO-GSD-AP-MW-18H	PH	pH	10/26/2022 13:27	4.81	SU
APCO-GSD-AP-MW-18H	SULFIDE	Sulfide	10/26/2022 13:27	0	mg/L
APCO-GSD-AP-MW-18H	TEMP	Temperature	10/26/2022 13:27	17.16	C
APCO-GSD-AP-MW-18H	TURB	Turbidity	10/26/2022 13:27	0.81	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-19H	COND	Conductivity	10/26/2022 10:07	375.29	uS/cm
APCO-GSD-AP-MW-19H	DO	DO	10/26/2022 10:07	0.12	mg/L
APCO-GSD-AP-MW-19H	DTW	Depth to Water Detail	10/26/2022 10:07	8.02	ft
APCO-GSD-AP-MW-19H	ORP	Oxidation Reduction Potention	10/26/2022 10:07	19.88	mv
APCO-GSD-AP-MW-19H	PH	pH	10/26/2022 10:07	6.39	SU
APCO-GSD-AP-MW-19H	TEMP	Temperature	10/26/2022 10:07	18.74	C
APCO-GSD-AP-MW-19H	TURB	Turbidity	10/26/2022 10:07	4.32	NTU
APCO-GSD-AP-MW-19H	COND	Conductivity	10/26/2022 10:12	368.53	uS/cm
APCO-GSD-AP-MW-19H	DO	DO	10/26/2022 10:12	0.11	mg/L
APCO-GSD-AP-MW-19H	DTW	Depth to Water Detail	10/26/2022 10:12	8.02	ft
APCO-GSD-AP-MW-19H	ORP	Oxidation Reduction Potention	10/26/2022 10:12	33.79	mv
APCO-GSD-AP-MW-19H	PH	pH	10/26/2022 10:12	6.31	SU
APCO-GSD-AP-MW-19H	TEMP	Temperature	10/26/2022 10:12	18.73	C
APCO-GSD-AP-MW-19H	TURB	Turbidity	10/26/2022 10:12	2.94	NTU
APCO-GSD-AP-MW-19H	COND	Conductivity	10/26/2022 10:17	364.75	uS/cm
APCO-GSD-AP-MW-19H	DO	DO	10/26/2022 10:17	0.11	mg/L
APCO-GSD-AP-MW-19H	DTW	Depth to Water Detail	10/26/2022 10:17	8.02	ft
APCO-GSD-AP-MW-19H	ORP	Oxidation Reduction Potention	10/26/2022 10:17	39.89	mv
APCO-GSD-AP-MW-19H	PH	pH	10/26/2022 10:17	6.28	SU
APCO-GSD-AP-MW-19H	TEMP	Temperature	10/26/2022 10:17	18.6	C
APCO-GSD-AP-MW-19H	TURB	Turbidity	10/26/2022 10:17	2.28	NTU
APCO-GSD-AP-MW-19H	COND	Conductivity	10/26/2022 10:22	362.9	uS/cm
APCO-GSD-AP-MW-19H	DO	DO	10/26/2022 10:22	0.11	mg/L
APCO-GSD-AP-MW-19H	DTW	Depth to Water Detail	10/26/2022 10:22	8.02	ft
APCO-GSD-AP-MW-19H	ORP	Oxidation Reduction Potention	10/26/2022 10:22	45.29	mv
APCO-GSD-AP-MW-19H	PH	pH	10/26/2022 10:22	6.25	SU
APCO-GSD-AP-MW-19H	SULFIDE	Sulfide	10/26/2022 10:22	0	mg/L
APCO-GSD-AP-MW-19H	TEMP	Temperature	10/26/2022 10:22	18.57	C
APCO-GSD-AP-MW-19H	TURB	Turbidity	10/26/2022 10:22	2.09	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-21VC	COND	Conductivity	10/26/2022 8:12	1565.3	uS/cm
APCO-GSD-AP-MW-21VC	DO	DO	10/26/2022 8:12	0.14	mg/L
APCO-GSD-AP-MW-21VC	DTW	Depth to Water Detail	10/26/2022 8:12	13.56	ft
APCO-GSD-AP-MW-21VC	ORP	Oxidation Reduction Potention	10/26/2022 8:12	-141.84	mv
APCO-GSD-AP-MW-21VC	PH	pH	10/26/2022 8:12	8.23	SU
APCO-GSD-AP-MW-21VC	TEMP	Temperature	10/26/2022 8:12	17.92	C
APCO-GSD-AP-MW-21VC	TURB	Turbidity	10/26/2022 8:12	10.71	NTU
APCO-GSD-AP-MW-21VC	COND	Conductivity	10/26/2022 8:17	1558.2	uS/cm
APCO-GSD-AP-MW-21VC	DO	DO	10/26/2022 8:17	0.15	mg/L
APCO-GSD-AP-MW-21VC	DTW	Depth to Water Detail	10/26/2022 8:17	14.96	ft
APCO-GSD-AP-MW-21VC	ORP	Oxidation Reduction Potention	10/26/2022 8:17	-154.63	mv
APCO-GSD-AP-MW-21VC	PH	pH	10/26/2022 8:17	8.24	SU
APCO-GSD-AP-MW-21VC	TEMP	Temperature	10/26/2022 8:17	17.85	C
APCO-GSD-AP-MW-21VC	TURB	Turbidity	10/26/2022 8:17	2.36	NTU
APCO-GSD-AP-MW-21VC	COND	Conductivity	10/26/2022 8:22	1566.35	uS/cm
APCO-GSD-AP-MW-21VC	DO	DO	10/26/2022 8:22	0.14	mg/L
APCO-GSD-AP-MW-21VC	DTW	Depth to Water Detail	10/26/2022 8:22	16.51	ft
APCO-GSD-AP-MW-21VC	ORP	Oxidation Reduction Potention	10/26/2022 8:22	-159.59	mv
APCO-GSD-AP-MW-21VC	PH	pH	10/26/2022 8:22	8.26	SU
APCO-GSD-AP-MW-21VC	TEMP	Temperature	10/26/2022 8:22	17.74	C
APCO-GSD-AP-MW-21VC	TURB	Turbidity	10/26/2022 8:22	2.46	NTU
APCO-GSD-AP-MW-21VC	COND	Conductivity	10/26/2022 8:27	1565.88	uS/cm
APCO-GSD-AP-MW-21VC	DO	DO	10/26/2022 8:27	0.17	mg/L
APCO-GSD-AP-MW-21VC	DTW	Depth to Water Detail	10/26/2022 8:27	16.54	ft
APCO-GSD-AP-MW-21VC	ORP	Oxidation Reduction Potention	10/26/2022 8:27	-160.61	mv
APCO-GSD-AP-MW-21VC	PH	pH	10/26/2022 8:27	8.28	SU
APCO-GSD-AP-MW-21VC	TEMP	Temperature	10/26/2022 8:27	17.56	C
APCO-GSD-AP-MW-21VC	TURB	Turbidity	10/26/2022 8:27	1.26	NTU
APCO-GSD-AP-MW-21VC	COND	Conductivity	10/26/2022 8:32	1578.14	uS/cm
APCO-GSD-AP-MW-21VC	DO	DO	10/26/2022 8:32	0.16	mg/L
APCO-GSD-AP-MW-21VC	DTW	Depth to Water Detail	10/26/2022 8:32	16.62	ft
APCO-GSD-AP-MW-21VC	ORP	Oxidation Reduction Potention	10/26/2022 8:32	-161.82	mv
APCO-GSD-AP-MW-21VC	PH	pH	10/26/2022 8:32	8.29	SU
APCO-GSD-AP-MW-21VC	TEMP	Temperature	10/26/2022 8:32	17.64	C
APCO-GSD-AP-MW-21VC	TURB	Turbidity	10/26/2022 8:32	1.2	NTU
APCO-GSD-AP-MW-21VC	COND	Conductivity	10/26/2022 8:37	1576.52	uS/cm
APCO-GSD-AP-MW-21VC	DO	DO	10/26/2022 8:37	0.17	mg/L
APCO-GSD-AP-MW-21VC	DTW	Depth to Water Detail	10/26/2022 8:37	16.68	ft
APCO-GSD-AP-MW-21VC	ORP	Oxidation Reduction Potention	10/26/2022 8:37	-161.89	mv
APCO-GSD-AP-MW-21VC	PH	pH	10/26/2022 8:37	8.31	SU
APCO-GSD-AP-MW-21VC	SULFIDE	Sulfide	10/26/2022 8:37	0	mg/L
APCO-GSD-AP-MW-21VC	TEMP	Temperature	10/26/2022 8:37	17.59	C
APCO-GSD-AP-MW-21VC	TURB	Turbidity	10/26/2022 8:37	1.12	NTU



**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-22VB	COND	Conductivity	10/26/2022 9:13	431.62	uS/cm
APCO-GSD-AP-MW-22VB	DO	DO	10/26/2022 9:13	0.23	mg/L
APCO-GSD-AP-MW-22VB	DTW	Depth to Water Detail	10/26/2022 9:13	9.97	ft
APCO-GSD-AP-MW-22VB	ORP	Oxidation Reduction Potention	10/26/2022 9:13	-137.7	mv
APCO-GSD-AP-MW-22VB	PH	pH	10/26/2022 9:13	8.03	SU
APCO-GSD-AP-MW-22VB	TEMP	Temperature	10/26/2022 9:13	17.54	C
APCO-GSD-AP-MW-22VB	TURB	Turbidity	10/26/2022 9:13	1.39	NTU
APCO-GSD-AP-MW-22VB	COND	Conductivity	10/26/2022 9:18	429.1	uS/cm
APCO-GSD-AP-MW-22VB	DO	DO	10/26/2022 9:18	0.18	mg/L
APCO-GSD-AP-MW-22VB	DTW	Depth to Water Detail	10/26/2022 9:18	10.34	ft
APCO-GSD-AP-MW-22VB	ORP	Oxidation Reduction Potention	10/26/2022 9:18	-148.88	mv
APCO-GSD-AP-MW-22VB	PH	pH	10/26/2022 9:18	8.05	SU
APCO-GSD-AP-MW-22VB	TEMP	Temperature	10/26/2022 9:18	17.48	C
APCO-GSD-AP-MW-22VB	TURB	Turbidity	10/26/2022 9:18	1.5	NTU
APCO-GSD-AP-MW-22VB	COND	Conductivity	10/26/2022 9:23	426.03	uS/cm
APCO-GSD-AP-MW-22VB	DO	DO	10/26/2022 9:23	0.21	mg/L
APCO-GSD-AP-MW-22VB	DTW	Depth to Water Detail	10/26/2022 9:23	10.63	ft
APCO-GSD-AP-MW-22VB	ORP	Oxidation Reduction Potention	10/26/2022 9:23	-154.33	mv
APCO-GSD-AP-MW-22VB	PH	pH	10/26/2022 9:23	8.07	SU
APCO-GSD-AP-MW-22VB	TEMP	Temperature	10/26/2022 9:23	17.42	C
APCO-GSD-AP-MW-22VB	TURB	Turbidity	10/26/2022 9:23	1.24	NTU
APCO-GSD-AP-MW-22VB	COND	Conductivity	10/26/2022 9:28	426.3	uS/cm
APCO-GSD-AP-MW-22VB	DO	DO	10/26/2022 9:28	0.22	mg/L
APCO-GSD-AP-MW-22VB	DTW	Depth to Water Detail	10/26/2022 9:28	10.58	ft
APCO-GSD-AP-MW-22VB	ORP	Oxidation Reduction Potention	10/26/2022 9:28	-157.56	mv
APCO-GSD-AP-MW-22VB	PH	pH	10/26/2022 9:28	8.1	SU
APCO-GSD-AP-MW-22VB	TEMP	Temperature	10/26/2022 9:28	17.49	C
APCO-GSD-AP-MW-22VB	TURB	Turbidity	10/26/2022 9:28	1.08	NTU
APCO-GSD-AP-MW-22VB	COND	Conductivity	10/26/2022 9:33	425.07	uS/cm
APCO-GSD-AP-MW-22VB	DO	DO	10/26/2022 9:33	0.23	mg/L
APCO-GSD-AP-MW-22VB	DTW	Depth to Water Detail	10/26/2022 9:33	10.58	ft
APCO-GSD-AP-MW-22VB	ORP	Oxidation Reduction Potention	10/26/2022 9:33	-160.45	mv
APCO-GSD-AP-MW-22VB	PH	pH	10/26/2022 9:33	8.11	SU
APCO-GSD-AP-MW-22VB	SULFIDE	Sulfide	10/26/2022 9:33	0	mg/L
APCO-GSD-AP-MW-22VB	TEMP	Temperature	10/26/2022 9:33	17.45	C
APCO-GSD-AP-MW-22VB	TURB	Turbidity	10/26/2022 9:33	0.97	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-PZ-5	COND	Conductivity	10/26/2022 12:05	125.45	uS/cm
APCO-GSD-AP-PZ-5	DO	DO	10/26/2022 12:05	4.1	mg/L
APCO-GSD-AP-PZ-5	DTW	Depth to Water Detail	10/26/2022 12:05	15.36	ft
APCO-GSD-AP-PZ-5	ORP	Oxidation Reduction Potention	10/26/2022 12:05	277.68	mv
APCO-GSD-AP-PZ-5	PH	pH	10/26/2022 12:05	5.2	SU
APCO-GSD-AP-PZ-5	TEMP	Temperature	10/26/2022 12:05	16.93	C
APCO-GSD-AP-PZ-5	TURB	Turbidity	10/26/2022 12:05	3.99	NTU
APCO-GSD-AP-PZ-5	COND	Conductivity	10/26/2022 12:10	124.81	uS/cm
APCO-GSD-AP-PZ-5	DO	DO	10/26/2022 12:10	4.09	mg/L
APCO-GSD-AP-PZ-5	DTW	Depth to Water Detail	10/26/2022 12:10	15.36	ft
APCO-GSD-AP-PZ-5	ORP	Oxidation Reduction Potention	10/26/2022 12:10	283.26	mv
APCO-GSD-AP-PZ-5	PH	pH	10/26/2022 12:10	5.35	SU
APCO-GSD-AP-PZ-5	TEMP	Temperature	10/26/2022 12:10	16.93	C
APCO-GSD-AP-PZ-5	TURB	Turbidity	10/26/2022 12:10	3.23	NTU
APCO-GSD-AP-PZ-5	COND	Conductivity	10/26/2022 12:15	124.71	uS/cm
APCO-GSD-AP-PZ-5	DO	DO	10/26/2022 12:15	4.09	mg/L
APCO-GSD-AP-PZ-5	DTW	Depth to Water Detail	10/26/2022 12:15	15.36	ft
APCO-GSD-AP-PZ-5	ORP	Oxidation Reduction Potention	10/26/2022 12:15	291.91	mv
APCO-GSD-AP-PZ-5	PH	pH	10/26/2022 12:15	5.33	SU
APCO-GSD-AP-PZ-5	TEMP	Temperature	10/26/2022 12:15	16.87	C
APCO-GSD-AP-PZ-5	TURB	Turbidity	10/26/2022 12:15	2.3	NTU
APCO-GSD-AP-PZ-5	COND	Conductivity	10/26/2022 12:20	124.69	uS/cm
APCO-GSD-AP-PZ-5	DO	DO	10/26/2022 12:20	4.1	mg/L
APCO-GSD-AP-PZ-5	DTW	Depth to Water Detail	10/26/2022 12:20	15.36	ft
APCO-GSD-AP-PZ-5	ORP	Oxidation Reduction Potention	10/26/2022 12:20	298.14	mv
APCO-GSD-AP-PZ-5	PH	pH	10/26/2022 12:20	5.31	SU
APCO-GSD-AP-PZ-5	SULFIDE	Sulfide	10/26/2022 12:20	0	mg/L
APCO-GSD-AP-PZ-5	TEMP	Temperature	10/26/2022 12:20	16.9	C
APCO-GSD-AP-PZ-5	TURB	Turbidity	10/26/2022 12:20	1.84	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-PZ-6	COND	Conductivity	10/26/2022 11:06	123.44	uS/cm
APCO-GSD-AP-PZ-6	DO	DO	10/26/2022 11:06	5.21	mg/L
APCO-GSD-AP-PZ-6	DTW	Depth to Water Detail	10/26/2022 11:06	10.76	ft
APCO-GSD-AP-PZ-6	ORP	Oxidation Reduction Potention	10/26/2022 11:06	232.21	mv
APCO-GSD-AP-PZ-6	PH	pH	10/26/2022 11:06	5.18	SU
APCO-GSD-AP-PZ-6	TEMP	Temperature	10/26/2022 11:06	19.32	C
APCO-GSD-AP-PZ-6	TURB	Turbidity	10/26/2022 11:06	13.5	NTU
APCO-GSD-AP-PZ-6	COND	Conductivity	10/26/2022 11:11	123.99	uS/cm
APCO-GSD-AP-PZ-6	DO	DO	10/26/2022 11:11	5.3	mg/L
APCO-GSD-AP-PZ-6	DTW	Depth to Water Detail	10/26/2022 11:11	10.76	ft
APCO-GSD-AP-PZ-6	ORP	Oxidation Reduction Potention	10/26/2022 11:11	245.1	mv
APCO-GSD-AP-PZ-6	PH	pH	10/26/2022 11:11	5.35	SU
APCO-GSD-AP-PZ-6	TEMP	Temperature	10/26/2022 11:11	19.29	C
APCO-GSD-AP-PZ-6	TURB	Turbidity	10/26/2022 11:11	8.68	NTU
APCO-GSD-AP-PZ-6	COND	Conductivity	10/26/2022 11:16	124.5	uS/cm
APCO-GSD-AP-PZ-6	DO	DO	10/26/2022 11:16	5.33	mg/L
APCO-GSD-AP-PZ-6	DTW	Depth to Water Detail	10/26/2022 11:16	10.76	ft
APCO-GSD-AP-PZ-6	ORP	Oxidation Reduction Potention	10/26/2022 11:16	251.83	mv
APCO-GSD-AP-PZ-6	PH	pH	10/26/2022 11:16	5.43	SU
APCO-GSD-AP-PZ-6	TEMP	Temperature	10/26/2022 11:16	19.27	C
APCO-GSD-AP-PZ-6	TURB	Turbidity	10/26/2022 11:16	5.53	NTU
APCO-GSD-AP-PZ-6	COND	Conductivity	10/26/2022 11:21	124.63	uS/cm
APCO-GSD-AP-PZ-6	DO	DO	10/26/2022 11:21	5.35	mg/L
APCO-GSD-AP-PZ-6	DTW	Depth to Water Detail	10/26/2022 11:21	10.76	ft
APCO-GSD-AP-PZ-6	ORP	Oxidation Reduction Potention	10/26/2022 11:21	255.13	mv
APCO-GSD-AP-PZ-6	PH	pH	10/26/2022 11:21	5.43	SU
APCO-GSD-AP-PZ-6	SULFIDE	Sulfide	10/26/2022 11:21	0	mg/L
APCO-GSD-AP-PZ-6	TEMP	Temperature	10/26/2022 11:21	19.3	C
APCO-GSD-AP-PZ-6	TURB	Turbidity	10/26/2022 11:21	3.99	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-5	COND	Conductivity	10/26/2022 9:34	297.09	uS/cm
APCO-GSD-AP-MW-5	DO	DO	10/26/2022 9:34	0.11	mg/L
APCO-GSD-AP-MW-5	DTW	Depth to Water Detail	10/26/2022 9:34	7.93	ft
APCO-GSD-AP-MW-5	ORP	Oxidation Reduction Potention	10/26/2022 9:34	62.15	mv
APCO-GSD-AP-MW-5	PH	pH	10/26/2022 9:34	6.47	SU
APCO-GSD-AP-MW-5	TEMP	Temperature	10/26/2022 9:34	20.4	C
APCO-GSD-AP-MW-5	TURB	Turbidity	10/26/2022 9:34	3.53	NTU
APCO-GSD-AP-MW-5	COND	Conductivity	10/26/2022 9:39	295.34	uS/cm
APCO-GSD-AP-MW-5	DO	DO	10/26/2022 9:39	0.13	mg/L
APCO-GSD-AP-MW-5	DTW	Depth to Water Detail	10/26/2022 9:39	7.93	ft
APCO-GSD-AP-MW-5	ORP	Oxidation Reduction Potention	10/26/2022 9:39	70.57	mv
APCO-GSD-AP-MW-5	PH	pH	10/26/2022 9:39	6.42	SU
APCO-GSD-AP-MW-5	TEMP	Temperature	10/26/2022 9:39	20.44	C
APCO-GSD-AP-MW-5	TURB	Turbidity	10/26/2022 9:39	2.4	NTU
APCO-GSD-AP-MW-5	COND	Conductivity	10/26/2022 9:44	296.29	uS/cm
APCO-GSD-AP-MW-5	DO	DO	10/26/2022 9:44	0.1	mg/L
APCO-GSD-AP-MW-5	DTW	Depth to Water Detail	10/26/2022 9:44	7.93	ft
APCO-GSD-AP-MW-5	ORP	Oxidation Reduction Potention	10/26/2022 9:44	71.29	mv
APCO-GSD-AP-MW-5	PH	pH	10/26/2022 9:44	6.44	SU
APCO-GSD-AP-MW-5	TEMP	Temperature	10/26/2022 9:44	20.52	C
APCO-GSD-AP-MW-5	TURB	Turbidity	10/26/2022 9:44	2.38	NTU
APCO-GSD-AP-MW-5	COND	Conductivity	10/26/2022 9:49	297.31	uS/cm
APCO-GSD-AP-MW-5	DO	DO	10/26/2022 9:49	0.09	mg/L
APCO-GSD-AP-MW-5	DTW	Depth to Water Detail	10/26/2022 9:49	7.93	ft
APCO-GSD-AP-MW-5	ORP	Oxidation Reduction Potention	10/26/2022 9:49	71.19	mv
APCO-GSD-AP-MW-5	PH	pH	10/26/2022 9:49	6.44	SU
APCO-GSD-AP-MW-5	SULFIDE	Sulfide	10/26/2022 9:49	0	mg/L
APCO-GSD-AP-MW-5	TEMP	Temperature	10/26/2022 9:49	20.5	C
APCO-GSD-AP-MW-5	TURB	Turbidity	10/26/2022 9:49	2.35	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-6	COND	Conductivity	10/26/2022 11:38	146.7	uS/cm
APCO-GSD-AP-MW-6	DO	DO	10/26/2022 11:38	0.13	mg/L
APCO-GSD-AP-MW-6	DTW	Depth to Water Detail	10/26/2022 11:38	7.16	ft
APCO-GSD-AP-MW-6	ORP	Oxidation Reduction Potention	10/26/2022 11:38	98.05	mv
APCO-GSD-AP-MW-6	PH	pH	10/26/2022 11:38	5.99	SU
APCO-GSD-AP-MW-6	TEMP	Temperature	10/26/2022 11:38	19.55	C
APCO-GSD-AP-MW-6	TURB	Turbidity	10/26/2022 11:38	0.43	NTU
APCO-GSD-AP-MW-6	COND	Conductivity	10/26/2022 11:43	146.46	uS/cm
APCO-GSD-AP-MW-6	DO	DO	10/26/2022 11:43	0.11	mg/L
APCO-GSD-AP-MW-6	DTW	Depth to Water Detail	10/26/2022 11:43	7.21	ft
APCO-GSD-AP-MW-6	ORP	Oxidation Reduction Potention	10/26/2022 11:43	104.48	mv
APCO-GSD-AP-MW-6	PH	pH	10/26/2022 11:43	5.95	SU
APCO-GSD-AP-MW-6	TEMP	Temperature	10/26/2022 11:43	19.54	C
APCO-GSD-AP-MW-6	TURB	Turbidity	10/26/2022 11:43	0.11	NTU
APCO-GSD-AP-MW-6	COND	Conductivity	10/26/2022 11:48	146.14	uS/cm
APCO-GSD-AP-MW-6	DO	DO	10/26/2022 11:48	0.1	mg/L
APCO-GSD-AP-MW-6	DTW	Depth to Water Detail	10/26/2022 11:48	7.21	ft
APCO-GSD-AP-MW-6	ORP	Oxidation Reduction Potention	10/26/2022 11:48	106.43	mv
APCO-GSD-AP-MW-6	PH	pH	10/26/2022 11:48	5.97	SU
APCO-GSD-AP-MW-6	TEMP	Temperature	10/26/2022 11:48	19.59	C
APCO-GSD-AP-MW-6	TURB	Turbidity	10/26/2022 11:48	0.09	NTU
APCO-GSD-AP-MW-6	COND	Conductivity	10/26/2022 11:53	145.68	uS/cm
APCO-GSD-AP-MW-6	DO	DO	10/26/2022 11:53	0.12	mg/L
APCO-GSD-AP-MW-6	DTW	Depth to Water Detail	10/26/2022 11:53	7.21	ft
APCO-GSD-AP-MW-6	ORP	Oxidation Reduction Potention	10/26/2022 11:53	109.23	mv
APCO-GSD-AP-MW-6	PH	pH	10/26/2022 11:53	5.98	SU
APCO-GSD-AP-MW-6	SULFIDE	Sulfide	10/26/2022 11:53	0	mg/L
APCO-GSD-AP-MW-6	TEMP	Temperature	10/26/2022 11:53	19.56	C
APCO-GSD-AP-MW-6	TURB	Turbidity	10/26/2022 11:53	0.09	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-7	COND	Conductivity	10/26/2022 12:31	211.47	uS/cm
APCO-GSD-AP-MW-7	DO	DO	10/26/2022 12:31	0.06	mg/L
APCO-GSD-AP-MW-7	DTW	Depth to Water Detail	10/26/2022 12:31	13.19	ft
APCO-GSD-AP-MW-7	ORP	Oxidation Reduction Potention	10/26/2022 12:31	112.31	mv
APCO-GSD-AP-MW-7	PH	pH	10/26/2022 12:31	6.5	SU
APCO-GSD-AP-MW-7	TEMP	Temperature	10/26/2022 12:31	18.84	C
APCO-GSD-AP-MW-7	TURB	Turbidity	10/26/2022 12:31	0.32	NTU
APCO-GSD-AP-MW-7	COND	Conductivity	10/26/2022 12:36	208.62	uS/cm
APCO-GSD-AP-MW-7	DO	DO	10/26/2022 12:36	0.04	mg/L
APCO-GSD-AP-MW-7	DTW	Depth to Water Detail	10/26/2022 12:36	13.19	ft
APCO-GSD-AP-MW-7	ORP	Oxidation Reduction Potention	10/26/2022 12:36	113.89	mv
APCO-GSD-AP-MW-7	PH	pH	10/26/2022 12:36	6.49	SU
APCO-GSD-AP-MW-7	TEMP	Temperature	10/26/2022 12:36	18.83	C
APCO-GSD-AP-MW-7	TURB	Turbidity	10/26/2022 12:36	0.31	NTU
APCO-GSD-AP-MW-7	COND	Conductivity	10/26/2022 12:41	206.26	uS/cm
APCO-GSD-AP-MW-7	DO	DO	10/26/2022 12:41	0.04	mg/L
APCO-GSD-AP-MW-7	DTW	Depth to Water Detail	10/26/2022 12:41	13.19	ft
APCO-GSD-AP-MW-7	ORP	Oxidation Reduction Potention	10/26/2022 12:41	115.98	mv
APCO-GSD-AP-MW-7	PH	pH	10/26/2022 12:41	6.46	SU
APCO-GSD-AP-MW-7	TEMP	Temperature	10/26/2022 12:41	18.82	C
APCO-GSD-AP-MW-7	TURB	Turbidity	10/26/2022 12:41	0.15	NTU
APCO-GSD-AP-MW-7	COND	Conductivity	10/26/2022 12:46	204.38	uS/cm
APCO-GSD-AP-MW-7	DO	DO	10/26/2022 12:46	0.04	mg/L
APCO-GSD-AP-MW-7	DTW	Depth to Water Detail	10/26/2022 12:46	13.19	ft
APCO-GSD-AP-MW-7	ORP	Oxidation Reduction Potention	10/26/2022 12:46	118.84	mv
APCO-GSD-AP-MW-7	PH	pH	10/26/2022 12:46	6.44	SU
APCO-GSD-AP-MW-7	SULFIDE	Sulfide	10/26/2022 12:46	0	mg/L
APCO-GSD-AP-MW-7	TEMP	Temperature	10/26/2022 12:46	18.76	C
APCO-GSD-AP-MW-7	TURB	Turbidity	10/26/2022 12:46	0.13	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-8	COND	Conductivity	10/26/2022 13:20	237.39	uS/cm
APCO-GSD-AP-MW-8	DO	DO	10/26/2022 13:20	0.12	mg/L
APCO-GSD-AP-MW-8	DTW	Depth to Water Detail	10/26/2022 13:20	11.61	ft
APCO-GSD-AP-MW-8	ORP	Oxidation Reduction Potention	10/26/2022 13:20	44.46	mv
APCO-GSD-AP-MW-8	PH	pH	10/26/2022 13:20	6.39	SU
APCO-GSD-AP-MW-8	TEMP	Temperature	10/26/2022 13:20	18.42	C
APCO-GSD-AP-MW-8	TURB	Turbidity	10/26/2022 13:20	28.1	NTU
APCO-GSD-AP-MW-8	COND	Conductivity	10/26/2022 13:25	323.88	uS/cm
APCO-GSD-AP-MW-8	DO	DO	10/26/2022 13:25	0.1	mg/L
APCO-GSD-AP-MW-8	DTW	Depth to Water Detail	10/26/2022 13:25	11.61	ft
APCO-GSD-AP-MW-8	ORP	Oxidation Reduction Potention	10/26/2022 13:25	16.91	mv
APCO-GSD-AP-MW-8	PH	pH	10/26/2022 13:25	6.57	SU
APCO-GSD-AP-MW-8	TEMP	Temperature	10/26/2022 13:25	18.4	C
APCO-GSD-AP-MW-8	TURB	Turbidity	10/26/2022 13:25	11.8	NTU
APCO-GSD-AP-MW-8	COND	Conductivity	10/26/2022 13:30	345.79	uS/cm
APCO-GSD-AP-MW-8	DO	DO	10/26/2022 13:30	0.09	mg/L
APCO-GSD-AP-MW-8	DTW	Depth to Water Detail	10/26/2022 13:30	11.61	ft
APCO-GSD-AP-MW-8	ORP	Oxidation Reduction Potention	10/26/2022 13:30	-0.42	mv
APCO-GSD-AP-MW-8	PH	pH	10/26/2022 13:30	6.62	SU
APCO-GSD-AP-MW-8	TEMP	Temperature	10/26/2022 13:30	18.38	C
APCO-GSD-AP-MW-8	TURB	Turbidity	10/26/2022 13:30	7.9	NTU
APCO-GSD-AP-MW-8	COND	Conductivity	10/26/2022 13:35	359.32	uS/cm
APCO-GSD-AP-MW-8	DO	DO	10/26/2022 13:35	0.09	mg/L
APCO-GSD-AP-MW-8	DTW	Depth to Water Detail	10/26/2022 13:35	11.61	ft
APCO-GSD-AP-MW-8	ORP	Oxidation Reduction Potention	10/26/2022 13:35	-13.44	mv
APCO-GSD-AP-MW-8	PH	pH	10/26/2022 13:35	6.65	SU
APCO-GSD-AP-MW-8	TEMP	Temperature	10/26/2022 13:35	18.36	C
APCO-GSD-AP-MW-8	TURB	Turbidity	10/26/2022 13:35	5.9	NTU
APCO-GSD-AP-MW-8	COND	Conductivity	10/26/2022 13:40	368.3	uS/cm
APCO-GSD-AP-MW-8	DO	DO	10/26/2022 13:40	0.08	mg/L
APCO-GSD-AP-MW-8	DTW	Depth to Water Detail	10/26/2022 13:40	11.61	ft
APCO-GSD-AP-MW-8	ORP	Oxidation Reduction Potention	10/26/2022 13:40	-20.23	mv
APCO-GSD-AP-MW-8	PH	pH	10/26/2022 13:40	6.66	SU
APCO-GSD-AP-MW-8	TEMP	Temperature	10/26/2022 13:40	18.31	C
APCO-GSD-AP-MW-8	TURB	Turbidity	10/26/2022 13:40	4.07	NTU
APCO-GSD-AP-MW-8	COND	Conductivity	10/26/2022 13:45	374.4	uS/cm
APCO-GSD-AP-MW-8	DO	DO	10/26/2022 13:45	0.08	mg/L
APCO-GSD-AP-MW-8	DTW	Depth to Water Detail	10/26/2022 13:45	11.61	ft
APCO-GSD-AP-MW-8	ORP	Oxidation Reduction Potention	10/26/2022 13:45	-26.02	mv
APCO-GSD-AP-MW-8	PH	pH	10/26/2022 13:45	6.68	SU
APCO-GSD-AP-MW-8	SULFIDE	Sulfide	10/26/2022 13:45	0	mg/L
APCO-GSD-AP-MW-8	TEMP	Temperature	10/26/2022 13:45	18.33	C
APCO-GSD-AP-MW-8	TURB	Turbidity	10/26/2022 13:45	3.37	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-9	COND	Conductivity	10/26/2022 14:16	283.6	uS/cm
APCO-GSD-AP-MW-9	DO	DO	10/26/2022 14:16	0.09	mg/L
APCO-GSD-AP-MW-9	DTW	Depth to Water Detail	10/26/2022 14:16	12.74	ft
APCO-GSD-AP-MW-9	ORP	Oxidation Reduction Potention	10/26/2022 14:16	12.43	mv
APCO-GSD-AP-MW-9	PH	pH	10/26/2022 14:16	6.89	SU
APCO-GSD-AP-MW-9	TEMP	Temperature	10/26/2022 14:16	18.45	C
APCO-GSD-AP-MW-9	TURB	Turbidity	10/26/2022 14:16	1.41	NTU
APCO-GSD-AP-MW-9	COND	Conductivity	10/26/2022 14:21	296.6	uS/cm
APCO-GSD-AP-MW-9	DO	DO	10/26/2022 14:21	0.07	mg/L
APCO-GSD-AP-MW-9	DTW	Depth to Water Detail	10/26/2022 14:21	12.74	ft
APCO-GSD-AP-MW-9	ORP	Oxidation Reduction Potention	10/26/2022 14:21	15.08	mv
APCO-GSD-AP-MW-9	PH	pH	10/26/2022 14:21	6.93	SU
APCO-GSD-AP-MW-9	TEMP	Temperature	10/26/2022 14:21	18.47	C
APCO-GSD-AP-MW-9	TURB	Turbidity	10/26/2022 14:21	0.76	NTU
APCO-GSD-AP-MW-9	COND	Conductivity	10/26/2022 14:26	308.39	uS/cm
APCO-GSD-AP-MW-9	DO	DO	10/26/2022 14:26	0.07	mg/L
APCO-GSD-AP-MW-9	DTW	Depth to Water Detail	10/26/2022 14:26	12.74	ft
APCO-GSD-AP-MW-9	ORP	Oxidation Reduction Potention	10/26/2022 14:26	8.23	mv
APCO-GSD-AP-MW-9	PH	pH	10/26/2022 14:26	7.01	SU
APCO-GSD-AP-MW-9	TEMP	Temperature	10/26/2022 14:26	18.51	C
APCO-GSD-AP-MW-9	TURB	Turbidity	10/26/2022 14:26	0.88	NTU
APCO-GSD-AP-MW-9	COND	Conductivity	10/26/2022 14:31	312.67	uS/cm
APCO-GSD-AP-MW-9	DO	DO	10/26/2022 14:31	0.06	mg/L
APCO-GSD-AP-MW-9	DTW	Depth to Water Detail	10/26/2022 14:31	12.74	ft
APCO-GSD-AP-MW-9	ORP	Oxidation Reduction Potention	10/26/2022 14:31	-4.01	mv
APCO-GSD-AP-MW-9	PH	pH	10/26/2022 14:31	7.05	SU
APCO-GSD-AP-MW-9	TEMP	Temperature	10/26/2022 14:31	18.48	C
APCO-GSD-AP-MW-9	TURB	Turbidity	10/26/2022 14:31	0.77	NTU
APCO-GSD-AP-MW-9	COND	Conductivity	10/26/2022 14:36	314.94	uS/cm
APCO-GSD-AP-MW-9	DO	DO	10/26/2022 14:36	0.06	mg/L
APCO-GSD-AP-MW-9	DTW	Depth to Water Detail	10/26/2022 14:36	12.74	ft
APCO-GSD-AP-MW-9	ORP	Oxidation Reduction Potention	10/26/2022 14:36	-15.67	mv
APCO-GSD-AP-MW-9	PH	pH	10/26/2022 14:36	7.07	SU
APCO-GSD-AP-MW-9	SULFIDE	Sulfide	10/26/2022 14:36	0	mg/L
APCO-GSD-AP-MW-9	TEMP	Temperature	10/26/2022 14:36	18.45	C
APCO-GSD-AP-MW-9	TURB	Turbidity	10/26/2022 14:36	0.8	NTU



**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-10	COND	Conductivity	10/26/2022 15:04	330.42	uS/cm
APCO-GSD-AP-MW-10	DO	DO	10/26/2022 15:04	0.12	mg/L
APCO-GSD-AP-MW-10	DTW	Depth to Water Detail	10/26/2022 15:04	22.56	ft
APCO-GSD-AP-MW-10	ORP	Oxidation Reduction Potention	10/26/2022 15:04	-100.39	mv
APCO-GSD-AP-MW-10	PH	pH	10/26/2022 15:04	6.83	SU
APCO-GSD-AP-MW-10	TEMP	Temperature	10/26/2022 15:04	19.45	C
APCO-GSD-AP-MW-10	TURB	Turbidity	10/26/2022 15:04	7.83	NTU
APCO-GSD-AP-MW-10	COND	Conductivity	10/26/2022 15:09	330.2	uS/cm
APCO-GSD-AP-MW-10	DO	DO	10/26/2022 15:09	0.09	mg/L
APCO-GSD-AP-MW-10	DTW	Depth to Water Detail	10/26/2022 15:09	22.58	ft
APCO-GSD-AP-MW-10	ORP	Oxidation Reduction Potention	10/26/2022 15:09	-108.89	mv
APCO-GSD-AP-MW-10	PH	pH	10/26/2022 15:09	6.83	SU
APCO-GSD-AP-MW-10	TEMP	Temperature	10/26/2022 15:09	19.4	C
APCO-GSD-AP-MW-10	TURB	Turbidity	10/26/2022 15:09	6.6	NTU
APCO-GSD-AP-MW-10	COND	Conductivity	10/26/2022 15:14	330.16	uS/cm
APCO-GSD-AP-MW-10	DO	DO	10/26/2022 15:14	0.08	mg/L
APCO-GSD-AP-MW-10	DTW	Depth to Water Detail	10/26/2022 15:14	22.59	ft
APCO-GSD-AP-MW-10	ORP	Oxidation Reduction Potention	10/26/2022 15:14	-112.13	mv
APCO-GSD-AP-MW-10	PH	pH	10/26/2022 15:14	6.82	SU
APCO-GSD-AP-MW-10	TEMP	Temperature	10/26/2022 15:14	19.42	C
APCO-GSD-AP-MW-10	TURB	Turbidity	10/26/2022 15:14	4.39	NTU
APCO-GSD-AP-MW-10	COND	Conductivity	10/26/2022 15:19	330.76	uS/cm
APCO-GSD-AP-MW-10	DO	DO	10/26/2022 15:19	0.07	mg/L
APCO-GSD-AP-MW-10	DTW	Depth to Water Detail	10/26/2022 15:19	22.62	ft
APCO-GSD-AP-MW-10	ORP	Oxidation Reduction Potention	10/26/2022 15:19	-115.3	mv
APCO-GSD-AP-MW-10	PH	pH	10/26/2022 15:19	6.84	SU
APCO-GSD-AP-MW-10	SULFIDE	Sulfide	10/26/2022 15:19	0	mg/L
APCO-GSD-AP-MW-10	TEMP	Temperature	10/26/2022 15:19	19.46	C
APCO-GSD-AP-MW-10	TURB	Turbidity	10/26/2022 15:19	3.59	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-PZ-1	COND	Conductivity	10/26/2022 8:31	117.71	uS/cm
APCO-GSD-AP-PZ-1	DO	DO	10/26/2022 8:31	1.45	mg/L
APCO-GSD-AP-PZ-1	DTW	Depth to Water Detail	10/26/2022 8:31	13.22	ft
APCO-GSD-AP-PZ-1	ORP	Oxidation Reduction Potention	10/26/2022 8:31	145.44	mv
APCO-GSD-AP-PZ-1	PH	pH	10/26/2022 8:31	6.37	SU
APCO-GSD-AP-PZ-1	TEMP	Temperature	10/26/2022 8:31	19.34	C
APCO-GSD-AP-PZ-1	TURB	Turbidity	10/26/2022 8:31	0.43	NTU
APCO-GSD-AP-PZ-1	COND	Conductivity	10/26/2022 8:36	140.91	uS/cm
APCO-GSD-AP-PZ-1	DO	DO	10/26/2022 8:36	1.52	mg/L
APCO-GSD-AP-PZ-1	DTW	Depth to Water Detail	10/26/2022 8:36	13.22	ft
APCO-GSD-AP-PZ-1	ORP	Oxidation Reduction Potention	10/26/2022 8:36	139.55	mv
APCO-GSD-AP-PZ-1	PH	pH	10/26/2022 8:36	6.49	SU
APCO-GSD-AP-PZ-1	TEMP	Temperature	10/26/2022 8:36	19.27	C
APCO-GSD-AP-PZ-1	TURB	Turbidity	10/26/2022 8:36	0.28	NTU
APCO-GSD-AP-PZ-1	COND	Conductivity	10/26/2022 8:41	155.61	uS/cm
APCO-GSD-AP-PZ-1	DO	DO	10/26/2022 8:41	1.39	mg/L
APCO-GSD-AP-PZ-1	DTW	Depth to Water Detail	10/26/2022 8:41	13.22	ft
APCO-GSD-AP-PZ-1	ORP	Oxidation Reduction Potention	10/26/2022 8:41	131.34	mv
APCO-GSD-AP-PZ-1	PH	pH	10/26/2022 8:41	6.6	SU
APCO-GSD-AP-PZ-1	TEMP	Temperature	10/26/2022 8:41	19.37	C
APCO-GSD-AP-PZ-1	TURB	Turbidity	10/26/2022 8:41	0.25	NTU
APCO-GSD-AP-PZ-1	COND	Conductivity	10/26/2022 8:46	161.71	uS/cm
APCO-GSD-AP-PZ-1	DO	DO	10/26/2022 8:46	1.34	mg/L
APCO-GSD-AP-PZ-1	DTW	Depth to Water Detail	10/26/2022 8:46	13.22	ft
APCO-GSD-AP-PZ-1	ORP	Oxidation Reduction Potention	10/26/2022 8:46	127.1	mv
APCO-GSD-AP-PZ-1	PH	pH	10/26/2022 8:46	6.65	SU
APCO-GSD-AP-PZ-1	TEMP	Temperature	10/26/2022 8:46	19.37	C
APCO-GSD-AP-PZ-1	TURB	Turbidity	10/26/2022 8:46	0.1	NTU
APCO-GSD-AP-PZ-1	COND	Conductivity	10/26/2022 8:51	162.64	uS/cm
APCO-GSD-AP-PZ-1	DO	DO	10/26/2022 8:51	1.36	mg/L
APCO-GSD-AP-PZ-1	DTW	Depth to Water Detail	10/26/2022 8:51	13.22	ft
APCO-GSD-AP-PZ-1	ORP	Oxidation Reduction Potention	10/26/2022 8:51	125.1	mv
APCO-GSD-AP-PZ-1	PH	pH	10/26/2022 8:51	6.66	SU
APCO-GSD-AP-PZ-1	TEMP	Temperature	10/26/2022 8:51	19.33	C
APCO-GSD-AP-PZ-1	TURB	Turbidity	10/26/2022 8:51	0.22	NTU
APCO-GSD-AP-PZ-1	COND	Conductivity	10/26/2022 8:56	162.02	uS/cm
APCO-GSD-AP-PZ-1	DO	DO	10/26/2022 8:56	1.38	mg/L
APCO-GSD-AP-PZ-1	DTW	Depth to Water Detail	10/26/2022 8:56	13.22	ft
APCO-GSD-AP-PZ-1	ORP	Oxidation Reduction Potention	10/26/2022 8:56	124.79	mv
APCO-GSD-AP-PZ-1	PH	pH	10/26/2022 8:56	6.66	SU
APCO-GSD-AP-PZ-1	SULFIDE	Sulfide	10/26/2022 8:56	0	mg/L
APCO-GSD-AP-PZ-1	TEMP	Temperature	10/26/2022 8:56	19.28	C
APCO-GSD-AP-PZ-1	TURB	Turbidity	10/26/2022 8:56	0.02	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-PZ-2	COND	Conductivity	10/26/2022 10:40	217.06	uS/cm
APCO-GSD-AP-PZ-2	DO	DO	10/26/2022 10:40	0.22	mg/L
APCO-GSD-AP-PZ-2	DTW	Depth to Water Detail	10/26/2022 10:40	10.71	ft
APCO-GSD-AP-PZ-2	ORP	Oxidation Reduction Potention	10/26/2022 10:40	34.05	mv
APCO-GSD-AP-PZ-2	PH	pH	10/26/2022 10:40	6.21	SU
APCO-GSD-AP-PZ-2	TEMP	Temperature	10/26/2022 10:40	20.46	C
APCO-GSD-AP-PZ-2	TURB	Turbidity	10/26/2022 10:40	1.97	NTU
APCO-GSD-AP-PZ-2	COND	Conductivity	10/26/2022 10:45	213.06	uS/cm
APCO-GSD-AP-PZ-2	DO	DO	10/26/2022 10:45	0.19	mg/L
APCO-GSD-AP-PZ-2	DTW	Depth to Water Detail	10/26/2022 10:45	10.9	ft
APCO-GSD-AP-PZ-2	ORP	Oxidation Reduction Potention	10/26/2022 10:45	33.02	mv
APCO-GSD-AP-PZ-2	PH	pH	10/26/2022 10:45	6.16	SU
APCO-GSD-AP-PZ-2	TEMP	Temperature	10/26/2022 10:45	20.42	C
APCO-GSD-AP-PZ-2	TURB	Turbidity	10/26/2022 10:45	1.17	NTU
APCO-GSD-AP-PZ-2	COND	Conductivity	10/26/2022 10:50	204.2	uS/cm
APCO-GSD-AP-PZ-2	DO	DO	10/26/2022 10:50	0.21	mg/L
APCO-GSD-AP-PZ-2	DTW	Depth to Water Detail	10/26/2022 10:50	10.96	ft
APCO-GSD-AP-PZ-2	ORP	Oxidation Reduction Potention	10/26/2022 10:50	35.87	mv
APCO-GSD-AP-PZ-2	PH	pH	10/26/2022 10:50	6.16	SU
APCO-GSD-AP-PZ-2	TEMP	Temperature	10/26/2022 10:50	20.45	C
APCO-GSD-AP-PZ-2	TURB	Turbidity	10/26/2022 10:50	0.55	NTU
APCO-GSD-AP-PZ-2	COND	Conductivity	10/26/2022 10:55	204.73	uS/cm
APCO-GSD-AP-PZ-2	DO	DO	10/26/2022 10:55	0.2	mg/L
APCO-GSD-AP-PZ-2	DTW	Depth to Water Detail	10/26/2022 10:55	11.06	ft
APCO-GSD-AP-PZ-2	ORP	Oxidation Reduction Potention	10/26/2022 10:55	40.66	mv
APCO-GSD-AP-PZ-2	PH	pH	10/26/2022 10:55	6.16	SU
APCO-GSD-AP-PZ-2	SULFIDE	Sulfide	10/26/2022 10:55	0	mg/L
APCO-GSD-AP-PZ-2	TEMP	Temperature	10/26/2022 10:55	20.42	C
APCO-GSD-AP-PZ-2	TURB	Turbidity	10/26/2022 10:55	0.37	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-17	COND	Conductivity	10/25/2022 9:23	279.85	uS/cm
APCO-GSD-AP-MW-17	DO	DO	10/25/2022 9:23	0.96	mg/L
APCO-GSD-AP-MW-17	DTW	Depth to Water Detail	10/25/2022 9:23	22.06	ft
APCO-GSD-AP-MW-17	ORP	Oxidation Reduction Potention	10/25/2022 9:23	192.29	mv
APCO-GSD-AP-MW-17	PH	pH	10/25/2022 9:23	7.96	SU
APCO-GSD-AP-MW-17	TEMP	Temperature	10/25/2022 9:23	19.58	C
APCO-GSD-AP-MW-17	TURB	Turbidity	10/25/2022 9:23	2.1	NTU
APCO-GSD-AP-MW-17	COND	Conductivity	10/25/2022 9:28	279.46	uS/cm
APCO-GSD-AP-MW-17	DO	DO	10/25/2022 9:28	0.78	mg/L
APCO-GSD-AP-MW-17	DTW	Depth to Water Detail	10/25/2022 9:28	22.31	ft
APCO-GSD-AP-MW-17	ORP	Oxidation Reduction Potention	10/25/2022 9:28	187.24	mv
APCO-GSD-AP-MW-17	PH	pH	10/25/2022 9:28	7.96	SU
APCO-GSD-AP-MW-17	TEMP	Temperature	10/25/2022 9:28	19.7	C
APCO-GSD-AP-MW-17	TURB	Turbidity	10/25/2022 9:28	1.71	NTU
APCO-GSD-AP-MW-17	COND	Conductivity	10/25/2022 9:33	279.01	uS/cm
APCO-GSD-AP-MW-17	DO	DO	10/25/2022 9:33	0.72	mg/L
APCO-GSD-AP-MW-17	DTW	Depth to Water Detail	10/25/2022 9:33	22.7	ft
APCO-GSD-AP-MW-17	ORP	Oxidation Reduction Potention	10/25/2022 9:33	182.45	mv
APCO-GSD-AP-MW-17	PH	pH	10/25/2022 9:33	7.96	SU
APCO-GSD-AP-MW-17	TEMP	Temperature	10/25/2022 9:33	19.83	C
APCO-GSD-AP-MW-17	TURB	Turbidity	10/25/2022 9:33	1.64	NTU
APCO-GSD-AP-MW-17	COND	Conductivity	10/25/2022 9:38	278.33	uS/cm
APCO-GSD-AP-MW-17	DO	DO	10/25/2022 9:38	0.71	mg/L
APCO-GSD-AP-MW-17	DTW	Depth to Water Detail	10/25/2022 9:38	23.09	ft
APCO-GSD-AP-MW-17	ORP	Oxidation Reduction Potention	10/25/2022 9:38	176.28	mv
APCO-GSD-AP-MW-17	PH	pH	10/25/2022 9:38	7.96	SU
APCO-GSD-AP-MW-17	TEMP	Temperature	10/25/2022 9:38	19.93	C
APCO-GSD-AP-MW-17	TURB	Turbidity	10/25/2022 9:38	1.34	NTU
APCO-GSD-AP-MW-17	COND	Conductivity	10/25/2022 9:43	278.18	uS/cm
APCO-GSD-AP-MW-17	DO	DO	10/25/2022 9:43	0.67	mg/L
APCO-GSD-AP-MW-17	DTW	Depth to Water Detail	10/25/2022 9:43	23.31	ft
APCO-GSD-AP-MW-17	ORP	Oxidation Reduction Potention	10/25/2022 9:43	168.88	mv
APCO-GSD-AP-MW-17	PH	pH	10/25/2022 9:43	7.96	SU
APCO-GSD-AP-MW-17	TEMP	Temperature	10/25/2022 9:43	19.98	C
APCO-GSD-AP-MW-17	TURB	Turbidity	10/25/2022 9:43	1.59	NTU
APCO-GSD-AP-MW-17	COND	Conductivity	10/25/2022 9:48	276.55	uS/cm
APCO-GSD-AP-MW-17	DO	DO	10/25/2022 9:48	0.65	mg/L
APCO-GSD-AP-MW-17	DTW	Depth to Water Detail	10/25/2022 9:48	23.52	ft
APCO-GSD-AP-MW-17	ORP	Oxidation Reduction Potention	10/25/2022 9:48	163.58	mv
APCO-GSD-AP-MW-17	PH	pH	10/25/2022 9:48	7.96	SU
APCO-GSD-AP-MW-17	TEMP	Temperature	10/25/2022 9:48	20.01	C
APCO-GSD-AP-MW-17	TURB	Turbidity	10/25/2022 9:48	1.25	NTU
APCO-GSD-AP-MW-17	COND	Conductivity	10/25/2022 9:53	276.2	uS/cm
APCO-GSD-AP-MW-17	DO	DO	10/25/2022 9:53	0.63	mg/L
APCO-GSD-AP-MW-17	DTW	Depth to Water Detail	10/25/2022 9:53	23.73	ft
APCO-GSD-AP-MW-17	ORP	Oxidation Reduction Potention	10/25/2022 9:53	156.19	mv
APCO-GSD-AP-MW-17	PH	pH	10/25/2022 9:53	7.97	SU
APCO-GSD-AP-MW-17	TEMP	Temperature	10/25/2022 9:53	20.09	C
APCO-GSD-AP-MW-17	TURB	Turbidity	10/25/2022 9:53	0.86	NTU
APCO-GSD-AP-MW-17	COND	Conductivity	10/25/2022 9:58	275.58	uS/cm

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-17	DO	DO	10/25/2022 9:58	0.62	mg/L
APCO-GSD-AP-MW-17	DTW	Depth to Water Detail	10/25/2022 9:58	23.91	ft
APCO-GSD-AP-MW-17	ORP	Oxidation Reduction Potention	10/25/2022 9:58	149.94	mv
APCO-GSD-AP-MW-17	PH	pH	10/25/2022 9:58	7.97	SU
APCO-GSD-AP-MW-17	TEMP	Temperature	10/25/2022 9:58	20.16	C
APCO-GSD-AP-MW-17	TURB	Turbidity	10/25/2022 9:58	0.84	NTU
APCO-GSD-AP-MW-17	COND	Conductivity	10/25/2022 10:03	274.97	uS/cm
APCO-GSD-AP-MW-17	DO	DO	10/25/2022 10:03	0.62	mg/L
APCO-GSD-AP-MW-17	DTW	Depth to Water Detail	10/25/2022 10:03	23.08	ft
APCO-GSD-AP-MW-17	ORP	Oxidation Reduction Potention	10/25/2022 10:03	141.58	mv
APCO-GSD-AP-MW-17	PH	pH	10/25/2022 10:03	7.97	SU
APCO-GSD-AP-MW-17	TEMP	Temperature	10/25/2022 10:03	20.32	C
APCO-GSD-AP-MW-17	TURB	Turbidity	10/25/2022 10:03	0.96	NTU
APCO-GSD-AP-MW-17	COND	Conductivity	10/25/2022 10:08	274.82	uS/cm
APCO-GSD-AP-MW-17	DO	DO	10/25/2022 10:08	0.63	mg/L
APCO-GSD-AP-MW-17	DTW	Depth to Water Detail	10/25/2022 10:08	23.11	ft
APCO-GSD-AP-MW-17	ORP	Oxidation Reduction Potention	10/25/2022 10:08	131.72	mv
APCO-GSD-AP-MW-17	PH	pH	10/25/2022 10:08	7.97	SU
APCO-GSD-AP-MW-17	SULFIDE	Sulfide	10/25/2022 10:08	0	mg/L
APCO-GSD-AP-MW-17	TEMP	Temperature	10/25/2022 10:08	20.89	C
APCO-GSD-AP-MW-17	TURB	Turbidity	10/25/2022 10:08	0.84	NTU

**Plant Gadsden Ash Pond  
Field Parameter Summary**

WELL ID	PARAMETER	DESCRIPTION	TIME OF READING	VALUE	UNIT
APCO-GSD-AP-MW-16	COND	Conductivity	10/25/2022 11:20	151.29	uS/cm
APCO-GSD-AP-MW-16	DO	DO	10/25/2022 11:20	4.16	mg/L
APCO-GSD-AP-MW-16	DTW	Depth to Water Detail	10/25/2022 11:20	26.91	ft
APCO-GSD-AP-MW-16	ORP	Oxidation Reduction Potention	10/25/2022 11:20	271.73	mv
APCO-GSD-AP-MW-16	PH	pH	10/25/2022 11:20	4.2	SU
APCO-GSD-AP-MW-16	TEMP	Temperature	10/25/2022 11:20	19.85	C
APCO-GSD-AP-MW-16	TURB	Turbidity	10/25/2022 11:20	99.4	NTU
APCO-GSD-AP-MW-16	COND	Conductivity	10/25/2022 11:25	141.73	uS/cm
APCO-GSD-AP-MW-16	DO	DO	10/25/2022 11:25	4.2	mg/L
APCO-GSD-AP-MW-16	DTW	Depth to Water Detail	10/25/2022 11:25	26.91	ft
APCO-GSD-AP-MW-16	ORP	Oxidation Reduction Potention	10/25/2022 11:25	273.39	mv
APCO-GSD-AP-MW-16	PH	pH	10/25/2022 11:25	4.34	SU
APCO-GSD-AP-MW-16	TEMP	Temperature	10/25/2022 11:25	19.82	C
APCO-GSD-AP-MW-16	TURB	Turbidity	10/25/2022 11:25	56.2	NTU
APCO-GSD-AP-MW-16	COND	Conductivity	10/25/2022 11:30	132.71	uS/cm
APCO-GSD-AP-MW-16	DO	DO	10/25/2022 11:30	4.24	mg/L
APCO-GSD-AP-MW-16	DTW	Depth to Water Detail	10/25/2022 11:30	26.91	ft
APCO-GSD-AP-MW-16	ORP	Oxidation Reduction Potention	10/25/2022 11:30	272.69	mv
APCO-GSD-AP-MW-16	PH	pH	10/25/2022 11:30	4.46	SU
APCO-GSD-AP-MW-16	TEMP	Temperature	10/25/2022 11:30	19.73	C
APCO-GSD-AP-MW-16	TURB	Turbidity	10/25/2022 11:30	25.9	NTU
APCO-GSD-AP-MW-16	COND	Conductivity	10/25/2022 11:35	132.04	uS/cm
APCO-GSD-AP-MW-16	DO	DO	10/25/2022 11:35	4.27	mg/L
APCO-GSD-AP-MW-16	DTW	Depth to Water Detail	10/25/2022 11:35	26.91	ft
APCO-GSD-AP-MW-16	ORP	Oxidation Reduction Potention	10/25/2022 11:35	272.63	mv
APCO-GSD-AP-MW-16	PH	pH	10/25/2022 11:35	4.51	SU
APCO-GSD-AP-MW-16	TEMP	Temperature	10/25/2022 11:35	19.7	C
APCO-GSD-AP-MW-16	TURB	Turbidity	10/25/2022 11:35	8.75	NTU
APCO-GSD-AP-MW-16	COND	Conductivity	10/25/2022 11:40	124.17	uS/cm
APCO-GSD-AP-MW-16	DO	DO	10/25/2022 11:40	4.3	mg/L
APCO-GSD-AP-MW-16	DTW	Depth to Water Detail	10/25/2022 11:40	26.91	ft
APCO-GSD-AP-MW-16	ORP	Oxidation Reduction Potention	10/25/2022 11:40	271.59	mv
APCO-GSD-AP-MW-16	PH	pH	10/25/2022 11:40	4.59	SU
APCO-GSD-AP-MW-16	TEMP	Temperature	10/25/2022 11:40	19.72	C
APCO-GSD-AP-MW-16	TURB	Turbidity	10/25/2022 11:40	4.2	NTU
APCO-GSD-AP-MW-16	COND	Conductivity	10/25/2022 11:45	122.37	uS/cm
APCO-GSD-AP-MW-16	DO	DO	10/25/2022 11:45	4.31	mg/L
APCO-GSD-AP-MW-16	DTW	Depth to Water Detail	10/25/2022 11:45	26.91	ft
APCO-GSD-AP-MW-16	ORP	Oxidation Reduction Potention	10/25/2022 11:45	271.31	mv
APCO-GSD-AP-MW-16	PH	pH	10/25/2022 11:45	4.63	SU
APCO-GSD-AP-MW-16	TEMP	Temperature	10/25/2022 11:45	19.75	C
APCO-GSD-AP-MW-16	TURB	Turbidity	10/25/2022 11:45	3.02	NTU
APCO-GSD-AP-MW-16	COND	Conductivity	10/25/2022 11:50	124.19	uS/cm
APCO-GSD-AP-MW-16	DO	DO	10/25/2022 11:50	4.26	mg/L
APCO-GSD-AP-MW-16	DTW	Depth to Water Detail	10/25/2022 11:50	26.91	ft
APCO-GSD-AP-MW-16	ORP	Oxidation Reduction Potention	10/25/2022 11:50	271.3	mv
APCO-GSD-AP-MW-16	PH	pH	10/25/2022 11:50	4.64	SU
APCO-GSD-AP-MW-16	SULFIDE	Sulfide	10/25/2022 11:50	0	mg/L
APCO-GSD-AP-MW-16	TEMP	Temperature	10/25/2022 11:50	19.81	C
APCO-GSD-AP-MW-16	TURB	Turbidity	10/25/2022 11:50	1.43	NTU

Alabama Power  
General Test Laboratory  
744 County Road 87, GSC #8  
Calera, AL 35040  
205-664-6001

# *Analytical Report*



**Sample Group :** WMWGADAP\_1389

**Project/Site :** Gadsden Ash Pond  
Gadsden, AL 35903

**For :** Southern Company Services  
3535 Colonnade Parkway  
Birmingham, AL 35243

**Attention :** Dustin Brooks & Greg Dyer

**Released By :** Brooke Caton  
tbwill@southernco.com  
(205) 664-6101

November 17, 2022

Dear Dustin Brooks,

Enclosed are the analytical results for sample(s) received by the laboratory on October 27, 2022. All results reported herein conform to the laboratory's most current Quality Assurance Manual. Results marked with an asterisk conform to the most current applicable TNI/NELAC requirements. Exceptions will be noted in the body of the report.

Laboratory certification ID: E571114  
Issued By: State of Florida, Department of Health  
Expiration: June 30, 2023

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

Sincerely,

Quality Control: **Brooke  
Caton**

Digitally signed by Brooke  
Caton  
Date: 2022.11.17  
14:23:18 -06'00'

Supervision: **T Durant  
Maske**

Digitally signed by T Durant Maske  
DN: cn=T Durant Maske, gn=T Durant Maske, o=US  
United States, lu=US United States,  
e=tmaske@alpower.com  
Reason: I am the author of this document  
Location:  
Date: 2022-11-18 09:12:08.00



### REPORT OF LABORATORY ANALYSIS

This Certificate states the physical and/or chemical characteristics of the sample as submitted.  
This document shall not be reproduced, except in full, without written consent from  
Alabama Power's General Test Laboratory.





# Case Narrative

Total Metals ICP

Gadsden Ash Pond

WMWGADAP\_1389

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
BC19650	739981	WMWGADAP_1389
BC19651	739981	WMWGADAP_1389
BC19652	739981	WMWGADAP_1389
BC19653	739981	WMWGADAP_1389
BC19654	739981	WMWGADAP_1389
BC19655	739981	WMWGADAP_1389
BC19656	739981	WMWGADAP_1389
BC19657	739981	WMWGADAP_1389
BC19658	739981	WMWGADAP_1389
BC19659	739981	WMWGADAP_1389
BC19660	739982	WMWGADAP_1389
BC19661	739982	WMWGADAP_1389
BC19662	739982	WMWGADAP_1389
BC19663	739982	WMWGADAP_1389
BC19664	739982	WMWGADAP_1389
BC19665	739982	WMWGADAP_1389
BC19666	739982	WMWGADAP_1389
BC19667	739982	WMWGADAP_1389
BC19668	739982	WMWGADAP_1389
BC19669	739982	WMWGADAP_1389
BC19670	739983	WMWGADAP_1389
BC19671	739983	WMWGADAP_1389
BC19672	739983	WMWGADAP_1389
BC19673	739983	WMWGADAP_1389
BC19674	739983	WMWGADAP_1389
BC19675	739983	WMWGADAP_1389
BC19676	739983	WMWGADAP_1389
BC19677	739983	WMWGADAP_1389
BC19678	739983	WMWGADAP_1389
BC19679	739983	WMWGADAP_1389
BC19680	739984	WMWGADAP_1389

BC19681	739984	WMWGADAP_1389
BC19682	739984	WMWGADAP_1389
BC19683	739984	WMWGADAP_1389

4. All of the above samples were analyzed by EPA 200.7 and prepared by EPA 1638.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

#### General Quality Control Procedures:

- Prior to sample analysis, an initial calibration verification (ICV) was analyzed, and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed, and all criteria were met.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were analyzed, and all criteria were met.
- A preparation method blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.
- All laboratory control sample criteria were met.
- The method blank associated with each digestion batch passed all acceptance criteria for all requested analytes.
- All calibration curve requirements were within acceptance criteria.
- All sample internal standard criteria were met.
- The spectral interference check associated with EPA 200.7 was analyzed, and all acceptance criteria were met.
- It is noted that the QC summary page typically provides the QC results from the original batch analytical sequence. If dilutions were subsequently performed to bring sample concentrations within the calibration range, any additional QC data from the dilution analyses may need to be obtained from the laboratory. Any qualifications applied to original analyses or dilution re-analyses are based upon QC data available at the time of review.

#### Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for accuracy were met, except for the following:
  - BC19679 Sodium MS/MSD spike levels were <30% of the sample concentrations.
  - BC19683 Calcium MS/MSD spike levels were <30% of the sample concentrations.
- A matrix spike and matrix spike duplicate were digested and analyzed with each ICP batch. All acceptance criteria for precision were met.

7. The following samples were diluted due to the analyzed sample concentration being greater than the high

standard of the calibration curve:

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
BC19650	Calcium, Iron	10.15
BC19652	Sodium	10.15
BC19653	Sodium	10.15
BC19654	Sodium	101.5
BC19655	Sodium	10.15
BC19656	Calcium	10.15
BC19657	Calcium	10.15
BC19661	Calcium	10.15
BC19671	Calcium, Iron	10.15
BC19672	Calcium	10.15
BC19673	Iron	10.15
BC19677	Calcium	10.15
BC19679	Sodium	10.15
BC19680	Iron	101.5
BC19681	Calcium	10.15
BC19682	Calcium, Iron	10.15
BC19683	Calcium	10.15

8. The raw data results are shown with dilution factors included.

Dissolved Metals ICP

Gadsden Ash Pond

WMWGADAP\_1389

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
BC19650	739926	WMWGADAP_1389
BC19652	739926	WMWGADAP_1389
BC19653	739926	WMWGADAP_1389
BC19654	739926	WMWGADAP_1389
BC19655	739926	WMWGADAP_1389
BC19656	739926	WMWGADAP_1389
BC19657	739926	WMWGADAP_1389
BC19658	739926	WMWGADAP_1389
BC19659	739926	WMWGADAP_1389
BC19660	739926	WMWGADAP_1389
BC19661	739927	WMWGADAP_1389
BC19663	739927	WMWGADAP_1389
BC19664	739927	WMWGADAP_1389
BC19665	739927	WMWGADAP_1389
BC19666	739927	WMWGADAP_1389
BC19667	739927	WMWGADAP_1389
BC19668	739927	WMWGADAP_1389
BC19669	739927	WMWGADAP_1389
BC19670	739927	WMWGADAP_1389
BC19671	739927	WMWGADAP_1389
BC19672	739928	WMWGADAP_1389
BC19673	739928	WMWGADAP_1389
BC19674	739928	WMWGADAP_1389
BC19675	739928	WMWGADAP_1389
BC19677	739928	WMWGADAP_1389
BC19679	739928	WMWGADAP_1389
BC19680	739928	WMWGADAP_1389
BC19681	739928	WMWGADAP_1389
BC19682	739928	WMWGADAP_1389
BC19683	739928	WMWGADAP_1389

4. All of the above samples were analyzed and prepared by EPA 200.7 for dissolved analysis.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

### General Quality Control Procedures:

- Prior to sample analysis, an initial calibration verification (ICV) was analyzed, and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed, and all criteria were met.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were analyzed, and all criteria were met.
- Due to no filtered method blank (MB) or laboratory control sample (LCS) submitted with the sample set, an unfiltered MB and LCS were analyzed with the samples in each batch.
- All laboratory control sample criteria were met.
- The method blank associated with each batch passed all acceptance criteria for all requested analytes.
- All calibration curve requirements were within acceptance criteria.
- All sample internal standard criteria were met.
- The spectral interference check associated with EPA 200.7 was analyzed and all acceptance criteria were met.
- It is noted that the QC summary page typically provides the QC results from the original batch analytical sequence. If dilutions were subsequently performed to bring sample concentrations within the calibration range, any additional QC data from the dilution analyses may need to be obtained from the laboratory. Any qualifications applied to original analyses or dilution re-analyses are based upon QC data available at the time of review.

### Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were analyzed with each ICP batch. All acceptance criteria for accuracy were met, except for the following:
    - BC19671 Calcium & Iron MS/MSD spike levels were <30% of the sample concentrations.
    - BC19683 Calcium MS/MSD spike levels were <30% of the sample concentrations.
  - A matrix spike and matrix spike duplicate were analyzed with each ICP batch. All acceptance criteria for precision were met.
7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

## Case Narrative

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
BC19650	Calcium, Iron	10.15
BC19652	Sodium	10.15
BC19653	Sodium	10.15
BC19654	Sodium	101.5
BC19655	Sodium	10.15
BC19661	Calcium	10.15
BC19671	Calcium, Iron	10.15
BC19672	Calcium	10.15
BC19673	Iron	10.15
BC19677	Calcium	10.15
BC19679	Sodium	10.15
BC19680	Iron	101.5
BC19681	Calcium	10.15
BC19682	Calcium, Iron	10.15
BC19683	Calcium	10.15

8. The raw data results are shown with dilution factors included.

Total Metals ICPMS

Gadsden Ash Pond

WMWGADAP\_1389

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
BC19650	740615	WMWGADAP_1389
BC19651	740615	WMWGADAP_1389
BC19652	740615	WMWGADAP_1389
BC19653	740615	WMWGADAP_1389
BC19654	740615	WMWGADAP_1389
BC19655	740615	WMWGADAP_1389
BC19656	740615	WMWGADAP_1389
BC19657	740615	WMWGADAP_1389
BC19658	740615	WMWGADAP_1389
BC19659	740615	WMWGADAP_1389
BC19660	740616	WMWGADAP_1389
BC19661	740616	WMWGADAP_1389
BC19662	740616	WMWGADAP_1389
BC19663	740616	WMWGADAP_1389
BC19664	740616	WMWGADAP_1389
BC19665	740616	WMWGADAP_1389
BC19666	740616	WMWGADAP_1389
BC19667	740616	WMWGADAP_1389
BC19668	740616	WMWGADAP_1389
BC19669	740616	WMWGADAP_1389
BC19670	740617	WMWGADAP_1389
BC19671	740617	WMWGADAP_1389
BC19672	740617	WMWGADAP_1389
BC19673	740617	WMWGADAP_1389
BC19674	740617	WMWGADAP_1389
BC19675	740617	WMWGADAP_1389
BC19676	740617	WMWGADAP_1389
BC19677	740617	WMWGADAP_1389
BC19678	740617	WMWGADAP_1389
BC19679	740617	WMWGADAP_1389
BC19680	740618	WMWGADAP_1389

BC19681	740618	WMWGADAP_1389
BC19682	740618	WMWGADAP_1389
BC19683	740618	WMWGADAP_1389

4. All of the above samples were analyzed by EPA 200.8 and prepared by EPA 1638.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

#### General Quality Control Procedures:

- All tune and calibration met criteria for all requested analytes.
- Prior to sample analysis, an initial calibration verification (ICV) was analyzed, and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.
- A preparation method blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.
- All laboratory control sample criteria were met.
- The method blank associated with each digestion batch passed all acceptance criteria for all requested analytes.
- The interference check samples associated with EPA 200.8 were analyzed and passed for all requested analytes.
- All sample internal standard criteria were met.
- It is noted that the QC summary page typically provides the QC results from the original batch analytical sequence. If dilutions were subsequently performed to bring sample concentrations within the calibration range, any additional QC data from the dilution analyses may need to be obtained from the laboratory. Any qualifications applied to original analyses or dilution re-analyses are based upon QC data available at the time of review.

#### Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for accuracy were met, except for the following:
    - BC19683 Manganese MS/MSD spike levels were <30% of the sample concentrations.
  - A matrix spike and matrix spike duplicate were digested and analyzed with each ICPMS batch. All acceptance criteria for precision were met.
7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:



## Case Narrative

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
BC19650	Manganese	10.15
BC19661	Manganese	5.075
BC19664	Aluminum	5.075
BC19671	Manganese	5.075
BC19672	Manganese	5.075
BC19674	Aluminum	5.075
BC19675	Aluminum	5.075
BC19677	Manganese	92.365
BC19680	Manganese	5.075
BC19681	Manganese	92.365
BC19682	Manganese	92.365
BC19683	Manganese	5.075

8. The raw data results are shown with dilution factors included.

Dissolved Metals ICPMS

Gadsden Ash Pond

WMWGADAP\_1389

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
BC19650	740619	WMWGADAP_1389
BC19652	740619	WMWGADAP_1389
BC19653	740619	WMWGADAP_1389
BC19654	740619	WMWGADAP_1389
BC19655	740619	WMWGADAP_1389
BC19656	740619	WMWGADAP_1389
BC19657	740619	WMWGADAP_1389
BC19658	740619	WMWGADAP_1389
BC19659	740619	WMWGADAP_1389
BC19660	740619	WMWGADAP_1389
BC19661	740620	WMWGADAP_1389
BC19663	740620	WMWGADAP_1389
BC19664	740620	WMWGADAP_1389
BC19665	740620	WMWGADAP_1389
BC19666	740620	WMWGADAP_1389
BC19667	740620	WMWGADAP_1389
BC19668	740620	WMWGADAP_1389
BC19669	740620	WMWGADAP_1389
BC19670	740620	WMWGADAP_1389
BC19671	740620	WMWGADAP_1389
BC19672	740621	WMWGADAP_1389
BC19673	740621	WMWGADAP_1389
BC19674	740621	WMWGADAP_1389
BC19675	740621	WMWGADAP_1389
BC19677	740621	WMWGADAP_1389
BC19679	740621	WMWGADAP_1389
BC19680	740621	WMWGADAP_1389
BC19681	740621	WMWGADAP_1389
BC19682	740621	WMWGADAP_1389
BC19683	740621	WMWGADAP_1389

4. All of the above samples were analyzed and prepared by EPA 200.8 for dissolved analysis.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

## General Quality Control Procedures:

- All tune and calibration met criteria for all requested analytes.
- Prior to sample analysis, an initial calibration verification (ICV) was analyzed, and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the limit of quantitation for all requested analytes.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analytes.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analytes.
- Due to no filtered method blank (MB) or laboratory control sample (LCS) submitted with the sample set, an unfiltered MB and LCS were analyzed with the samples in each batch.
- All laboratory control sample criteria were met.
- The method blank associated with each preparation batch passed all acceptance criteria for all requested analytes.
- The interference check samples associated with EPA 200.8 were analyzed and passed for all requested analytes.
- All sample internal standard criteria were met.
- It is noted that the QC summary page typically provides the QC results from the original batch analytical sequence. If dilutions were subsequently performed to bring sample concentrations within the calibration range, any additional QC data from the dilution analyses may need to be obtained from the laboratory. Any qualifications applied to original analyses or dilution re-analyses are based upon QC data available at the time of review.

## Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were analyzed with each ICPMS batch. All acceptance criteria for accuracy were met, except for the following:
    - BC19683 Manganese MS/MSD spike levels were <30% of the sample concentrations.
  - A matrix spike and matrix spike duplicate were analyzed with each ICPMS batch. All acceptance criteria for precision were met.
7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
BC19650	Manganese	10.15
BC19661	Manganese	5.075

## Case Narrative

BC19664	Aluminum	5.075
BC19671	Manganese	5.075
BC19672	Manganese	5.075
BC19674	Aluminum	5.075
BC19675	Aluminum	5.075
BC19677	Manganese	92.365
BC19680	Manganese	5.075
BC19681	Manganese	92.365
BC19682	Manganese	92.365
BC19683	Manganese	5.075

8. The raw data results are shown with dilution factors included.

Mercury

Gadsden Ash Pond

WMWGADAP\_1389

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
BC19650	740797	WMWGADAP_1389
BC19651	740797	WMWGADAP_1389
BC19652	740797	WMWGADAP_1389
BC19653	740797	WMWGADAP_1389
BC19654	740797	WMWGADAP_1389
BC19655	740797	WMWGADAP_1389
BC19656	740797	WMWGADAP_1389
BC19657	740797	WMWGADAP_1389
BC19658	740797	WMWGADAP_1389
BC19659	740797	WMWGADAP_1389
BC19660	740798	WMWGADAP_1389
BC19661	740798	WMWGADAP_1389
BC19662	740798	WMWGADAP_1389
BC19663	740798	WMWGADAP_1389
BC19664	740798	WMWGADAP_1389
BC19665	740798	WMWGADAP_1389
BC19666	740798	WMWGADAP_1389
BC19667	740798	WMWGADAP_1389
BC19668	740798	WMWGADAP_1389
BC19669	740798	WMWGADAP_1389
BC19670	740799	WMWGADAP_1389
BC19671	740799	WMWGADAP_1389
BC19672	740799	WMWGADAP_1389
BC19673	740799	WMWGADAP_1389
BC19674	740799	WMWGADAP_1389
BC19675	740799	WMWGADAP_1389
BC19676	740799	WMWGADAP_1389
BC19677	740799	WMWGADAP_1389
BC19678	740799	WMWGADAP_1389
BC19679	740799	WMWGADAP_1389
BC19680	740800	WMWGADAP_1389

BC19681	740800	WMWGADAP_1389
BC19682	740800	WMWGADAP_1389
BC19683	740800	WMWGADAP_1389

4. All of the above samples were analyzed and prepared by EPA 245.1.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

### General Quality Control Procedures:

- Prior to sample analysis, an initial calibration verification (ICV) was analyzed and all criteria were met.
- Following the ICV, an initial calibration blank (ICB) was analyzed and was below the method detection limit for the requested analyte.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analyte.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analyte.
- A preparation method blank and laboratory control sample were digested and analyzed with the samples in each digestion batch.
- All laboratory control sample criteria were met.
- The method blank associated with each digestion batch was below the limit of quantitation for the requested analyte.
- All calibration met criteria for the requested analyte.
- All response signals were satisfactory.

### Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were digested and analyzed with each analytical batch. All acceptance criteria for accuracy were met.
  - A matrix spike and matrix spike duplicate were digested and analyzed with each analytical batch. All acceptance criteria for precision were met.
7. All samples were analyzed without a dilution.

Total Dissolved Solids

Gadsden Ash Pond

WMWGADAP\_1389

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
BC19650	739809	WMWGADAP_1389
BC19651	739809	WMWGADAP_1389
BC19652	739809	WMWGADAP_1389
BC19653	739809	WMWGADAP_1389
BC19654	739809	WMWGADAP_1389
BC19655	739809	WMWGADAP_1389
BC19656	739809	WMWGADAP_1389
BC19657	739809	WMWGADAP_1389
BC19658	739810	WMWGADAP_1389
BC19659	739810	WMWGADAP_1389
BC19660	739810	WMWGADAP_1389
BC19661	739810	WMWGADAP_1389
BC19662	739810	WMWGADAP_1389
BC19663	739810	WMWGADAP_1389
BC19664	739810	WMWGADAP_1389
BC19665	739810	WMWGADAP_1389
BC19666	739810	WMWGADAP_1389
BC19667	739810	WMWGADAP_1389
BC19668	740053	WMWGADAP_1389
BC19669	740053	WMWGADAP_1389
BC19670	740053	WMWGADAP_1389
BC19671	740053	WMWGADAP_1389
BC19672	740053	WMWGADAP_1389
BC19673	740053	WMWGADAP_1389
BC19674	740053	WMWGADAP_1389
BC19675	740053	WMWGADAP_1389
BC19676	740053	WMWGADAP_1389
BC19677	740053	WMWGADAP_1389
BC19678	740054	WMWGADAP_1389
BC19679	740054	WMWGADAP_1389
BC19680	740054	WMWGADAP_1389

BC19681	740054	WMWGADAP_1389
BC19682	740054	WMWGADAP_1389
BC19683	740054	WMWGADAP_1389

4. All of the above samples were prepared and analyzed by Standard Method 2540C.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

### General Quality Control Procedures:

- A Method Blank was analyzed with each batch. All criteria were met.
- All final weights of samples, standards, and blanks agreed within 0.5mg of the previous weight.
- A sample duplicate was analyzed with each batch, and RPD was  $\leq 10\%$ , except for the following:
  - BC09616 Precision is invalid, sample and/or sample duplicate less than 5x the RL.
- A laboratory control sample was analyzed with each batch. All criteria were met.
- Samples were between 2.5mg and 200mg residue.
- All samples with residue  $< 2.5\text{mg}$  had the maximum volume of 150mL filtered. Affected samples are as follows:
  - BC19651
  - BC19662
  - BC19676
  - BC19678



Alkalinity

Gadsden Ash Pond

WMWGADAP\_1389

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
BC19650	741068, 741069	WMWGADAP_1389
BC19652	741068, 741069	WMWGADAP_1389
BC19653	741068, 741069	WMWGADAP_1389
BC19654	741068, 741069	WMWGADAP_1389
BC19655	741068, 741069	WMWGADAP_1389
BC19656	741068, 741069	WMWGADAP_1389
BC19657	741068, 741069	WMWGADAP_1389
BC19658	741068, 741069	WMWGADAP_1389
BC19659	741068, 741069	WMWGADAP_1389
BC19660	741068, 741069	WMWGADAP_1389
BC19661	741068, 741069	WMWGADAP_1389
BC19663	741068, 741069	WMWGADAP_1389
BC19664	741068, 741069	WMWGADAP_1389
BC19665	741068, 741069	WMWGADAP_1389
BC19666	741068, 741069	WMWGADAP_1389
BC19667	741068, 741069	WMWGADAP_1389
BC19668	741068, 741069	WMWGADAP_1389
BC19669	741068, 741069	WMWGADAP_1389
BC19670	741068, 741069	WMWGADAP_1389
BC19671	741068, 741069	WMWGADAP_1389
BC19672	741149, 741150	WMWGADAP_1389
BC19673	741149, 741150	WMWGADAP_1389
BC19674	741149, 741150	WMWGADAP_1389
BC19675	741149, 741150	WMWGADAP_1389
BC19677	741149, 741150	WMWGADAP_1389
BC19679	741149, 741150	WMWGADAP_1389
BC19680	741149, 741150	WMWGADAP_1389
BC19681	741149, 741150	WMWGADAP_1389
BC19682	741149, 741150	WMWGADAP_1389
BC19683	741149, 741150	WMWGADAP_1389

4. All of the above samples were prepared and analyzed by Standard Method 2320B, except for the following:
  - BC19674: Alkalinity could not be performed, pH below titration end point of 4.5 SU.
  - BC19675: Alkalinity could not be performed, pH below titration end point of 4.5 SU.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

#### General Quality Control Procedures:

- An initial pH check was analyzed with each batch. The acceptance criteria were met.
  - A final pH check was analyzed with each batch. The acceptance criteria were met.
  - An alkalinity laboratory control sample was analyzed with each batch. Range criteria of within 10% of true value was met.
  - An alkalinity sample duplicate was analyzed with each batch. Precision criteria less than 10 RPD was met.
7. The following samples had pH>10 and/or TDS>500mg/L. Therefore, the calculations for carbonate and bicarbonate are estimates:
    - BC19653
    - BC19654
    - BC19661
    - BC19682

Anions

Gadsden Ash Pond

WMWGADAP\_1389

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
BC19650	740058, 740062, 740381	WMWGADAP_1389
BC19651	740058, 740062, 740381	WMWGADAP_1389
BC19652	740058, 740062, 740381	WMWGADAP_1389
BC19653	740058, 740062, 740381	WMWGADAP_1389
BC19654	740058, 740062, 740381	WMWGADAP_1389
BC19655	740058, 740062, 740381	WMWGADAP_1389
BC19656	740058, 740062, 740381	WMWGADAP_1389
BC19657	740058, 740062, 740381	WMWGADAP_1389
BC19658	740058, 740062, 740381	WMWGADAP_1389
BC19659	740058, 740062, 740381	WMWGADAP_1389
BC19660	740059, 740063, 740382	WMWGADAP_1389
BC19661	740059, 740063, 740382	WMWGADAP_1389
BC19662	740059, 740063, 740382	WMWGADAP_1389
BC19663	740059, 740063, 740382	WMWGADAP_1389
BC19664	740059, 740063, 740382	WMWGADAP_1389
BC19665	740059, 740063, 740382	WMWGADAP_1389
BC19666	740059, 740063, 740382	WMWGADAP_1389
BC19667	740059, 740063, 740382	WMWGADAP_1389
BC19668	740059, 740063, 740382	WMWGADAP_1389
BC19669	740059, 740063, 740382	WMWGADAP_1389
BC19670	740060, 740064, 740383	WMWGADAP_1389
BC19671	740060, 740064, 740383	WMWGADAP_1389
BC19672	740060, 740064, 740383	WMWGADAP_1389
BC19673	740060, 740064, 740383	WMWGADAP_1389
BC19674	740060, 740064, 740383	WMWGADAP_1389
BC19675	740060, 740064, 740383	WMWGADAP_1389
BC19676	740060, 740064, 740383	WMWGADAP_1389
BC19677	740060, 740064, 740383	WMWGADAP_1389
BC19678	740060, 740064, 740383	WMWGADAP_1389
BC19679	740060, 740064, 740383	WMWGADAP_1389
BC19680	740061, 740065, 740384	WMWGADAP_1389

BC19681	740061, 740065, 740384	WMWGADAP_1389
BC19682	740061, 740065, 740384	WMWGADAP_1389
BC19683	740061, 740065, 740384	WMWGADAP_1389

4. All of the above samples were analyzed and prepared by SM4500 Cl E, SM4500 F G, and SM4500 SO4 E.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

General Quality Control Procedures:

- All calibration met criteria for the requested analyte.
- Prior to sample analysis, an initial calibration verification (ICV), and all criteria were met.
- Prior to sample analysis, an initial calibration blank (ICB) was analyzed and was below half the limit of quantitation for the requested analyte.
- All continued calibration verification (CCV) were within the acceptance criteria for the requested analyte.
- All continued calibration blanks (CCB) were below the limit of quantitation for the requested analyte.
- It is noted that the QC summary page typically provides the QC results from the original batch analytical sequence. If dilutions were subsequently performed to bring sample concentrations within the calibration range, any additional QC data from the dilution analyses may need to be obtained from the laboratory. Any qualifications applied to original analyses or dilution re-analyses are based upon QC data available at the time of review.

Matrix Specific Quality Control Procedures:

Similarity of matrix and therefore relevance of matrix specific QC results should not be automatically inferred for any sample other than the sample selected for QC.

- A matrix spike and matrix spike duplicate were analyzed with each batch. All acceptance criteria for accuracy were met.
  - A matrix spike and matrix spike duplicate were analyzed with each batch. All acceptance criteria for precision were met.
7. The following samples were diluted due to the analyzed sample concentration being greater than the high standard of the calibration curve:

<u>Sample ID</u>	<u>Analyte</u>	<u>Dilution Factor</u>
BC19650	Sulfate	6
BC19653	Chloride, Fluoride	4, 2
BC19654	Chloride, Fluoride	10, 2
BC19656	Sulfate	3
BC19657	Sulfate	3
BC19661	Sulfate	25

BC19674	Sulfate	3
BC19675	Sulfate	3
BC19677	Sulfate	10
BC19680	Sulfate	3
BC19681	Sulfate	10
BC19682	Sulfate	20
BC19683	Sulfate	20

8. The raw data results are shown with dilution factors included.
9. Fluoride may have potential matrix interference for the following:
  - BC19664
  - BC19674
  - BC19675

Nitrate-Nitrite

Gadsden Ash Pond

WMWGADAP\_1389

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
BC19650	740077	WMWGADAP_1389
BC19651	740077	WMWGADAP_1389
BC19652	740077	WMWGADAP_1389
BC19653	740077	WMWGADAP_1389
BC19654	740077	WMWGADAP_1389
BC19655	740077	WMWGADAP_1389
BC19656	740077	WMWGADAP_1389
BC19657	740077	WMWGADAP_1389
BC19658	740077	WMWGADAP_1389
BC19659	740077	WMWGADAP_1389
BC19660	740078	WMWGADAP_1389
BC19661	740078	WMWGADAP_1389
BC19662	740078	WMWGADAP_1389
BC19663	740078	WMWGADAP_1389
BC19664	740078	WMWGADAP_1389
BC19665	740078	WMWGADAP_1389
BC19666	740078	WMWGADAP_1389
BC19667	740078	WMWGADAP_1389
BC19668	740078	WMWGADAP_1389
BC19669	740078	WMWGADAP_1389
BC19670	740079	WMWGADAP_1389
BC19671	740079	WMWGADAP_1389
BC19672	740079	WMWGADAP_1389
BC19673	740079	WMWGADAP_1389
BC19674	740079	WMWGADAP_1389
BC19675	740079	WMWGADAP_1389
BC19676	740079	WMWGADAP_1389
BC19677	740079	WMWGADAP_1389
BC19678	740079	WMWGADAP_1389
BC19679	740079	WMWGADAP_1389
BC19680	740080	WMWGADAP_1389

BC19681	740080	WMWGADAP_1389
BC19682	740080	WMWGADAP_1389
BC19683	740080	WMWGADAP_1389

4. All of the above samples were prepared and analyzed for NO<sub>x</sub> by EPA 353.2.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

### General Quality Control Procedures:

- Water baseline report was run and met criteria.
- All calibration met criteria for the requested analytes.
- Prior to sample analysis, an initial calibration verification (ICV) was analyzed and met all criteria.
- All continued calibration verification (CCV) were within the acceptance criteria.
- Prior to sample analysis, an initial calibration blank (ICB) was analyzed and were below limit of detection.
- All continued calibration blanks (CCB) were below the limit of detection.

### EPA 353.2 Specific QC:

- Prior to sample analysis, Cadmium coil reduction efficiency check met criteria.
  - Matrix Specific QC:
    - A sample duplicate was run and criteria for precision was met.
    - A matrix spike was run and criteria for accuracy was met.
7. All samples were analyzed without a dilution factor.
  8. The raw data results are shown with dilution factors included.

Total Organic Carbon

Gadsden Ash Pond

WMWGADAP\_1389

1. This report consists of all MWs and corresponding Lab IDs listed on the Chain of Custody.
2. Refer to comments on Chain of Custody for information regarding sample receipt.
3. All standards and solutions meet NELAP traceability requirements and were used within their recommended shelf life.

<u>Sample ID</u>	<u>Batch ID</u>	<u>Project ID</u>
BC19650	739918	WMWGADAP_1389
BC19651	739918	WMWGADAP_1389
BC19652	739918	WMWGADAP_1389
BC19653	739918	WMWGADAP_1389
BC19654	739918	WMWGADAP_1389
BC19655	739918	WMWGADAP_1389
BC19656	739918	WMWGADAP_1389
BC19657	739918	WMWGADAP_1389
BC19658	739918	WMWGADAP_1389
BC19659	739918	WMWGADAP_1389
BC19660	739919	WMWGADAP_1389
BC19661	739919	WMWGADAP_1389
BC19662	739919	WMWGADAP_1389
BC19663	739919	WMWGADAP_1389
BC19664	739919	WMWGADAP_1389
BC19665	739919	WMWGADAP_1389
BC19666	739919	WMWGADAP_1389
BC19667	739919	WMWGADAP_1389
BC19668	739919	WMWGADAP_1389
BC19669	739919	WMWGADAP_1389
BC19670	739920	WMWGADAP_1389
BC19671	739920	WMWGADAP_1389
BC19672	739920	WMWGADAP_1389
BC19673	739920	WMWGADAP_1389
BC19674	739920	WMWGADAP_1389
BC19675	739920	WMWGADAP_1389
BC19676	739920	WMWGADAP_1389
BC19677	739920	WMWGADAP_1389
BC19678	739920	WMWGADAP_1389
BC19679	739920	WMWGADAP_1389
BC19680	739921	WMWGADAP_1389



BC19681	739921	WMWGADAP_1389
BC19682	739921	WMWGADAP_1389
BC19683	739921	WMWGADAP_1389

4. All of the above samples were prepared and analyzed by Standard Method 5310B.
5. All samples were prepared and analyzed within the established hold times.
6. All in house quality control procedures were followed, as described below.

#### General Quality Control Procedures:

- All calibration criteria were met.
- Prior to sample analysis, an initial calibration verification (ICV) was analyzed and met all criteria.
- Prior to sample analysis, an initial calibration blank (ICB) was analyzed and was <1/2RL.
- All continued calibration verifications (CCVs) were within the acceptance range.
- All continued calibration blanks (CCBs) were <1/2RL.

#### Matrix Specific Quality Control Procedures:

- A matrix spike and matrix spike duplicate were analyzed with each batch. All acceptance criteria for accuracy were met.
  - A matrix spike and matrix spike duplicate were analyzed with each batch. All acceptance criteria for precision were met.
7. All samples were analyzed without a dilution factor.
  8. The raw data results are shown with dilution factors included.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-2

**Location Code:** WMWGADAP  
**Collected:** 10/25/22 09:15  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19650

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 11:14		1.015	0.500	mg/L	0.030000	0.1015	
* Calcium, Total	10/28/22 11:50	11/4/22 17:09		10.15	86.9	mg/L	0.70035	4.06	
* Iron, Total	10/28/22 11:50	11/4/22 17:09		10.15	11.6	mg/L	0.08120	0.406	
* Lithium, Total	10/28/22 11:50	11/3/22 11:14		1.015	0.0304	mg/L	0.007105	0.01999956	
* Magnesium, Total	10/28/22 11:50	11/3/22 11:14		1.015	10.0	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 11:14		1	11.6	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 11:14		1.015	5.40	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/3/22 11:14		1.015	5.11	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 13:35		1.015	0.506	mg/L	0.030000	0.1015	
* Calcium, Dissolved	10/28/22 08:43	11/3/22 10:39		10.15	108	mg/L	0.70035	4.06	
* Iron, Dissolved	10/28/22 08:43	11/3/22 10:39		10.15	13.1	mg/L	0.08120	0.406	
* Lithium, Dissolved	10/28/22 08:43	10/31/22 13:35		1.015	0.0274	mg/L	0.007105	0.01999956	
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 12:07		1.015	10.2	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 13:35		1	11.1	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 13:35		1.015	5.21	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	10/31/22 13:35		1.015	5.05	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 13:49		1.015	0.000538	mg/L	0.000508	0.001015	J
* Aluminum, Total	10/28/22 11:50	10/28/22 13:49		1.015	0.0563	mg/L	0.006090	0.01015	
* Arsenic, Total	10/28/22 11:50	10/28/22 13:49		1.015	0.555	mg/L	0.000081	0.000203	
* Barium, Total	10/28/22 11:50	10/28/22 13:49		1.015	0.0888	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 13:49		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 13:49		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/28/22 11:50	10/28/22 13:49		1.015	0.000220	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/28/22 11:50	10/28/22 13:49		1.015	0.0302	mg/L	0.000068	0.000203	
* Lead, Total	10/28/22 11:50	10/28/22 13:49		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 20:32		10.15	7.98	mg/L	0.001522	0.01015	
* Molybdenum, Total	10/28/22 11:50	10/28/22 13:49		1.015	0.0202	mg/L	0.000102	0.000203	
* Potassium, Total	10/28/22 11:50	10/28/22 13:49		1.015	7.68	mg/L	0.169505	0.5075	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-2

**Location Code:** WMWGADAP  
**Collected:** 10/25/22 09:15  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19650

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 13:49		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 13:49		1.015	0.000361	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 10:50		1.015	0.00113	mg/L	0.000508	0.001015	
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 10:50		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 10:50		1.015	0.507	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 10:50		1.015	0.0854	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 10:50		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 10:50		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 10:50		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 10:50		1.015	0.0294	mg/L	0.000068	0.000203	
* Lead, Dissolved	10/28/22 08:43	10/28/22 10:50		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 19:34		10.15	8.31	mg/L	0.001522	0.01015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 10:50		1.015	0.0201	mg/L	0.000102	0.000203	
* Potassium, Dissolved	10/28/22 08:43	10/28/22 10:50		1.015	7.64	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 10:50		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 10:50		1.015	0.000377	mg/L	0.000068	0.000203	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/3/22 22:00		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 11:20	10/28/22 11:20		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/8/22 08:50	11/8/22 08:55		1	157	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/27/22 12:00	10/31/22 10:08		1	337	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 08:55		1	157	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 08:55		1	Not Detected	mg CaCO3/L		0.5	
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/27/22 16:46	10/27/22 16:46		1	1.08	mg/L	1.00	2	J

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-2

**Location Code:** WMWGADAP  
**Collected:** 10/25/22 09:15  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19650

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/27/22 14:41	10/27/22 14:41		1	2.45	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 10:54	10/28/22 10:54		1	0.271	mg/L	0.06	0.125	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 09:15	11/1/22 09:15		6	111	mg/L	3.6	12	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/25/22 09:12	10/25/22 09:12			594.44	uS/cm			FA
pH	10/25/22 09:12	10/25/22 09:12			6.64	SU			FA
Temperature	10/25/22 09:12	10/25/22 09:12			20.34	C			FA
Turbidity	10/25/22 09:12	10/25/22 09:12			6.21	NTU			FA
Sulfide	10/25/22 09:12	10/25/22 09:12			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/25/22 09:15  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-2

**Laboratory ID Number:** BC19650

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19660	Aluminum, Dissolved	mg/L	0.0000549	0.010	0.100	0.141	0.140	0.103	0.0850 to 0.115	99.5	70.0 to 130	0.712	20.0
BC19659	Aluminum, Total	mg/L	0.000961	0.010	0.100	0.111	0.111	0.103	0.0850 to 0.115	99.6	70.0 to 130	0.00	20.0
BC19660	Antimony, Dissolved	mg/L	0.0000571	0.00100	0.100	0.0858	0.0867	0.0871	0.0850 to 0.115	85.0	70.0 to 130	1.04	20.0
BC19659	Antimony, Total	mg/L	0.000028	0.00100	0.100	0.0953	0.0932	0.0918	0.0850 to 0.115	95.3	70.0 to 130	2.23	20.0
BC19660	Arsenic, Dissolved	mg/L	0.0000398	0.000176	0.100	0.0959	0.0990	0.102	0.0850 to 0.115	95.6	70.0 to 130	3.18	20.0
BC19659	Arsenic, Total	mg/L	0.0000953	0.000176	0.100	0.0965	0.0982	0.0989	0.0850 to 0.115	96.5	70.0 to 130	1.75	20.0
BC19660	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.130	0.129	0.0919	0.0850 to 0.115	93.6	70.0 to 130	0.772	20.0
BC19659	Barium, Total	mg/L	-0.0000058	0.00100	0.100	0.148	0.140	0.0970	0.0850 to 0.115	101	70.0 to 130	5.56	20.0
BC19660	Beryllium, Dissolved	mg/L	0.0000222	0.000880	0.100	0.0941	0.0936	0.0966	0.0850 to 0.115	94.1	70.0 to 130	0.533	20.0
BC19659	Beryllium, Total	mg/L	0.0000213	0.000880	0.100	0.0938	0.0947	0.0944	0.0850 to 0.115	93.8	70.0 to 130	0.955	20.0
BC19660	Boron, Dissolved	mg/L	-0.00146	0.0650	1.00	1.08	1.07	0.990	0.850 to 1.15	100	70.0 to 130	0.930	20.0
BC19659	Boron, Total	mg/L	0.00226	0.0650	1.00	0.989	1.01	0.999	0.850 to 1.15	98.9	70.0 to 130	2.10	20.0
BC19660	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0976	0.0979	0.100	0.0850 to 0.115	97.6	70.0 to 130	0.307	20.0
BC19659	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.100	0.100	0.101	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BC19660	Calcium, Dissolved	mg/L	0.00894	0.152	5.00	14.2	14.8	5.08	4.25 to 5.75	93.2	70.0 to 130	4.14	20.0
BC19659	Calcium, Total	mg/L	-0.00258	0.152	5.00	8.26	8.43	5.30	4.25 to 5.75	103	70.0 to 130	2.04	20.0
BC19659	Chloride	mg/L	0.123	1.00	10.0	14.5	14.5	9.95	9.00 to 11.0	105	80.0 to 120	0.00	20.0
BC19660	Chromium, Dissolved	mg/L	0.0000111	0.000440	0.100	0.0975	0.0980	0.102	0.0850 to 0.115	97.5	70.0 to 130	0.512	20.0
BC19659	Chromium, Total	mg/L	0.000129	0.000440	0.100	0.100	0.0986	0.101	0.0850 to 0.115	99.7	70.0 to 130	1.41	20.0
BC19660	Cobalt, Dissolved	mg/L	0.0000002	0.000147	0.100	0.0999	0.101	0.105	0.0850 to 0.115	99.4	70.0 to 130	1.10	20.0
BC19659	Cobalt, Total	mg/L	-0.0000001	0.000147	0.100	0.102	0.101	0.104	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BC19659	Fluoride	mg/L	0.0256	0.125	2.50	2.39	2.51	2.60	2.25 to 2.75	95.6	80.0 to 120	4.90	20.0
BC19660	Iron, Dissolved	mg/L	-0.000185	0.0176	0.2	0.205	0.207	0.202	0.170 to 0.230	102	70.0 to 130	0.971	20.0
BC19659	Iron, Total	mg/L	0.00114	0.0176	0.2	0.218	0.224	0.211	0.170 to 0.230	104	70.0 to 130	2.71	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/25/22 09:15  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-2

**Laboratory ID Number:** BC19650

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19660	Lead, Dissolved	mg/L	0.0000074	0.000147	0.100	0.0998	0.0998	0.102	0.0850 to 0.115	99.8	70.0 to 130	0.00	20.0
BC19659	Lead, Total	mg/L	0.0000062	0.000147	0.100	0.101	0.101	0.0998	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BC19660	Lithium, Dissolved	mg/L	-0.000107	0.0154	0.200	0.213	0.196	0.197	0.170 to 0.230	106	70.0 to 130	8.31	20.0
BC19659	Lithium, Total	mg/L	4.040E-05	0.0154	0.200	0.207	0.211	0.204	0.170 to 0.230	104	70.0 to 130	1.91	20.0
BC19660	Magnesium, Dissolved	mg/L	-0.0132	0.0462	5.00	9.36	9.33	5.18	4.25 to 5.75	101	70.0 to 130	0.321	20.0
BC19659	Magnesium, Total	mg/L	0.000300	0.0462	5.00	6.14	6.26	5.10	4.25 to 5.75	101	70.0 to 130	1.94	20.0
BC19660	Manganese, Dissolved	mg/L	0.0000131	0.00033	0.100	0.120	0.119	0.105	0.0850 to 0.115	100	70.0 to 130	0.837	20.0
BC19659	Manganese, Total	mg/L	0.000128	0.00033	0.100	0.112	0.110	0.104	0.0850 to 0.115	103	70.0 to 130	1.80	20.0
BC19659	Mercury, Total by CVAA	mg/L	1.000E-05	0.000500	0.004	0.00404	0.00422	0.00407	0.00340 to 0.00460	101	70.0 to 130	4.36	20.0
BC19660	Molybdenum, Dissolved	mg/L	0.0000133	0.0002	0.100	0.0942	0.0940	0.0989	0.0850 to 0.115	94.2	70.0 to 130	0.213	20.0
BC19659	Molybdenum, Total	mg/L	-0.000003	0.0002	0.100	0.0990	0.0966	0.0988	0.0850 to 0.115	99.0	70.0 to 130	2.45	20.0
BC19660	Potassium, Dissolved	mg/L	-0.00218	0.367	10.0	10.9	10.8	10.4	8.50 to 11.5	99.2	70.0 to 130	0.922	20.0
BC19659	Potassium, Total	mg/L	0.0461	0.367	10.0	10.6	10.6	10.2	8.50 to 11.5	101	70.0 to 130	0.00	20.0
BC19660	Selenium, Dissolved	mg/L	0.0000887	0.00100	0.100	0.0977	0.0983	0.105	0.0850 to 0.115	96.2	70.0 to 130	0.612	20.0
BC19659	Selenium, Total	mg/L	0.0000408	0.00100	0.100	0.0993	0.101	0.104	0.0850 to 0.115	99.3	70.0 to 130	1.70	20.0
BC19660	Silicon, Dissolved	mg/L	-0.000043	0.0440	1.00	4.66	4.63	1.01	0.850 to 1.15	104	70.0 to 130	0.646	20.0
BC19659	Silicon, Total	mg/L	0.00120	0.0440	1.00	8.27	8.39	1.03	0.850 to 1.15	95.0	70.0 to 130	1.44	20.0
BC19660	Sodium, Dissolved	mg/L	0.000963	0.0660	5.00	10.8	10.1	5.00	4.25 to 5.75	108	70.0 to 130	6.70	20.0
BC19659	Sodium, Total	mg/L	0.00985	0.0660	5.00	8.66	8.83	4.99	4.25 to 5.75	101	70.0 to 130	1.94	20.0
BC19659	Sulfate	mg/L	-0.0301	2.0	20.0	20.7	21.0	20.0	18.0 to 22.0	98.5	80.0 to 120	1.44	20.0
BC19660	Thallium, Dissolved	mg/L	0.000011	0.000147	0.100	0.101	0.0991	0.101	0.0850 to 0.115	101	70.0 to 130	1.90	20.0
BC19659	Thallium, Total	mg/L	0.0000143	0.000147	0.100	0.102	0.100	0.0993	0.0850 to 0.115	102	70.0 to 130	1.98	20.0
BC19659	Total Organic Carbon	mg/L	0.266	1.00	10.0	10.3	11.4	24.2		103	80.0 to 120	10.1	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/25/22 09:15  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-2

**Laboratory ID Number:** BC19650

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19671	Alkalinity to pH 4.5	mg CaCO3/L					178	50.7	45.0 to 55.0			0.563	10.0
BC19659	Nitrogen, Nitrate/Nitrite	mg/L as N	0.07	0.200	2.00	3.02	1.13	2.06	1.80 to 2.20	94.5	90.0 to 110	0.00	15.0
BC19657	Solids, Dissolved	mg/L	0.0000	25.0			204	49.0	40.0 to 60.0			0.985	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond Field Blank-1

**Location Code:** WMWGADAPFB  
**Collected:** 10/25/22 09:40  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19651

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Total	10/28/22 11:50	11/3/22 11:18		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Total	10/28/22 11:50	11/3/22 11:18		1.015	Not Detected	mg/L	0.070035	0.406	U	
* Iron, Total	10/28/22 11:50	11/3/22 11:18		1.015	Not Detected	mg/L	0.008120	0.0406	U	
* Lithium, Total	10/28/22 11:50	11/3/22 11:18		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	10/28/22 11:50	11/3/22 11:18		1.015	Not Detected	mg/L	0.021315	0.406	U	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 11:18		1	Not Detected	mg/L				
Silicon, Total	10/28/22 11:50	11/3/22 11:18		1.015	Not Detected	mg/L	0.02030	0.25375	U	
* Sodium, Total	10/28/22 11:50	11/3/22 11:18		1.015	Not Detected	mg/L	0.03045	0.406	U	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>					
* Antimony, Total	10/28/22 11:50	10/28/22 13:53		1.015	0.000570	mg/L	0.000508	0.001015	J	
* Aluminum, Total	10/28/22 11:50	10/28/22 13:53		1.015	0.00994	mg/L	0.006090	0.01015	J	
* Arsenic, Total	10/28/22 11:50	10/28/22 13:53		1.015	0.000145	mg/L	0.000081	0.000203	J	
* Barium, Total	10/28/22 11:50	10/28/22 13:53		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Beryllium, Total	10/28/22 11:50	10/28/22 13:53		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	10/28/22 11:50	10/28/22 13:53		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	10/28/22 11:50	10/28/22 13:53		1.015	0.000381	mg/L	0.000203	0.001015	J	
* Cobalt, Total	10/28/22 11:50	10/28/22 13:53		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Lead, Total	10/28/22 11:50	10/28/22 13:53		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	10/28/22 11:50	10/28/22 13:53		1.015	0.000374	mg/L	0.000152	0.001015	J	
* Molybdenum, Total	10/28/22 11:50	10/28/22 13:53		1.015	Not Detected	mg/L	0.000102	0.000203	U	
* Potassium, Total	10/28/22 11:50	10/28/22 13:53		1.015	Not Detected	mg/L	0.169505	0.5075	U	
* Selenium, Total	10/28/22 11:50	10/28/22 13:53		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Thallium, Total	10/28/22 11:50	10/28/22 13:53		1.015	Not Detected	mg/L	0.000068	0.000203	U	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>								
* Mercury, Total by CVAA	11/3/22 17:59	11/3/22 22:04		1	Not Detected	mg/L	0.0003	0.0005	U	
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>								
* Nitrogen, Nitrate/Nitrite	10/28/22 11:21	10/28/22 11:21		1	Not Detected	mg/L as N	0.20	0.3	U	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>								
* Solids, Dissolved	10/27/22 12:00	10/31/22 10:08		1	Not Detected	mg/L		25	U	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:**



# Certificate Of Analysis

**Description:** Gadsden Ash Pond Field Blank-1

**Location Code:** WMWGADAPFB  
**Collected:** 10/25/22 09:40  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19651

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/27/22 17:03	10/27/22 17:03		1	Not Detected	mg/L	1.00	2	U
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/27/22 14:43	10/27/22 14:43		1	Not Detected	mg/L	0.50	1	U
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 10:55	10/28/22 10:55		1	Not Detected	mg/L	0.06	0.125	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 09:02	11/1/22 09:02		1	Not Detected	mg/L	0.6	2	U

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MDL's and RL's are adjusted for sample dilution, as applicable

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**Comments:**

# Batch QC Summary

**Customer Account:** WMWGADAPFB  
**Sample Date:** 10/25/22 09:40  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond Field Blank-1

**Laboratory ID Number:** BC19651

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19659	Aluminum, Total	mg/L	0.000961	0.010	0.100	0.111	0.111	0.103	0.0850 to 0.115	99.6	70.0 to 130	0.00	20.0
BC19659	Antimony, Total	mg/L	0.000028	0.00100	0.100	0.0953	0.0932	0.0918	0.0850 to 0.115	95.3	70.0 to 130	2.23	20.0
BC19659	Arsenic, Total	mg/L	0.0000953	0.000176	0.100	0.0965	0.0982	0.0989	0.0850 to 0.115	96.5	70.0 to 130	1.75	20.0
BC19659	Barium, Total	mg/L	-0.0000058	0.00100	0.100	0.148	0.140	0.0970	0.0850 to 0.115	101	70.0 to 130	5.56	20.0
BC19659	Beryllium, Total	mg/L	0.0000213	0.000880	0.100	0.0938	0.0947	0.0944	0.0850 to 0.115	93.8	70.0 to 130	0.955	20.0
BC19659	Boron, Total	mg/L	0.00226	0.0650	1.00	0.989	1.01	0.999	0.850 to 1.15	98.9	70.0 to 130	2.10	20.0
BC19659	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.100	0.100	0.101	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BC19659	Calcium, Total	mg/L	-0.00258	0.152	5.00	8.26	8.43	5.30	4.25 to 5.75	103	70.0 to 130	2.04	20.0
BC19659	Chloride	mg/L	0.123	1.00	10.0	14.5	14.5	9.95	9.00 to 11.0	105	80.0 to 120	0.00	20.0
BC19659	Chromium, Total	mg/L	0.000129	0.000440	0.100	0.100	0.0986	0.101	0.0850 to 0.115	99.7	70.0 to 130	1.41	20.0
BC19659	Cobalt, Total	mg/L	-0.0000001	0.000147	0.100	0.102	0.101	0.104	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BC19659	Fluoride	mg/L	0.0256	0.125	2.50	2.39	2.51	2.60	2.25 to 2.75	95.6	80.0 to 120	4.90	20.0
BC19659	Iron, Total	mg/L	0.00114	0.0176	0.2	0.218	0.224	0.211	0.170 to 0.230	104	70.0 to 130	2.71	20.0
BC19659	Lead, Total	mg/L	0.0000062	0.000147	0.100	0.101	0.101	0.0998	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BC19659	Lithium, Total	mg/L	4.040E-05	0.0154	0.200	0.207	0.211	0.204	0.170 to 0.230	104	70.0 to 130	1.91	20.0
BC19659	Magnesium, Total	mg/L	0.000300	0.0462	5.00	6.14	6.26	5.10	4.25 to 5.75	101	70.0 to 130	1.94	20.0
BC19659	Manganese, Total	mg/L	0.000128	0.00033	0.100	0.112	0.110	0.104	0.0850 to 0.115	103	70.0 to 130	1.80	20.0
BC19659	Mercury, Total by CVAA	mg/L	1.000E-05	0.000500	0.004	0.00404	0.00422	0.00407	0.00340 to 0.00460	101	70.0 to 130	4.36	20.0
BC19659	Molybdenum, Total	mg/L	-0.000003	0.0002	0.100	0.0990	0.0966	0.0988	0.0850 to 0.115	99.0	70.0 to 130	2.45	20.0
BC19659	Potassium, Total	mg/L	0.0461	0.367	10.0	10.6	10.6	10.2	8.50 to 11.5	101	70.0 to 130	0.00	20.0
BC19659	Selenium, Total	mg/L	0.0000408	0.00100	0.100	0.0993	0.101	0.104	0.0850 to 0.115	99.3	70.0 to 130	1.70	20.0
BC19659	Silicon, Total	mg/L	0.00120	0.0440	1.00	8.27	8.39	1.03	0.850 to 1.15	95.0	70.0 to 130	1.44	20.0
BC19659	Sodium, Total	mg/L	0.00985	0.0660	5.00	8.66	8.83	4.99	4.25 to 5.75	101	70.0 to 130	1.94	20.0
BC19659	Sulfate	mg/L	-0.0301	2.0	20.0	20.7	21.0	20.0	18.0 to 22.0	98.5	80.0 to 120	1.44	20.0

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGADAPFB  
**Sample Date:** 10/25/22 09:40  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond Field Blank-1

**Laboratory ID Number:** BC19651

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	Limit
BC19659	Thallium, Total	mg/L	0.0000143	0.000147	0.100	0.102	0.100	0.0993	0.0850 to 0.115	102	70.0 to 130	1.98	20.0
BC19659	Total Organic Carbon	mg/L	0.266	1.00	10.0	10.3	11.4	24.2		103	80.0 to 120	10.1	20.0

**Comments:**

## Batch QC Summary

**Customer Account:** WMWGADAPFB

**Sample Date:** 10/25/22 09:40

**Customer ID:**

**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond Field Blank-1

**Laboratory ID Number:** BC19651

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19659	Nitrogen, Nitrate/Nitrite	mg/L as N	0.07	0.200	2.00	3.02	1.13	2.06	1.80 to 2.20	94.5	90.0 to 110	0.00	15.0
BC19657	Solids, Dissolved	mg/L	0.0000	25.0			204	49.0	40.0 to 60.0			0.985	10.0

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**Comments:**

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-2VA

**Location Code:** WMWGADAP  
**Collected:** 10/25/22 10:28  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19652

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 11:21		1.015	0.555	mg/L	0.030000	0.1015	
* Calcium, Total	10/28/22 11:50	11/3/22 11:21		1.015	5.52	mg/L	0.070035	0.406	
* Iron, Total	10/28/22 11:50	11/3/22 11:21		1.015	0.116	mg/L	0.008120	0.0406	
* Lithium, Total	10/28/22 11:50	11/3/22 11:21		1.015	0.0748	mg/L	0.007105	0.01999956	
* Magnesium, Total	10/28/22 11:50	11/3/22 11:21		1.015	1.34	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 11:21		1	9.31	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 11:21		1.015	4.35	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/9/22 10:47		10.15	152	mg/L	0.3045	4.06	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 13:38		1.015	0.557	mg/L	0.030000	0.1015	
* Calcium, Dissolved	10/28/22 08:43	10/31/22 13:38		1.015	5.12	mg/L	0.070035	0.406	
* Iron, Dissolved	10/28/22 08:43	10/31/22 13:38		1.015	0.0926	mg/L	0.008120	0.0406	
* Lithium, Dissolved	10/28/22 08:43	10/31/22 13:38		1.015	0.0643	mg/L	0.007105	0.01999956	
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 12:10		1.015	1.34	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 13:38		1	8.95	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 13:38		1.015	4.18	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	11/3/22 10:42		10.15	173	mg/L	0.3045	4.06	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 13:56		1.015	0.000539	mg/L	0.000508	0.001015	J
* Aluminum, Total	10/28/22 11:50	10/28/22 13:56		1.015	0.0232	mg/L	0.006090	0.01015	
* Arsenic, Total	10/28/22 11:50	10/28/22 13:56		1.015	0.00165	mg/L	0.000081	0.000203	
* Barium, Total	10/28/22 11:50	10/28/22 13:56		1.015	0.137	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 13:56		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 13:56		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/28/22 11:50	10/28/22 13:56		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	10/28/22 11:50	10/28/22 13:56		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	10/28/22 11:50	10/28/22 13:56		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 13:56		1.015	0.0137	mg/L	0.000152	0.001015	
* Molybdenum, Total	10/28/22 11:50	10/28/22 13:56		1.015	0.00361	mg/L	0.000102	0.000203	
* Potassium, Total	10/28/22 11:50	10/28/22 13:56		1.015	0.642	mg/L	0.169505	0.5075	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 2.5 mg residue requirement was not met for Total Dissolved Solids.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-2VA

**Location Code:** WMWGADAP  
**Collected:** 10/25/22 10:28  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19652

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 13:56		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 13:56		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 10:53		1.015	0.00102	mg/L	0.000508	0.001015	
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 10:53		1.015	0.00674	mg/L	0.006090	0.01015	J
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 10:53		1.015	0.00196	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 10:53		1.015	0.138	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 10:53		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 10:53		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 10:53		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 10:53		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Dissolved	10/28/22 08:43	10/28/22 10:53		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 10:53		1.015	0.0140	mg/L	0.000152	0.001015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 10:53		1.015	0.00324	mg/L	0.000102	0.000203	
* Potassium, Dissolved	10/28/22 08:43	10/28/22 10:53		1.015	0.694	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 10:53		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 10:53		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/3/22 22:08		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 11:23	10/28/22 11:23		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/8/22 08:50	11/8/22 09:02		1	280	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/27/22 12:00	10/31/22 10:08		1	330	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 09:02		1	271	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 09:02		1	9.03	mg CaCO3/L			
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/27/22 17:18	10/27/22 17:18		1	1.11	mg/L	1.00	2	J

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 2.5 mg residue requirement was not met for Total Dissolved Solids.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-2VA

**Location Code:** WMWGADAP  
**Collected:** 10/25/22 10:28  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19652

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/27/22 14:44	10/27/22 14:44		1	6.86	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 10:56	10/28/22 10:56		1	2.41	mg/L	0.06	0.125	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 09:03	11/1/22 09:03		1	2.13	mg/L	0.6	2	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/25/22 10:25	10/25/22 10:25			587.02	uS/cm			FA
pH	10/25/22 10:25	10/25/22 10:25			8.33	SU			FA
Temperature	10/25/22 10:25	10/25/22 10:25			20.78	C			FA
Turbidity	10/25/22 10:25	10/25/22 10:25			1.82	NTU			FA
Sulfide	10/25/22 10:25	10/25/22 10:25			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 2.5 mg residue requirement was not met for Total Dissolved Solids.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/25/22 10:28  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-2VA

**Laboratory ID Number:** BC19652

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19660	Aluminum, Dissolved	mg/L	0.0000549	0.010	0.100	0.141	0.140	0.103	0.0850 to 0.115	99.5	70.0 to 130	0.712	20.0
BC19659	Aluminum, Total	mg/L	0.000961	0.010	0.100	0.111	0.111	0.103	0.0850 to 0.115	99.6	70.0 to 130	0.00	20.0
BC19660	Antimony, Dissolved	mg/L	0.0000571	0.00100	0.100	0.0858	0.0867	0.0871	0.0850 to 0.115	85.0	70.0 to 130	1.04	20.0
BC19659	Antimony, Total	mg/L	0.000028	0.00100	0.100	0.0953	0.0932	0.0918	0.0850 to 0.115	95.3	70.0 to 130	2.23	20.0
BC19660	Arsenic, Dissolved	mg/L	0.0000398	0.000176	0.100	0.0959	0.0990	0.102	0.0850 to 0.115	95.6	70.0 to 130	3.18	20.0
BC19659	Arsenic, Total	mg/L	0.0000953	0.000176	0.100	0.0965	0.0982	0.0989	0.0850 to 0.115	96.5	70.0 to 130	1.75	20.0
BC19660	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.130	0.129	0.0919	0.0850 to 0.115	93.6	70.0 to 130	0.772	20.0
BC19659	Barium, Total	mg/L	-0.0000058	0.00100	0.100	0.148	0.140	0.0970	0.0850 to 0.115	101	70.0 to 130	5.56	20.0
BC19660	Beryllium, Dissolved	mg/L	0.0000222	0.000880	0.100	0.0941	0.0936	0.0966	0.0850 to 0.115	94.1	70.0 to 130	0.533	20.0
BC19659	Beryllium, Total	mg/L	0.0000213	0.000880	0.100	0.0938	0.0947	0.0944	0.0850 to 0.115	93.8	70.0 to 130	0.955	20.0
BC19660	Boron, Dissolved	mg/L	-0.00146	0.0650	1.00	1.08	1.07	0.990	0.850 to 1.15	100	70.0 to 130	0.930	20.0
BC19659	Boron, Total	mg/L	0.00226	0.0650	1.00	0.989	1.01	0.999	0.850 to 1.15	98.9	70.0 to 130	2.10	20.0
BC19660	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0976	0.0979	0.100	0.0850 to 0.115	97.6	70.0 to 130	0.307	20.0
BC19659	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.100	0.100	0.101	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BC19660	Calcium, Dissolved	mg/L	0.00894	0.152	5.00	14.2	14.8	5.08	4.25 to 5.75	93.2	70.0 to 130	4.14	20.0
BC19659	Calcium, Total	mg/L	-0.00258	0.152	5.00	8.26	8.43	5.30	4.25 to 5.75	103	70.0 to 130	2.04	20.0
BC19659	Chloride	mg/L	0.123	1.00	10.0	14.5	14.5	9.95	9.00 to 11.0	105	80.0 to 120	0.00	20.0
BC19660	Chromium, Dissolved	mg/L	0.0000111	0.000440	0.100	0.0975	0.0980	0.102	0.0850 to 0.115	97.5	70.0 to 130	0.512	20.0
BC19659	Chromium, Total	mg/L	0.000129	0.000440	0.100	0.100	0.0986	0.101	0.0850 to 0.115	99.7	70.0 to 130	1.41	20.0
BC19660	Cobalt, Dissolved	mg/L	0.0000002	0.000147	0.100	0.0999	0.101	0.105	0.0850 to 0.115	99.4	70.0 to 130	1.10	20.0
BC19659	Cobalt, Total	mg/L	-0.0000001	0.000147	0.100	0.102	0.101	0.104	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BC19659	Fluoride	mg/L	0.0256	0.125	2.50	2.39	2.51	2.60	2.25 to 2.75	95.6	80.0 to 120	4.90	20.0
BC19660	Iron, Dissolved	mg/L	-0.000185	0.0176	0.2	0.205	0.207	0.202	0.170 to 0.230	102	70.0 to 130	0.971	20.0
BC19659	Iron, Total	mg/L	0.00114	0.0176	0.2	0.218	0.224	0.211	0.170 to 0.230	104	70.0 to 130	2.71	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 2.5 mg residue requirement was not met for Total Dissolved Solids.



# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/25/22 10:28  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-2VA

**Laboratory ID Number:** BC19652

Sample	Analysis	Units	MB					Standard		Rec			Prec Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19660	Lead, Dissolved	mg/L	0.0000074	0.000147	0.100	0.0998	0.0998	0.102	0.0850 to 0.115	99.8	70.0 to 130	0.00	20.0
BC19659	Lead, Total	mg/L	0.0000062	0.000147	0.100	0.101	0.101	0.0998	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BC19660	Lithium, Dissolved	mg/L	-0.000107	0.0154	0.200	0.213	0.196	0.197	0.170 to 0.230	106	70.0 to 130	8.31	20.0
BC19659	Lithium, Total	mg/L	4.040E-05	0.0154	0.200	0.207	0.211	0.204	0.170 to 0.230	104	70.0 to 130	1.91	20.0
BC19660	Magnesium, Dissolved	mg/L	-0.0132	0.0462	5.00	9.36	9.33	5.18	4.25 to 5.75	101	70.0 to 130	0.321	20.0
BC19659	Magnesium, Total	mg/L	0.000300	0.0462	5.00	6.14	6.26	5.10	4.25 to 5.75	101	70.0 to 130	1.94	20.0
BC19660	Manganese, Dissolved	mg/L	0.0000131	0.00033	0.100	0.120	0.119	0.105	0.0850 to 0.115	100	70.0 to 130	0.837	20.0
BC19659	Manganese, Total	mg/L	0.000128	0.00033	0.100	0.112	0.110	0.104	0.0850 to 0.115	103	70.0 to 130	1.80	20.0
BC19659	Mercury, Total by CVAA	mg/L	1.000E-05	0.000500	0.004	0.00404	0.00422	0.00407	0.00340 to 0.00460	101	70.0 to 130	4.36	20.0
BC19660	Molybdenum, Dissolved	mg/L	0.0000133	0.0002	0.100	0.0942	0.0940	0.0989	0.0850 to 0.115	94.2	70.0 to 130	0.213	20.0
BC19659	Molybdenum, Total	mg/L	-0.000003	0.0002	0.100	0.0990	0.0966	0.0988	0.0850 to 0.115	99.0	70.0 to 130	2.45	20.0
BC19660	Potassium, Dissolved	mg/L	-0.00218	0.367	10.0	10.9	10.8	10.4	8.50 to 11.5	99.2	70.0 to 130	0.922	20.0
BC19659	Potassium, Total	mg/L	0.0461	0.367	10.0	10.6	10.6	10.2	8.50 to 11.5	101	70.0 to 130	0.00	20.0
BC19660	Selenium, Dissolved	mg/L	0.0000887	0.00100	0.100	0.0977	0.0983	0.105	0.0850 to 0.115	96.2	70.0 to 130	0.612	20.0
BC19659	Selenium, Total	mg/L	0.0000408	0.00100	0.100	0.0993	0.101	0.104	0.0850 to 0.115	99.3	70.0 to 130	1.70	20.0
BC19660	Silicon, Dissolved	mg/L	-0.000043	0.0440	1.00	4.66	4.63	1.01	0.850 to 1.15	104	70.0 to 130	0.646	20.0
BC19659	Silicon, Total	mg/L	0.00120	0.0440	1.00	8.27	8.39	1.03	0.850 to 1.15	95.0	70.0 to 130	1.44	20.0
BC19660	Sodium, Dissolved	mg/L	0.000963	0.0660	5.00	10.8	10.1	5.00	4.25 to 5.75	108	70.0 to 130	6.70	20.0
BC19659	Sodium, Total	mg/L	0.00985	0.0660	5.00	8.66	8.83	4.99	4.25 to 5.75	101	70.0 to 130	1.94	20.0
BC19659	Sulfate	mg/L	-0.0301	2.0	20.0	20.7	21.0	20.0	18.0 to 22.0	98.5	80.0 to 120	1.44	20.0
BC19660	Thallium, Dissolved	mg/L	0.000011	0.000147	0.100	0.101	0.0991	0.101	0.0850 to 0.115	101	70.0 to 130	1.90	20.0
BC19659	Thallium, Total	mg/L	0.0000143	0.000147	0.100	0.102	0.100	0.0993	0.0850 to 0.115	102	70.0 to 130	1.98	20.0
BC19659	Total Organic Carbon	mg/L	0.266	1.00	10.0	10.3	11.4	24.2		103	80.0 to 120	10.1	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 2.5 mg residue requirement was not met for Total Dissolved Solids.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/25/22 10:28  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-2VA

**Laboratory ID Number:** BC19652

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19671	Alkalinity to pH 4.5	mg CaCO3/L					178	50.7	45.0 to 55.0			0.563	10.0
BC19659	Nitrogen, Nitrate/Nitrite	mg/L as N	0.07	0.200	2.00	3.02	1.13	2.06	1.80 to 2.20	94.5	90.0 to 110	0.00	15.0
BC19657	Solids, Dissolved	mg/L	0.0000	25.0			204	49.0	40.0 to 60.0			0.985	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 2.5 mg residue requirement was not met for Total Dissolved Solids.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-2VB

**Location Code:** WMWGADAP  
**Collected:** 10/25/22 12:04  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19653

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 11:24		1.015	0.628	mg/L	0.030000	0.1015	
* Calcium, Total	10/28/22 11:50	11/3/22 11:24		1.015	4.99	mg/L	0.070035	0.406	
* Iron, Total	10/28/22 11:50	11/3/22 11:24		1.015	0.0739	mg/L	0.008120	0.0406	
* Lithium, Total	10/28/22 11:50	11/3/22 11:24		1.015	0.141	mg/L	0.007105	0.01999956	
* Magnesium, Total	10/28/22 11:50	11/3/22 11:24		1.015	1.56	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 11:24		1	9.84	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 11:24		1.015	4.60	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/9/22 10:50		10.15	308	mg/L	0.3045	4.06	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 13:41		1.015	0.629	mg/L	0.030000	0.1015	
* Calcium, Dissolved	10/28/22 08:43	10/31/22 13:41		1.015	4.69	mg/L	0.070035	0.406	
* Iron, Dissolved	10/28/22 08:43	10/31/22 13:41		1.015	0.0452	mg/L	0.008120	0.0406	
* Lithium, Dissolved	10/28/22 08:43	10/31/22 13:41		1.015	0.112	mg/L	0.007105	0.01999956	
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 12:14		1.015	1.57	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 13:41		1	9.42	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 13:41		1.015	4.40	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	11/3/22 10:45		10.15	277	mg/L	0.3045	4.06	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 14:00		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Total	10/28/22 11:50	10/28/22 14:00		1.015	0.0509	mg/L	0.006090	0.01015	
* Arsenic, Total	10/28/22 11:50	10/28/22 14:00		1.015	0.000907	mg/L	0.000081	0.000203	
* Barium, Total	10/28/22 11:50	10/28/22 14:00		1.015	0.346	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 14:00		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 14:00		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/28/22 11:50	10/28/22 14:00		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	10/28/22 11:50	10/28/22 14:00		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	10/28/22 11:50	10/28/22 14:00		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 14:00		1.015	0.0252	mg/L	0.000152	0.001015	
* Molybdenum, Total	10/28/22 11:50	10/28/22 14:00		1.015	0.00135	mg/L	0.000102	0.000203	
* Potassium, Total	10/28/22 11:50	10/28/22 14:00		1.015	1.37	mg/L	0.169505	0.5075	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-2VB

**Location Code:** WMWGADAP  
**Collected:** 10/25/22 12:04  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19653

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 14:00		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 14:00		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 10:57		1.015	0.000967	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 10:57		1.015	0.0153	mg/L	0.006090	0.01015	
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 10:57		1.015	0.000835	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 10:57		1.015	0.335	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 10:57		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 10:57		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 10:57		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 10:57		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Dissolved	10/28/22 08:43	10/28/22 10:57		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 10:57		1.015	0.0234	mg/L	0.000152	0.001015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 10:57		1.015	0.00132	mg/L	0.000102	0.000203	
* Potassium, Dissolved	10/28/22 08:43	10/28/22 10:57		1.015	1.45	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 10:57		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 10:57		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/3/22 22:12		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 11:25	10/28/22 11:25		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/8/22 08:50	11/8/22 09:07		1	432	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/27/22 12:00	10/31/22 10:08		1	588	mg/L		50	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 09:07		1	419	mg CaCO3/L		1	A
Carbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 09:07		1	13.3	mg CaCO3/L		0.5	A
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/27/22 17:32	10/27/22 17:32		1	4.50	mg/L	1.00	2	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-2VB

**Location Code:** WMWGADAP  
**Collected:** 10/25/22 12:04  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19653

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/27/22 14:56	10/27/22 14:56		4	49.0	mg/L	2.00	4	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 11:08	10/28/22 11:08		2	5.77	mg/L	0.12	0.25	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 09:04	11/1/22 09:04		1	18.0	mg/L	0.6	2	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/25/22 12:01	10/25/22 12:01			1015.36	uS/cm			FA
pH	10/25/22 12:01	10/25/22 12:01			8.33	SU			FA
Temperature	10/25/22 12:01	10/25/22 12:01			22.14	C			FA
Turbidity	10/25/22 12:01	10/25/22 12:01			0.77	NTU			FA
Sulfide	10/25/22 12:01	10/25/22 12:01			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/25/22 12:04  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-2VB

**Laboratory ID Number:** BC19653

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19660	Aluminum, Dissolved	mg/L	0.0000549	0.010	0.100	0.141	0.140	0.103	0.0850 to 0.115	99.5	70.0 to 130	0.712	20.0
BC19659	Aluminum, Total	mg/L	0.000961	0.010	0.100	0.111	0.111	0.103	0.0850 to 0.115	99.6	70.0 to 130	0.00	20.0
BC19660	Antimony, Dissolved	mg/L	0.0000571	0.00100	0.100	0.0858	0.0867	0.0871	0.0850 to 0.115	85.0	70.0 to 130	1.04	20.0
BC19659	Antimony, Total	mg/L	0.000028	0.00100	0.100	0.0953	0.0932	0.0918	0.0850 to 0.115	95.3	70.0 to 130	2.23	20.0
BC19660	Arsenic, Dissolved	mg/L	0.0000398	0.000176	0.100	0.0959	0.0990	0.102	0.0850 to 0.115	95.6	70.0 to 130	3.18	20.0
BC19659	Arsenic, Total	mg/L	0.0000953	0.000176	0.100	0.0965	0.0982	0.0989	0.0850 to 0.115	96.5	70.0 to 130	1.75	20.0
BC19660	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.130	0.129	0.0919	0.0850 to 0.115	93.6	70.0 to 130	0.772	20.0
BC19659	Barium, Total	mg/L	-0.0000058	0.00100	0.100	0.148	0.140	0.0970	0.0850 to 0.115	101	70.0 to 130	5.56	20.0
BC19660	Beryllium, Dissolved	mg/L	0.0000222	0.000880	0.100	0.0941	0.0936	0.0966	0.0850 to 0.115	94.1	70.0 to 130	0.533	20.0
BC19659	Beryllium, Total	mg/L	0.0000213	0.000880	0.100	0.0938	0.0947	0.0944	0.0850 to 0.115	93.8	70.0 to 130	0.955	20.0
BC19660	Boron, Dissolved	mg/L	-0.00146	0.0650	1.00	1.08	1.07	0.990	0.850 to 1.15	100	70.0 to 130	0.930	20.0
BC19659	Boron, Total	mg/L	0.00226	0.0650	1.00	0.989	1.01	0.999	0.850 to 1.15	98.9	70.0 to 130	2.10	20.0
BC19660	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0976	0.0979	0.100	0.0850 to 0.115	97.6	70.0 to 130	0.307	20.0
BC19659	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.100	0.100	0.101	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BC19660	Calcium, Dissolved	mg/L	0.00894	0.152	5.00	14.2	14.8	5.08	4.25 to 5.75	93.2	70.0 to 130	4.14	20.0
BC19659	Calcium, Total	mg/L	-0.00258	0.152	5.00	8.26	8.43	5.30	4.25 to 5.75	103	70.0 to 130	2.04	20.0
BC19659	Chloride	mg/L	0.123	1.00	10.0	14.5	14.5	9.95	9.00 to 11.0	105	80.0 to 120	0.00	20.0
BC19660	Chromium, Dissolved	mg/L	0.0000111	0.000440	0.100	0.0975	0.0980	0.102	0.0850 to 0.115	97.5	70.0 to 130	0.512	20.0
BC19659	Chromium, Total	mg/L	0.000129	0.000440	0.100	0.100	0.0986	0.101	0.0850 to 0.115	99.7	70.0 to 130	1.41	20.0
BC19660	Cobalt, Dissolved	mg/L	0.0000002	0.000147	0.100	0.0999	0.101	0.105	0.0850 to 0.115	99.4	70.0 to 130	1.10	20.0
BC19659	Cobalt, Total	mg/L	-0.0000001	0.000147	0.100	0.102	0.101	0.104	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BC19659	Fluoride	mg/L	0.0256	0.125	2.50	2.39	2.51	2.60	2.25 to 2.75	95.6	80.0 to 120	4.90	20.0
BC19660	Iron, Dissolved	mg/L	-0.000185	0.0176	0.2	0.205	0.207	0.202	0.170 to 0.230	102	70.0 to 130	0.971	20.0
BC19659	Iron, Total	mg/L	0.00114	0.0176	0.2	0.218	0.224	0.211	0.170 to 0.230	104	70.0 to 130	2.71	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/25/22 12:04  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-2VB

**Laboratory ID Number:** BC19653

Sample	Analysis	Units	MB	MB		MS	MSD	Standard		Rec		Prec	Limit
				Limit	Spike			Standard	Limit	Rec	Limit		
BC19660	Lead, Dissolved	mg/L	0.0000074	0.000147	0.100	0.0998	0.0998	0.102	0.0850 to 0.115	99.8	70.0 to 130	0.00	20.0
BC19659	Lead, Total	mg/L	0.0000062	0.000147	0.100	0.101	0.101	0.0998	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BC19660	Lithium, Dissolved	mg/L	-0.000107	0.0154	0.200	0.213	0.196	0.197	0.170 to 0.230	106	70.0 to 130	8.31	20.0
BC19659	Lithium, Total	mg/L	4.040E-05	0.0154	0.200	0.207	0.211	0.204	0.170 to 0.230	104	70.0 to 130	1.91	20.0
BC19660	Magnesium, Dissolved	mg/L	-0.0132	0.0462	5.00	9.36	9.33	5.18	4.25 to 5.75	101	70.0 to 130	0.321	20.0
BC19659	Magnesium, Total	mg/L	0.000300	0.0462	5.00	6.14	6.26	5.10	4.25 to 5.75	101	70.0 to 130	1.94	20.0
BC19660	Manganese, Dissolved	mg/L	0.0000131	0.00033	0.100	0.120	0.119	0.105	0.0850 to 0.115	100	70.0 to 130	0.837	20.0
BC19659	Manganese, Total	mg/L	0.000128	0.00033	0.100	0.112	0.110	0.104	0.0850 to 0.115	103	70.0 to 130	1.80	20.0
BC19659	Mercury, Total by CVAA	mg/L	1.000E-05	0.000500	0.004	0.00404	0.00422	0.00407	0.00340 to 0.00460	101	70.0 to 130	4.36	20.0
BC19660	Molybdenum, Dissolved	mg/L	0.0000133	0.0002	0.100	0.0942	0.0940	0.0989	0.0850 to 0.115	94.2	70.0 to 130	0.213	20.0
BC19659	Molybdenum, Total	mg/L	-0.000003	0.0002	0.100	0.0990	0.0966	0.0988	0.0850 to 0.115	99.0	70.0 to 130	2.45	20.0
BC19660	Potassium, Dissolved	mg/L	-0.00218	0.367	10.0	10.9	10.8	10.4	8.50 to 11.5	99.2	70.0 to 130	0.922	20.0
BC19659	Potassium, Total	mg/L	0.0461	0.367	10.0	10.6	10.6	10.2	8.50 to 11.5	101	70.0 to 130	0.00	20.0
BC19660	Selenium, Dissolved	mg/L	0.0000887	0.00100	0.100	0.0977	0.0983	0.105	0.0850 to 0.115	96.2	70.0 to 130	0.612	20.0
BC19659	Selenium, Total	mg/L	0.0000408	0.00100	0.100	0.0993	0.101	0.104	0.0850 to 0.115	99.3	70.0 to 130	1.70	20.0
BC19660	Silicon, Dissolved	mg/L	-0.000043	0.0440	1.00	4.66	4.63	1.01	0.850 to 1.15	104	70.0 to 130	0.646	20.0
BC19659	Silicon, Total	mg/L	0.00120	0.0440	1.00	8.27	8.39	1.03	0.850 to 1.15	95.0	70.0 to 130	1.44	20.0
BC19660	Sodium, Dissolved	mg/L	0.000963	0.0660	5.00	10.8	10.1	5.00	4.25 to 5.75	108	70.0 to 130	6.70	20.0
BC19659	Sodium, Total	mg/L	0.00985	0.0660	5.00	8.66	8.83	4.99	4.25 to 5.75	101	70.0 to 130	1.94	20.0
BC19659	Sulfate	mg/L	-0.0301	2.0	20.0	20.7	21.0	20.0	18.0 to 22.0	98.5	80.0 to 120	1.44	20.0
BC19660	Thallium, Dissolved	mg/L	0.000011	0.000147	0.100	0.101	0.0991	0.101	0.0850 to 0.115	101	70.0 to 130	1.90	20.0
BC19659	Thallium, Total	mg/L	0.0000143	0.000147	0.100	0.102	0.100	0.0993	0.0850 to 0.115	102	70.0 to 130	1.98	20.0
BC19659	Total Organic Carbon	mg/L	0.266	1.00	10.0	10.3	11.4	24.2		103	80.0 to 120	10.1	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/25/22 12:04  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-2VB

**Laboratory ID Number:** BC19653

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19671	Alkalinity to pH 4.5	mg CaCO3/L					178	50.7	45.0 to 55.0			0.563	10.0
BC19659	Nitrogen, Nitrate/Nitrite	mg/L as N	0.07	0.200	2.00	3.02	1.13	2.06	1.80 to 2.20	94.5	90.0 to 110	0.00	15.0
BC19657	Solids, Dissolved	mg/L	0.0000	25.0			204	49.0	40.0 to 60.0			0.985	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.



# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-21VC

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 08:40  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19654

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 11:28		1.015	0.559	mg/L	0.030000	0.1015	
* Calcium, Total	10/28/22 11:50	11/3/22 11:28		1.015	3.60	mg/L	0.070035	0.406	
* Iron, Total	10/28/22 11:50	11/3/22 11:28		1.015	0.0710	mg/L	0.008120	0.0406	
* Lithium, Total	10/28/22 11:50	11/3/22 11:28		1.015	0.262	mg/L	0.007105	0.01999956	
* Magnesium, Total	10/28/22 11:50	11/3/22 11:28		1.015	1.11	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 11:28		1	8.71	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 11:28		1.015	4.07	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/9/22 10:53		101.5	431	mg/L	3.045	40.6	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 13:44		1.015	0.557	mg/L	0.030000	0.1015	
* Calcium, Dissolved	10/28/22 08:43	10/31/22 13:44		1.015	3.15	mg/L	0.070035	0.406	
* Iron, Dissolved	10/28/22 08:43	10/31/22 13:44		1.015	0.0492	mg/L	0.008120	0.0406	
* Lithium, Dissolved	10/28/22 08:43	10/31/22 13:44		1.015	0.204	mg/L	0.007105	0.01999956	
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 12:17		1.015	1.09	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 13:44		1	8.26	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 13:44		1.015	3.86	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	11/3/22 10:48		101.5	436	mg/L	3.045	40.6	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 14:04		1.015	0.000695	mg/L	0.000508	0.001015	J
* Aluminum, Total	10/28/22 11:50	10/28/22 14:04		1.015	0.0282	mg/L	0.006090	0.01015	
* Arsenic, Total	10/28/22 11:50	10/28/22 14:04		1.015	0.00122	mg/L	0.000081	0.000203	
* Barium, Total	10/28/22 11:50	10/28/22 14:04		1.015	0.431	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 14:04		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 14:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/28/22 11:50	10/28/22 14:04		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	10/28/22 11:50	10/28/22 14:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	10/28/22 11:50	10/28/22 14:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 14:04		1.015	0.00738	mg/L	0.000152	0.001015	
* Molybdenum, Total	10/28/22 11:50	10/28/22 14:04		1.015	0.00238	mg/L	0.000102	0.000203	
* Potassium, Total	10/28/22 11:50	10/28/22 14:04		1.015	1.05	mg/L	0.169505	0.5075	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-21VC

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 08:40  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19654

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 14:04		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 14:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 11:01		1.015	0.00114	mg/L	0.000508	0.001015	
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 11:01		1.015	0.00952	mg/L	0.006090	0.01015	J
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 11:01		1.015	0.00123	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 11:01		1.015	0.417	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 11:01		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 11:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 11:01		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 11:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Dissolved	10/28/22 08:43	10/28/22 11:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 11:01		1.015	0.00716	mg/L	0.000152	0.001015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 11:01		1.015	0.00258	mg/L	0.000102	0.000203	
* Potassium, Dissolved	10/28/22 08:43	10/28/22 11:01		1.015	1.09	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 11:01		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 11:01		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/3/22 22:16		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 11:27	10/28/22 11:27		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/8/22 08:50	11/8/22 15:09		1	581	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/27/22 12:00	10/31/22 10:08		1	952	mg/L		100	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	556	mg CaCO3/L		1	A
Carbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	25.0	mg CaCO3/L		0.5	A
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/27/22 17:48	10/27/22 17:48		1	2.18	mg/L	1.00	2	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-21VC

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 08:40  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19654

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/27/22 14:57	10/27/22 14:57		10	181	mg/L	5.00	10	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 11:10	10/28/22 11:10		2	7.57	mg/L	0.12	0.25	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 09:06	11/1/22 09:06		1	23.9	mg/L	0.6	2	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/26/22 08:37	10/26/22 08:37			1576.52	uS/cm			FA
pH	10/26/22 08:37	10/26/22 08:37			8.31	SU			FA
Temperature	10/26/22 08:37	10/26/22 08:37			17.59	C			FA
Turbidity	10/26/22 08:37	10/26/22 08:37			1.12	NTU			FA
Sulfide	10/26/22 08:37	10/26/22 08:37			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 08:40  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-21VC

**Laboratory ID Number:** BC19654

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19660	Aluminum, Dissolved	mg/L	0.0000549	0.010	0.100	0.141	0.140	0.103	0.0850 to 0.115	99.5	70.0 to 130	0.712	20.0
BC19659	Aluminum, Total	mg/L	0.000961	0.010	0.100	0.111	0.111	0.103	0.0850 to 0.115	99.6	70.0 to 130	0.00	20.0
BC19660	Antimony, Dissolved	mg/L	0.0000571	0.00100	0.100	0.0858	0.0867	0.0871	0.0850 to 0.115	85.0	70.0 to 130	1.04	20.0
BC19659	Antimony, Total	mg/L	0.000028	0.00100	0.100	0.0953	0.0932	0.0918	0.0850 to 0.115	95.3	70.0 to 130	2.23	20.0
BC19660	Arsenic, Dissolved	mg/L	0.0000398	0.000176	0.100	0.0959	0.0990	0.102	0.0850 to 0.115	95.6	70.0 to 130	3.18	20.0
BC19659	Arsenic, Total	mg/L	0.0000953	0.000176	0.100	0.0965	0.0982	0.0989	0.0850 to 0.115	96.5	70.0 to 130	1.75	20.0
BC19660	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.130	0.129	0.0919	0.0850 to 0.115	93.6	70.0 to 130	0.772	20.0
BC19659	Barium, Total	mg/L	-0.0000058	0.00100	0.100	0.148	0.140	0.0970	0.0850 to 0.115	101	70.0 to 130	5.56	20.0
BC19660	Beryllium, Dissolved	mg/L	0.0000222	0.000880	0.100	0.0941	0.0936	0.0966	0.0850 to 0.115	94.1	70.0 to 130	0.533	20.0
BC19659	Beryllium, Total	mg/L	0.0000213	0.000880	0.100	0.0938	0.0947	0.0944	0.0850 to 0.115	93.8	70.0 to 130	0.955	20.0
BC19660	Boron, Dissolved	mg/L	-0.00146	0.0650	1.00	1.08	1.07	0.990	0.850 to 1.15	100	70.0 to 130	0.930	20.0
BC19659	Boron, Total	mg/L	0.00226	0.0650	1.00	0.989	1.01	0.999	0.850 to 1.15	98.9	70.0 to 130	2.10	20.0
BC19660	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0976	0.0979	0.100	0.0850 to 0.115	97.6	70.0 to 130	0.307	20.0
BC19659	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.100	0.100	0.101	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BC19660	Calcium, Dissolved	mg/L	0.00894	0.152	5.00	14.2	14.8	5.08	4.25 to 5.75	93.2	70.0 to 130	4.14	20.0
BC19659	Calcium, Total	mg/L	-0.00258	0.152	5.00	8.26	8.43	5.30	4.25 to 5.75	103	70.0 to 130	2.04	20.0
BC19659	Chloride	mg/L	0.123	1.00	10.0	14.5	14.5	9.95	9.00 to 11.0	105	80.0 to 120	0.00	20.0
BC19660	Chromium, Dissolved	mg/L	0.0000111	0.000440	0.100	0.0975	0.0980	0.102	0.0850 to 0.115	97.5	70.0 to 130	0.512	20.0
BC19659	Chromium, Total	mg/L	0.000129	0.000440	0.100	0.100	0.0986	0.101	0.0850 to 0.115	99.7	70.0 to 130	1.41	20.0
BC19660	Cobalt, Dissolved	mg/L	0.0000002	0.000147	0.100	0.0999	0.101	0.105	0.0850 to 0.115	99.4	70.0 to 130	1.10	20.0
BC19659	Cobalt, Total	mg/L	-0.0000001	0.000147	0.100	0.102	0.101	0.104	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BC19659	Fluoride	mg/L	0.0256	0.125	2.50	2.39	2.51	2.60	2.25 to 2.75	95.6	80.0 to 120	4.90	20.0
BC19660	Iron, Dissolved	mg/L	-0.000185	0.0176	0.2	0.205	0.207	0.202	0.170 to 0.230	102	70.0 to 130	0.971	20.0
BC19659	Iron, Total	mg/L	0.00114	0.0176	0.2	0.218	0.224	0.211	0.170 to 0.230	104	70.0 to 130	2.71	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 08:40  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-21VC

**Laboratory ID Number:** BC19654

Sample	Analysis	Units	MB	MB		MS	MSD	Standard		Rec		Prec	Limit
				Limit	Spike			Standard	Limit	Rec	Limit		
BC19660	Lead, Dissolved	mg/L	0.0000074	0.000147	0.100	0.0998	0.0998	0.102	0.0850 to 0.115	99.8	70.0 to 130	0.00	20.0
BC19659	Lead, Total	mg/L	0.0000062	0.000147	0.100	0.101	0.101	0.0998	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BC19660	Lithium, Dissolved	mg/L	-0.000107	0.0154	0.200	0.213	0.196	0.197	0.170 to 0.230	106	70.0 to 130	8.31	20.0
BC19659	Lithium, Total	mg/L	4.040E-05	0.0154	0.200	0.207	0.211	0.204	0.170 to 0.230	104	70.0 to 130	1.91	20.0
BC19660	Magnesium, Dissolved	mg/L	-0.0132	0.0462	5.00	9.36	9.33	5.18	4.25 to 5.75	101	70.0 to 130	0.321	20.0
BC19659	Magnesium, Total	mg/L	0.000300	0.0462	5.00	6.14	6.26	5.10	4.25 to 5.75	101	70.0 to 130	1.94	20.0
BC19660	Manganese, Dissolved	mg/L	0.0000131	0.00033	0.100	0.120	0.119	0.105	0.0850 to 0.115	100	70.0 to 130	0.837	20.0
BC19659	Manganese, Total	mg/L	0.000128	0.00033	0.100	0.112	0.110	0.104	0.0850 to 0.115	103	70.0 to 130	1.80	20.0
BC19659	Mercury, Total by CVAA	mg/L	1.000E-05	0.000500	0.004	0.00404	0.00422	0.00407	0.00340 to 0.00460	101	70.0 to 130	4.36	20.0
BC19660	Molybdenum, Dissolved	mg/L	0.0000133	0.0002	0.100	0.0942	0.0940	0.0989	0.0850 to 0.115	94.2	70.0 to 130	0.213	20.0
BC19659	Molybdenum, Total	mg/L	-0.000003	0.0002	0.100	0.0990	0.0966	0.0988	0.0850 to 0.115	99.0	70.0 to 130	2.45	20.0
BC19660	Potassium, Dissolved	mg/L	-0.00218	0.367	10.0	10.9	10.8	10.4	8.50 to 11.5	99.2	70.0 to 130	0.922	20.0
BC19659	Potassium, Total	mg/L	0.0461	0.367	10.0	10.6	10.6	10.2	8.50 to 11.5	101	70.0 to 130	0.00	20.0
BC19660	Selenium, Dissolved	mg/L	0.0000887	0.00100	0.100	0.0977	0.0983	0.105	0.0850 to 0.115	96.2	70.0 to 130	0.612	20.0
BC19659	Selenium, Total	mg/L	0.0000408	0.00100	0.100	0.0993	0.101	0.104	0.0850 to 0.115	99.3	70.0 to 130	1.70	20.0
BC19660	Silicon, Dissolved	mg/L	-0.000043	0.0440	1.00	4.66	4.63	1.01	0.850 to 1.15	104	70.0 to 130	0.646	20.0
BC19659	Silicon, Total	mg/L	0.00120	0.0440	1.00	8.27	8.39	1.03	0.850 to 1.15	95.0	70.0 to 130	1.44	20.0
BC19660	Sodium, Dissolved	mg/L	0.000963	0.0660	5.00	10.8	10.1	5.00	4.25 to 5.75	108	70.0 to 130	6.70	20.0
BC19659	Sodium, Total	mg/L	0.00985	0.0660	5.00	8.66	8.83	4.99	4.25 to 5.75	101	70.0 to 130	1.94	20.0
BC19659	Sulfate	mg/L	-0.0301	2.0	20.0	20.7	21.0	20.0	18.0 to 22.0	98.5	80.0 to 120	1.44	20.0
BC19660	Thallium, Dissolved	mg/L	0.000011	0.000147	0.100	0.101	0.0991	0.101	0.0850 to 0.115	101	70.0 to 130	1.90	20.0
BC19659	Thallium, Total	mg/L	0.0000143	0.000147	0.100	0.102	0.100	0.0993	0.0850 to 0.115	102	70.0 to 130	1.98	20.0
BC19659	Total Organic Carbon	mg/L	0.266	1.00	10.0	10.3	11.4	24.2		103	80.0 to 120	10.1	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 08:40  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-21VC

**Laboratory ID Number:** BC19654

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19671	Alkalinity to pH 4.5	mg CaCO3/L					178	50.7	45.0 to 55.0			0.563	10.0
BC19659	Nitrogen, Nitrate/Nitrite	mg/L as N	0.07	0.200	2.00	3.02	1.13	2.06	1.80 to 2.20	94.5	90.0 to 110	0.00	15.0
BC19657	Solids, Dissolved	mg/L	0.0000	25.0			204	49.0	40.0 to 60.0			0.985	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-22VB

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 09:36  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19655

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 11:31		1.015	0.400	mg/L	0.030000	0.1015	
* Calcium, Total	10/28/22 11:50	11/3/22 11:31		1.015	9.75	mg/L	0.070035	0.406	
* Iron, Total	10/28/22 11:50	11/3/22 11:31		1.015	0.0940	mg/L	0.008120	0.0406	
* Lithium, Total	10/28/22 11:50	11/3/22 11:31		1.015	0.0616	mg/L	0.007105	0.01999956	
* Magnesium, Total	10/28/22 11:50	11/3/22 11:31		1.015	2.08	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 11:31		1	9.82	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 11:31		1.015	4.59	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/9/22 10:57		10.15	107	mg/L	0.3045	4.06	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 13:47		1.015	0.402	mg/L	0.030000	0.1015	
* Calcium, Dissolved	10/28/22 08:43	10/31/22 13:47		1.015	8.89	mg/L	0.070035	0.406	
* Iron, Dissolved	10/28/22 08:43	10/31/22 13:47		1.015	0.0731	mg/L	0.008120	0.0406	
* Lithium, Dissolved	10/28/22 08:43	10/31/22 13:47		1.015	0.0547	mg/L	0.007105	0.01999956	
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 12:20		1.015	2.07	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 13:47		1	9.61	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 13:47		1.015	4.49	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	11/3/22 10:51		10.15	114	mg/L	0.3045	4.06	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 14:07		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Total	10/28/22 11:50	10/28/22 14:07		1.015	0.0280	mg/L	0.006090	0.01015	
* Arsenic, Total	10/28/22 11:50	10/28/22 14:07		1.015	0.00269	mg/L	0.000081	0.000203	
* Barium, Total	10/28/22 11:50	10/28/22 14:07		1.015	0.257	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 14:07		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 14:07		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/28/22 11:50	10/28/22 14:07		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	10/28/22 11:50	10/28/22 14:07		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	10/28/22 11:50	10/28/22 14:07		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 14:07		1.015	0.0225	mg/L	0.000152	0.001015	
* Molybdenum, Total	10/28/22 11:50	10/28/22 14:07		1.015	0.00190	mg/L	0.000102	0.000203	
* Potassium, Total	10/28/22 11:50	10/28/22 14:07		1.015	0.503	mg/L	0.169505	0.5075	J

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-22VB

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 09:36  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19655

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 14:07		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 14:07		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 11:04		1.015	0.000925	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 11:04		1.015	0.0110	mg/L	0.006090	0.01015	
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 11:04		1.015	0.00253	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 11:04		1.015	0.244	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 11:04		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 11:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 11:04		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 11:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Dissolved	10/28/22 08:43	10/28/22 11:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 11:04		1.015	0.0222	mg/L	0.000152	0.001015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 11:04		1.015	0.00175	mg/L	0.000102	0.000203	
* Potassium, Dissolved	10/28/22 08:43	10/28/22 11:04		1.015	0.533	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 11:04		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 11:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/3/22 22:20		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 11:29	10/28/22 11:29		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/8/22 08:50	11/8/22 15:09		1	209	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/27/22 12:00	10/31/22 10:08		1	239	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	203	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	5.64	mg CaCO3/L			
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/27/22 18:04	10/27/22 18:04		1	1.38	mg/L	1.00	2	J

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.



# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-22VB

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 09:36  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19655

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/27/22 14:47	10/27/22 14:47		1	1.56	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 11:00	10/28/22 11:00		1	1.36	mg/L	0.06	0.125	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 09:07	11/1/22 09:07		1	3.55	mg/L	0.6	2	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/26/22 09:33	10/26/22 09:33			425.07	uS/cm			FA
pH	10/26/22 09:33	10/26/22 09:33			8.11	SU			FA
Temperature	10/26/22 09:33	10/26/22 09:33			17.45	C			FA
Turbidity	10/26/22 09:33	10/26/22 09:33			0.97	NTU			FA
Sulfide	10/26/22 09:33	10/26/22 09:33			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 09:36  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-22VB

**Laboratory ID Number:** BC19655

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19660	Aluminum, Dissolved	mg/L	0.0000549	0.010	0.100	0.141	0.140	0.103	0.0850 to 0.115	99.5	70.0 to 130	0.712	20.0
BC19659	Aluminum, Total	mg/L	0.000961	0.010	0.100	0.111	0.111	0.103	0.0850 to 0.115	99.6	70.0 to 130	0.00	20.0
BC19660	Antimony, Dissolved	mg/L	0.0000571	0.00100	0.100	0.0858	0.0867	0.0871	0.0850 to 0.115	85.0	70.0 to 130	1.04	20.0
BC19659	Antimony, Total	mg/L	0.000028	0.00100	0.100	0.0953	0.0932	0.0918	0.0850 to 0.115	95.3	70.0 to 130	2.23	20.0
BC19660	Arsenic, Dissolved	mg/L	0.0000398	0.000176	0.100	0.0959	0.0990	0.102	0.0850 to 0.115	95.6	70.0 to 130	3.18	20.0
BC19659	Arsenic, Total	mg/L	0.0000953	0.000176	0.100	0.0965	0.0982	0.0989	0.0850 to 0.115	96.5	70.0 to 130	1.75	20.0
BC19660	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.130	0.129	0.0919	0.0850 to 0.115	93.6	70.0 to 130	0.772	20.0
BC19659	Barium, Total	mg/L	-0.0000058	0.00100	0.100	0.148	0.140	0.0970	0.0850 to 0.115	101	70.0 to 130	5.56	20.0
BC19660	Beryllium, Dissolved	mg/L	0.0000222	0.000880	0.100	0.0941	0.0936	0.0966	0.0850 to 0.115	94.1	70.0 to 130	0.533	20.0
BC19659	Beryllium, Total	mg/L	0.0000213	0.000880	0.100	0.0938	0.0947	0.0944	0.0850 to 0.115	93.8	70.0 to 130	0.955	20.0
BC19660	Boron, Dissolved	mg/L	-0.00146	0.0650	1.00	1.08	1.07	0.990	0.850 to 1.15	100	70.0 to 130	0.930	20.0
BC19659	Boron, Total	mg/L	0.00226	0.0650	1.00	0.989	1.01	0.999	0.850 to 1.15	98.9	70.0 to 130	2.10	20.0
BC19660	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0976	0.0979	0.100	0.0850 to 0.115	97.6	70.0 to 130	0.307	20.0
BC19659	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.100	0.100	0.101	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BC19660	Calcium, Dissolved	mg/L	0.00894	0.152	5.00	14.2	14.8	5.08	4.25 to 5.75	93.2	70.0 to 130	4.14	20.0
BC19659	Calcium, Total	mg/L	-0.00258	0.152	5.00	8.26	8.43	5.30	4.25 to 5.75	103	70.0 to 130	2.04	20.0
BC19659	Chloride	mg/L	0.123	1.00	10.0	14.5	14.5	9.95	9.00 to 11.0	105	80.0 to 120	0.00	20.0
BC19660	Chromium, Dissolved	mg/L	0.0000111	0.000440	0.100	0.0975	0.0980	0.102	0.0850 to 0.115	97.5	70.0 to 130	0.512	20.0
BC19659	Chromium, Total	mg/L	0.000129	0.000440	0.100	0.100	0.0986	0.101	0.0850 to 0.115	99.7	70.0 to 130	1.41	20.0
BC19660	Cobalt, Dissolved	mg/L	0.0000002	0.000147	0.100	0.0999	0.101	0.105	0.0850 to 0.115	99.4	70.0 to 130	1.10	20.0
BC19659	Cobalt, Total	mg/L	-0.0000001	0.000147	0.100	0.102	0.101	0.104	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BC19659	Fluoride	mg/L	0.0256	0.125	2.50	2.39	2.51	2.60	2.25 to 2.75	95.6	80.0 to 120	4.90	20.0
BC19660	Iron, Dissolved	mg/L	-0.000185	0.0176	0.2	0.205	0.207	0.202	0.170 to 0.230	102	70.0 to 130	0.971	20.0
BC19659	Iron, Total	mg/L	0.00114	0.0176	0.2	0.218	0.224	0.211	0.170 to 0.230	104	70.0 to 130	2.71	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 09:36  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-22VB

**Laboratory ID Number:** BC19655

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19660	Lead, Dissolved	mg/L	0.0000074	0.000147	0.100	0.0998	0.0998	0.102	0.0850 to 0.115	99.8	70.0 to 130	0.00	20.0
BC19659	Lead, Total	mg/L	0.0000062	0.000147	0.100	0.101	0.101	0.0998	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BC19660	Lithium, Dissolved	mg/L	-0.000107	0.0154	0.200	0.213	0.196	0.197	0.170 to 0.230	106	70.0 to 130	8.31	20.0
BC19659	Lithium, Total	mg/L	4.040E-05	0.0154	0.200	0.207	0.211	0.204	0.170 to 0.230	104	70.0 to 130	1.91	20.0
BC19660	Magnesium, Dissolved	mg/L	-0.0132	0.0462	5.00	9.36	9.33	5.18	4.25 to 5.75	101	70.0 to 130	0.321	20.0
BC19659	Magnesium, Total	mg/L	0.000300	0.0462	5.00	6.14	6.26	5.10	4.25 to 5.75	101	70.0 to 130	1.94	20.0
BC19660	Manganese, Dissolved	mg/L	0.0000131	0.00033	0.100	0.120	0.119	0.105	0.0850 to 0.115	100	70.0 to 130	0.837	20.0
BC19659	Manganese, Total	mg/L	0.000128	0.00033	0.100	0.112	0.110	0.104	0.0850 to 0.115	103	70.0 to 130	1.80	20.0
BC19659	Mercury, Total by CVAA	mg/L	1.000E-05	0.000500	0.004	0.00404	0.00422	0.00407	0.00340 to 0.00460	101	70.0 to 130	4.36	20.0
BC19660	Molybdenum, Dissolved	mg/L	0.0000133	0.0002	0.100	0.0942	0.0940	0.0989	0.0850 to 0.115	94.2	70.0 to 130	0.213	20.0
BC19659	Molybdenum, Total	mg/L	-0.000003	0.0002	0.100	0.0990	0.0966	0.0988	0.0850 to 0.115	99.0	70.0 to 130	2.45	20.0
BC19660	Potassium, Dissolved	mg/L	-0.00218	0.367	10.0	10.9	10.8	10.4	8.50 to 11.5	99.2	70.0 to 130	0.922	20.0
BC19659	Potassium, Total	mg/L	0.0461	0.367	10.0	10.6	10.6	10.2	8.50 to 11.5	101	70.0 to 130	0.00	20.0
BC19660	Selenium, Dissolved	mg/L	0.0000887	0.00100	0.100	0.0977	0.0983	0.105	0.0850 to 0.115	96.2	70.0 to 130	0.612	20.0
BC19659	Selenium, Total	mg/L	0.0000408	0.00100	0.100	0.0993	0.101	0.104	0.0850 to 0.115	99.3	70.0 to 130	1.70	20.0
BC19660	Silicon, Dissolved	mg/L	-0.000043	0.0440	1.00	4.66	4.63	1.01	0.850 to 1.15	104	70.0 to 130	0.646	20.0
BC19659	Silicon, Total	mg/L	0.00120	0.0440	1.00	8.27	8.39	1.03	0.850 to 1.15	95.0	70.0 to 130	1.44	20.0
BC19660	Sodium, Dissolved	mg/L	0.000963	0.0660	5.00	10.8	10.1	5.00	4.25 to 5.75	108	70.0 to 130	6.70	20.0
BC19659	Sodium, Total	mg/L	0.00985	0.0660	5.00	8.66	8.83	4.99	4.25 to 5.75	101	70.0 to 130	1.94	20.0
BC19659	Sulfate	mg/L	-0.0301	2.0	20.0	20.7	21.0	20.0	18.0 to 22.0	98.5	80.0 to 120	1.44	20.0
BC19660	Thallium, Dissolved	mg/L	0.000011	0.000147	0.100	0.101	0.0991	0.101	0.0850 to 0.115	101	70.0 to 130	1.90	20.0
BC19659	Thallium, Total	mg/L	0.0000143	0.000147	0.100	0.102	0.100	0.0993	0.0850 to 0.115	102	70.0 to 130	1.98	20.0
BC19659	Total Organic Carbon	mg/L	0.266	1.00	10.0	10.3	11.4	24.2		103	80.0 to 120	10.1	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 09:36  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-22VB

**Laboratory ID Number:** BC19655

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19671	Alkalinity to pH 4.5	mg CaCO3/L					178	50.7	45.0 to 55.0			0.563	10.0
BC19659	Nitrogen, Nitrate/Nitrite	mg/L as N	0.07	0.200	2.00	3.02	1.13	2.06	1.80 to 2.20	94.5	90.0 to 110	0.00	15.0
BC19657	Solids, Dissolved	mg/L	0.0000	25.0			204	49.0	40.0 to 60.0			0.985	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-19H

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 10:25  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19656

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 11:34		1.015	0.327	mg/L	0.030000	0.1015	
* Calcium, Total	10/28/22 11:50	11/4/22 17:25		10.15	51.6	mg/L	0.70035	4.06	
* Iron, Total	10/28/22 11:50	11/3/22 11:34		1.015	0.609	mg/L	0.008120	0.0406	
* Lithium, Total	10/28/22 11:50	11/3/22 11:34		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/28/22 11:50	11/3/22 11:34		1.015	7.30	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 11:34		1	17.9	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 11:34		1.015	8.38	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/3/22 11:34		1.015	13.9	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 13:51		1.015	0.337	mg/L	0.030000	0.1015	
* Calcium, Dissolved	10/28/22 08:43	10/31/22 13:51		1.015	38.3	mg/L	0.070035	0.406	
* Iron, Dissolved	10/28/22 08:43	10/31/22 13:51		1.015	0.550	mg/L	0.008120	0.0406	
* Lithium, Dissolved	10/28/22 08:43	10/31/22 13:51		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 12:23		1.015	7.48	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 13:51		1	17.3	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 13:51		1.015	8.09	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	10/31/22 13:51		1.015	13.9	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 14:11		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Total	10/28/22 11:50	10/28/22 14:11		1.015	0.0112	mg/L	0.006090	0.01015	
* Arsenic, Total	10/28/22 11:50	10/28/22 14:11		1.015	0.000583	mg/L	0.000081	0.000203	
* Barium, Total	10/28/22 11:50	10/28/22 14:11		1.015	0.159	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 14:11		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 14:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/28/22 11:50	10/28/22 14:11		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	10/28/22 11:50	10/28/22 14:11		1.015	0.00294	mg/L	0.000068	0.000203	
* Lead, Total	10/28/22 11:50	10/28/22 14:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 14:11		1.015	0.563	mg/L	0.000152	0.001015	
* Molybdenum, Total	10/28/22 11:50	10/28/22 14:11		1.015	0.000136	mg/L	0.000102	0.000203	J
* Potassium, Total	10/28/22 11:50	10/28/22 14:11		1.015	0.958	mg/L	0.169505	0.5075	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-19H

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 10:25  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19656

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 14:11		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 14:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 11:08		1.015	0.000751	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 11:08		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 11:08		1.015	0.000598	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 11:08		1.015	0.153	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 11:08		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 11:08		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 11:08		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 11:08		1.015	0.00289	mg/L	0.000068	0.000203	
* Lead, Dissolved	10/28/22 08:43	10/28/22 11:08		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 11:08		1.015	0.551	mg/L	0.000152	0.001015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 11:08		1.015	0.000171	mg/L	0.000102	0.000203	J
* Potassium, Dissolved	10/28/22 08:43	10/28/22 11:08		1.015	0.968	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 11:08		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 11:08		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/3/22 22:24		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 11:31	10/28/22 11:31		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/8/22 08:50	11/8/22 15:09		1	91.9	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/27/22 12:00	10/31/22 10:08		1	207	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	91.8	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	Not Detected	mg CaCO3/L		0.5	
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/27/22 18:21	10/27/22 18:21		1	1.06	mg/L	1.00	2	J

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-19H

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 10:25  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19656

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/27/22 14:49	10/27/22 14:49		1	7.04	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 11:01	10/28/22 11:01		1	Not Detected	mg/L	0.06	0.125	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 09:16	11/1/22 09:16		3	55.1	mg/L	1.8	6	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/26/22 10:22	10/26/22 10:22			362.90	uS/cm			FA
pH	10/26/22 10:22	10/26/22 10:22			6.25	SU			FA
Temperature	10/26/22 10:22	10/26/22 10:22			18.57	C			FA
Turbidity	10/26/22 10:22	10/26/22 10:22			2.09	NTU			FA
Sulfide	10/26/22 10:22	10/26/22 10:22			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 10:25  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-19H

**Laboratory ID Number:** BC19656

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19660	Aluminum, Dissolved	mg/L	0.0000549	0.010	0.100	0.141	0.140	0.103	0.0850 to 0.115	99.5	70.0 to 130	0.712	20.0
BC19659	Aluminum, Total	mg/L	0.000961	0.010	0.100	0.111	0.111	0.103	0.0850 to 0.115	99.6	70.0 to 130	0.00	20.0
BC19660	Antimony, Dissolved	mg/L	0.0000571	0.00100	0.100	0.0858	0.0867	0.0871	0.0850 to 0.115	85.0	70.0 to 130	1.04	20.0
BC19659	Antimony, Total	mg/L	0.000028	0.00100	0.100	0.0953	0.0932	0.0918	0.0850 to 0.115	95.3	70.0 to 130	2.23	20.0
BC19660	Arsenic, Dissolved	mg/L	0.0000398	0.000176	0.100	0.0959	0.0990	0.102	0.0850 to 0.115	95.6	70.0 to 130	3.18	20.0
BC19659	Arsenic, Total	mg/L	0.0000953	0.000176	0.100	0.0965	0.0982	0.0989	0.0850 to 0.115	96.5	70.0 to 130	1.75	20.0
BC19660	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.130	0.129	0.0919	0.0850 to 0.115	93.6	70.0 to 130	0.772	20.0
BC19659	Barium, Total	mg/L	-0.0000058	0.00100	0.100	0.148	0.140	0.0970	0.0850 to 0.115	101	70.0 to 130	5.56	20.0
BC19660	Beryllium, Dissolved	mg/L	0.0000222	0.000880	0.100	0.0941	0.0936	0.0966	0.0850 to 0.115	94.1	70.0 to 130	0.533	20.0
BC19659	Beryllium, Total	mg/L	0.0000213	0.000880	0.100	0.0938	0.0947	0.0944	0.0850 to 0.115	93.8	70.0 to 130	0.955	20.0
BC19660	Boron, Dissolved	mg/L	-0.00146	0.0650	1.00	1.08	1.07	0.990	0.850 to 1.15	100	70.0 to 130	0.930	20.0
BC19659	Boron, Total	mg/L	0.00226	0.0650	1.00	0.989	1.01	0.999	0.850 to 1.15	98.9	70.0 to 130	2.10	20.0
BC19660	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0976	0.0979	0.100	0.0850 to 0.115	97.6	70.0 to 130	0.307	20.0
BC19659	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.100	0.100	0.101	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BC19660	Calcium, Dissolved	mg/L	0.00894	0.152	5.00	14.2	14.8	5.08	4.25 to 5.75	93.2	70.0 to 130	4.14	20.0
BC19659	Calcium, Total	mg/L	-0.00258	0.152	5.00	8.26	8.43	5.30	4.25 to 5.75	103	70.0 to 130	2.04	20.0
BC19659	Chloride	mg/L	0.123	1.00	10.0	14.5	14.5	9.95	9.00 to 11.0	105	80.0 to 120	0.00	20.0
BC19660	Chromium, Dissolved	mg/L	0.0000111	0.000440	0.100	0.0975	0.0980	0.102	0.0850 to 0.115	97.5	70.0 to 130	0.512	20.0
BC19659	Chromium, Total	mg/L	0.000129	0.000440	0.100	0.100	0.0986	0.101	0.0850 to 0.115	99.7	70.0 to 130	1.41	20.0
BC19660	Cobalt, Dissolved	mg/L	0.0000002	0.000147	0.100	0.0999	0.101	0.105	0.0850 to 0.115	99.4	70.0 to 130	1.10	20.0
BC19659	Cobalt, Total	mg/L	-0.0000001	0.000147	0.100	0.102	0.101	0.104	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BC19659	Fluoride	mg/L	0.0256	0.125	2.50	2.39	2.51	2.60	2.25 to 2.75	95.6	80.0 to 120	4.90	20.0
BC19660	Iron, Dissolved	mg/L	-0.000185	0.0176	0.2	0.205	0.207	0.202	0.170 to 0.230	102	70.0 to 130	0.971	20.0
BC19659	Iron, Total	mg/L	0.00114	0.0176	0.2	0.218	0.224	0.211	0.170 to 0.230	104	70.0 to 130	2.71	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.



# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 10:25  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-19H

**Laboratory ID Number:** BC19656

Sample	Analysis	Units	MB				Standard			Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19660	Lead, Dissolved	mg/L	0.0000074	0.000147	0.100	0.0998	0.0998	0.102	0.0850 to 0.115	99.8	70.0 to 130	0.00	20.0
BC19659	Lead, Total	mg/L	0.0000062	0.000147	0.100	0.101	0.101	0.0998	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BC19660	Lithium, Dissolved	mg/L	-0.000107	0.0154	0.200	0.213	0.196	0.197	0.170 to 0.230	106	70.0 to 130	8.31	20.0
BC19659	Lithium, Total	mg/L	4.040E-05	0.0154	0.200	0.207	0.211	0.204	0.170 to 0.230	104	70.0 to 130	1.91	20.0
BC19660	Magnesium, Dissolved	mg/L	-0.0132	0.0462	5.00	9.36	9.33	5.18	4.25 to 5.75	101	70.0 to 130	0.321	20.0
BC19659	Magnesium, Total	mg/L	0.000300	0.0462	5.00	6.14	6.26	5.10	4.25 to 5.75	101	70.0 to 130	1.94	20.0
BC19660	Manganese, Dissolved	mg/L	0.0000131	0.00033	0.100	0.120	0.119	0.105	0.0850 to 0.115	100	70.0 to 130	0.837	20.0
BC19659	Manganese, Total	mg/L	0.000128	0.00033	0.100	0.112	0.110	0.104	0.0850 to 0.115	103	70.0 to 130	1.80	20.0
BC19659	Mercury, Total by CVAA	mg/L	1.000E-05	0.000500	0.004	0.00404	0.00422	0.00407	0.00340 to 0.00460	101	70.0 to 130	4.36	20.0
BC19660	Molybdenum, Dissolved	mg/L	0.0000133	0.0002	0.100	0.0942	0.0940	0.0989	0.0850 to 0.115	94.2	70.0 to 130	0.213	20.0
BC19659	Molybdenum, Total	mg/L	-0.000003	0.0002	0.100	0.0990	0.0966	0.0988	0.0850 to 0.115	99.0	70.0 to 130	2.45	20.0
BC19660	Potassium, Dissolved	mg/L	-0.00218	0.367	10.0	10.9	10.8	10.4	8.50 to 11.5	99.2	70.0 to 130	0.922	20.0
BC19659	Potassium, Total	mg/L	0.0461	0.367	10.0	10.6	10.6	10.2	8.50 to 11.5	101	70.0 to 130	0.00	20.0
BC19660	Selenium, Dissolved	mg/L	0.0000887	0.00100	0.100	0.0977	0.0983	0.105	0.0850 to 0.115	96.2	70.0 to 130	0.612	20.0
BC19659	Selenium, Total	mg/L	0.0000408	0.00100	0.100	0.0993	0.101	0.104	0.0850 to 0.115	99.3	70.0 to 130	1.70	20.0
BC19660	Silicon, Dissolved	mg/L	-0.000043	0.0440	1.00	4.66	4.63	1.01	0.850 to 1.15	104	70.0 to 130	0.646	20.0
BC19659	Silicon, Total	mg/L	0.00120	0.0440	1.00	8.27	8.39	1.03	0.850 to 1.15	95.0	70.0 to 130	1.44	20.0
BC19660	Sodium, Dissolved	mg/L	0.000963	0.0660	5.00	10.8	10.1	5.00	4.25 to 5.75	108	70.0 to 130	6.70	20.0
BC19659	Sodium, Total	mg/L	0.00985	0.0660	5.00	8.66	8.83	4.99	4.25 to 5.75	101	70.0 to 130	1.94	20.0
BC19659	Sulfate	mg/L	-0.0301	2.0	20.0	20.7	21.0	20.0	18.0 to 22.0	98.5	80.0 to 120	1.44	20.0
BC19660	Thallium, Dissolved	mg/L	0.000011	0.000147	0.100	0.101	0.0991	0.101	0.0850 to 0.115	101	70.0 to 130	1.90	20.0
BC19659	Thallium, Total	mg/L	0.0000143	0.000147	0.100	0.102	0.100	0.0993	0.0850 to 0.115	102	70.0 to 130	1.98	20.0
BC19659	Total Organic Carbon	mg/L	0.266	1.00	10.0	10.3	11.4	24.2		103	80.0 to 120	10.1	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 10:25  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-19H

**Laboratory ID Number:** BC19656

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19671	Alkalinity to pH 4.5	mg CaCO3/L					178	50.7	45.0 to 55.0			0.563	10.0
BC19659	Nitrogen, Nitrate/Nitrite	mg/L as N	0.07	0.200	2.00	3.02	1.13	2.06	1.80 to 2.20	94.5	90.0 to 110	0.00	15.0
BC19657	Solids, Dissolved	mg/L	0.0000	25.0			204	49.0	40.0 to 60.0			0.985	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-19H Dup

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 10:25  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19657

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 11:38		1.015	0.327	mg/L	0.030000	0.1015	
* Calcium, Total	10/28/22 11:50	11/4/22 17:28		10.15	46.5	mg/L	0.70035	4.06	
* Iron, Total	10/28/22 11:50	11/3/22 11:38		1.015	0.592	mg/L	0.008120	0.0406	
* Lithium, Total	10/28/22 11:50	11/3/22 11:38		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/28/22 11:50	11/3/22 11:38		1.015	7.38	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 11:38		1	18.1	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 11:38		1.015	8.46	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/3/22 11:38		1.015	14.0	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 13:54		1.015	0.338	mg/L	0.030000	0.1015	
* Calcium, Dissolved	10/28/22 08:43	10/31/22 13:54		1.015	38.5	mg/L	0.070035	0.406	
* Iron, Dissolved	10/28/22 08:43	10/31/22 13:54		1.015	0.537	mg/L	0.008120	0.0406	
* Lithium, Dissolved	10/28/22 08:43	10/31/22 13:54		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 12:26		1.015	7.38	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 13:54		1	17.6	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 13:54		1.015	8.21	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	10/31/22 13:54		1.015	13.7	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 14:15		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Total	10/28/22 11:50	10/28/22 14:15		1.015	0.0105	mg/L	0.006090	0.01015	
* Arsenic, Total	10/28/22 11:50	10/28/22 14:15		1.015	0.000499	mg/L	0.000081	0.000203	
* Barium, Total	10/28/22 11:50	10/28/22 14:15		1.015	0.158	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 14:15		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 14:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/28/22 11:50	10/28/22 14:15		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	10/28/22 11:50	10/28/22 14:15		1.015	0.00292	mg/L	0.000068	0.000203	
* Lead, Total	10/28/22 11:50	10/28/22 14:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 14:15		1.015	0.553	mg/L	0.000152	0.001015	
* Molybdenum, Total	10/28/22 11:50	10/28/22 14:15		1.015	0.000169	mg/L	0.000102	0.000203	J
* Potassium, Total	10/28/22 11:50	10/28/22 14:15		1.015	0.944	mg/L	0.169505	0.5075	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-19H Dup

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 10:25  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19657

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 14:15		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 14:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 11:11		1.015	0.000817	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 11:11		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 11:11		1.015	0.000588	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 11:11		1.015	0.156	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 11:11		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 11:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 11:11		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 11:11		1.015	0.00287	mg/L	0.000068	0.000203	
* Lead, Dissolved	10/28/22 08:43	10/28/22 11:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 11:11		1.015	0.559	mg/L	0.000152	0.001015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 11:11		1.015	0.000170	mg/L	0.000102	0.000203	J
* Potassium, Dissolved	10/28/22 08:43	10/28/22 11:11		1.015	0.958	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 11:11		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 11:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/3/22 22:27		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 11:32	10/28/22 11:32		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/8/22 08:50	11/8/22 15:09		1	90.5	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/27/22 12:00	10/31/22 10:08		1	202	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	90.4	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	Not Detected	mg CaCO3/L		0.5	
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/27/22 18:36	10/27/22 18:36		1	Not Detected	mg/L	1.00	2	U

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-19H Dup

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 10:25  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19657

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/27/22 14:50	10/27/22 14:50		1	7.01	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 11:02	10/28/22 11:02		1	Not Detected	mg/L	0.06	0.125	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 09:18	11/1/22 09:18		3	54.6	mg/L	1.8	6	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/26/22 10:22	10/26/22 10:22			362.90	uS/cm			FA
pH	10/26/22 10:22	10/26/22 10:22			6.25	SU			FA
Temperature	10/26/22 10:22	10/26/22 10:22			18.57	C			FA
Turbidity	10/26/22 10:22	10/26/22 10:22			2.09	NTU			FA
Sulfide	10/26/22 10:22	10/26/22 10:22			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 10:25  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-19H Dup

**Laboratory ID Number:** BC19657

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19660	Aluminum, Dissolved	mg/L	0.0000549	0.010	0.100	0.141	0.140	0.103	0.0850 to 0.115	99.5	70.0 to 130	0.712	20.0
BC19659	Aluminum, Total	mg/L	0.000961	0.010	0.100	0.111	0.111	0.103	0.0850 to 0.115	99.6	70.0 to 130	0.00	20.0
BC19660	Antimony, Dissolved	mg/L	0.0000571	0.00100	0.100	0.0858	0.0867	0.0871	0.0850 to 0.115	85.0	70.0 to 130	1.04	20.0
BC19659	Antimony, Total	mg/L	0.000028	0.00100	0.100	0.0953	0.0932	0.0918	0.0850 to 0.115	95.3	70.0 to 130	2.23	20.0
BC19660	Arsenic, Dissolved	mg/L	0.0000398	0.000176	0.100	0.0959	0.0990	0.102	0.0850 to 0.115	95.6	70.0 to 130	3.18	20.0
BC19659	Arsenic, Total	mg/L	0.0000953	0.000176	0.100	0.0965	0.0982	0.0989	0.0850 to 0.115	96.5	70.0 to 130	1.75	20.0
BC19660	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.130	0.129	0.0919	0.0850 to 0.115	93.6	70.0 to 130	0.772	20.0
BC19659	Barium, Total	mg/L	-0.0000058	0.00100	0.100	0.148	0.140	0.0970	0.0850 to 0.115	101	70.0 to 130	5.56	20.0
BC19660	Beryllium, Dissolved	mg/L	0.0000222	0.000880	0.100	0.0941	0.0936	0.0966	0.0850 to 0.115	94.1	70.0 to 130	0.533	20.0
BC19659	Beryllium, Total	mg/L	0.0000213	0.000880	0.100	0.0938	0.0947	0.0944	0.0850 to 0.115	93.8	70.0 to 130	0.955	20.0
BC19660	Boron, Dissolved	mg/L	-0.00146	0.0650	1.00	1.08	1.07	0.990	0.850 to 1.15	100	70.0 to 130	0.930	20.0
BC19659	Boron, Total	mg/L	0.00226	0.0650	1.00	0.989	1.01	0.999	0.850 to 1.15	98.9	70.0 to 130	2.10	20.0
BC19660	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0976	0.0979	0.100	0.0850 to 0.115	97.6	70.0 to 130	0.307	20.0
BC19659	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.100	0.100	0.101	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BC19660	Calcium, Dissolved	mg/L	0.00894	0.152	5.00	14.2	14.8	5.08	4.25 to 5.75	93.2	70.0 to 130	4.14	20.0
BC19659	Calcium, Total	mg/L	-0.00258	0.152	5.00	8.26	8.43	5.30	4.25 to 5.75	103	70.0 to 130	2.04	20.0
BC19659	Chloride	mg/L	0.123	1.00	10.0	14.5	14.5	9.95	9.00 to 11.0	105	80.0 to 120	0.00	20.0
BC19660	Chromium, Dissolved	mg/L	0.0000111	0.000440	0.100	0.0975	0.0980	0.102	0.0850 to 0.115	97.5	70.0 to 130	0.512	20.0
BC19659	Chromium, Total	mg/L	0.000129	0.000440	0.100	0.100	0.0986	0.101	0.0850 to 0.115	99.7	70.0 to 130	1.41	20.0
BC19660	Cobalt, Dissolved	mg/L	0.0000002	0.000147	0.100	0.0999	0.101	0.105	0.0850 to 0.115	99.4	70.0 to 130	1.10	20.0
BC19659	Cobalt, Total	mg/L	-0.0000001	0.000147	0.100	0.102	0.101	0.104	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BC19659	Fluoride	mg/L	0.0256	0.125	2.50	2.39	2.51	2.60	2.25 to 2.75	95.6	80.0 to 120	4.90	20.0
BC19660	Iron, Dissolved	mg/L	-0.000185	0.0176	0.2	0.205	0.207	0.202	0.170 to 0.230	102	70.0 to 130	0.971	20.0
BC19659	Iron, Total	mg/L	0.00114	0.0176	0.2	0.218	0.224	0.211	0.170 to 0.230	104	70.0 to 130	2.71	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 10:25  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-19H Dup

**Laboratory ID Number:** BC19657

Sample	Analysis	Units	MB	MB		MS	MSD	Standard		Rec		Prec	Limit
				Limit	Spike			Standard	Limit	Rec	Limit		
BC19660	Lead, Dissolved	mg/L	0.0000074	0.000147	0.100	0.0998	0.0998	0.102	0.0850 to 0.115	99.8	70.0 to 130	0.00	20.0
BC19659	Lead, Total	mg/L	0.0000062	0.000147	0.100	0.101	0.101	0.0998	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BC19660	Lithium, Dissolved	mg/L	-0.000107	0.0154	0.200	0.213	0.196	0.197	0.170 to 0.230	106	70.0 to 130	8.31	20.0
BC19659	Lithium, Total	mg/L	4.040E-05	0.0154	0.200	0.207	0.211	0.204	0.170 to 0.230	104	70.0 to 130	1.91	20.0
BC19660	Magnesium, Dissolved	mg/L	-0.0132	0.0462	5.00	9.36	9.33	5.18	4.25 to 5.75	101	70.0 to 130	0.321	20.0
BC19659	Magnesium, Total	mg/L	0.000300	0.0462	5.00	6.14	6.26	5.10	4.25 to 5.75	101	70.0 to 130	1.94	20.0
BC19660	Manganese, Dissolved	mg/L	0.0000131	0.00033	0.100	0.120	0.119	0.105	0.0850 to 0.115	100	70.0 to 130	0.837	20.0
BC19659	Manganese, Total	mg/L	0.000128	0.00033	0.100	0.112	0.110	0.104	0.0850 to 0.115	103	70.0 to 130	1.80	20.0
BC19659	Mercury, Total by CVAA	mg/L	1.000E-05	0.000500	0.004	0.00404	0.00422	0.00407	0.00340 to 0.00460	101	70.0 to 130	4.36	20.0
BC19660	Molybdenum, Dissolved	mg/L	0.0000133	0.0002	0.100	0.0942	0.0940	0.0989	0.0850 to 0.115	94.2	70.0 to 130	0.213	20.0
BC19659	Molybdenum, Total	mg/L	-0.000003	0.0002	0.100	0.0990	0.0966	0.0988	0.0850 to 0.115	99.0	70.0 to 130	2.45	20.0
BC19660	Potassium, Dissolved	mg/L	-0.00218	0.367	10.0	10.9	10.8	10.4	8.50 to 11.5	99.2	70.0 to 130	0.922	20.0
BC19659	Potassium, Total	mg/L	0.0461	0.367	10.0	10.6	10.6	10.2	8.50 to 11.5	101	70.0 to 130	0.00	20.0
BC19660	Selenium, Dissolved	mg/L	0.0000887	0.00100	0.100	0.0977	0.0983	0.105	0.0850 to 0.115	96.2	70.0 to 130	0.612	20.0
BC19659	Selenium, Total	mg/L	0.0000408	0.00100	0.100	0.0993	0.101	0.104	0.0850 to 0.115	99.3	70.0 to 130	1.70	20.0
BC19660	Silicon, Dissolved	mg/L	-0.000043	0.0440	1.00	4.66	4.63	1.01	0.850 to 1.15	104	70.0 to 130	0.646	20.0
BC19659	Silicon, Total	mg/L	0.00120	0.0440	1.00	8.27	8.39	1.03	0.850 to 1.15	95.0	70.0 to 130	1.44	20.0
BC19660	Sodium, Dissolved	mg/L	0.000963	0.0660	5.00	10.8	10.1	5.00	4.25 to 5.75	108	70.0 to 130	6.70	20.0
BC19659	Sodium, Total	mg/L	0.00985	0.0660	5.00	8.66	8.83	4.99	4.25 to 5.75	101	70.0 to 130	1.94	20.0
BC19659	Sulfate	mg/L	-0.0301	2.0	20.0	20.7	21.0	20.0	18.0 to 22.0	98.5	80.0 to 120	1.44	20.0
BC19660	Thallium, Dissolved	mg/L	0.000011	0.000147	0.100	0.101	0.0991	0.101	0.0850 to 0.115	101	70.0 to 130	1.90	20.0
BC19659	Thallium, Total	mg/L	0.0000143	0.000147	0.100	0.102	0.100	0.0993	0.0850 to 0.115	102	70.0 to 130	1.98	20.0
BC19659	Total Organic Carbon	mg/L	0.266	1.00	10.0	10.3	11.4	24.2		103	80.0 to 120	10.1	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 10:25  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-19H Dup

**Laboratory ID Number:** BC19657

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19671	Alkalinity to pH 4.5	mg CaCO3/L					178	50.7	45.0 to 55.0			0.563	10.0
BC19659	Nitrogen, Nitrate/Nitrite	mg/L as N	0.07	0.200	2.00	3.02	1.13	2.06	1.80 to 2.20	94.5	90.0 to 110	0.00	15.0
BC19657	Solids, Dissolved	mg/L	0.0000	25.0			204	49.0	40.0 to 60.0			0.985	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.



# Certificate Of Analysis

**Description:** Gadsden Ash Pond - PZ-6

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 11:24  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19658

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 11:41		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	10/28/22 11:50	11/3/22 11:41		1.015	3.42	mg/L	0.070035	0.406	
* Iron, Total	10/28/22 11:50	11/3/22 11:41		1.015	0.0306	mg/L	0.008120	0.0406	J
* Lithium, Total	10/28/22 11:50	11/3/22 11:41		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/28/22 11:50	11/3/22 11:41		1.015	1.02	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 11:41		1	13.7	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 11:41		1.015	6.38	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/3/22 11:41		1.015	3.67	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 13:57		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Dissolved	10/28/22 08:43	10/31/22 13:57		1.015	3.28	mg/L	0.070035	0.406	
* Iron, Dissolved	10/28/22 08:43	10/31/22 13:57		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Dissolved	10/28/22 08:43	10/31/22 13:57		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 12:29		1.015	1.01	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 13:57		1	13.4	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 13:57		1.015	6.25	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	10/31/22 13:57		1.015	3.75	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 14:18		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Total	10/28/22 11:50	10/28/22 14:18		1.015	0.0369	mg/L	0.006090	0.01015	
* Arsenic, Total	10/28/22 11:50	10/28/22 14:18		1.015	0.000150	mg/L	0.000081	0.000203	J
* Barium, Total	10/28/22 11:50	10/28/22 14:18		1.015	0.0282	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 14:18		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 14:18		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/28/22 11:50	10/28/22 14:18		1.015	0.000224	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/28/22 11:50	10/28/22 14:18		1.015	0.0000779	mg/L	0.000068	0.000203	J
* Lead, Total	10/28/22 11:50	10/28/22 14:18		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 14:18		1.015	0.00223	mg/L	0.000152	0.001015	
* Molybdenum, Total	10/28/22 11:50	10/28/22 14:18		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Potassium, Total	10/28/22 11:50	10/28/22 14:18		1.015	0.449	mg/L	0.169505	0.5075	J

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - PZ-6

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 11:24  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19658

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 14:18		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 14:18		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 11:15		1.015	0.000778	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 11:15		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 11:15		1.015	0.000136	mg/L	0.000081	0.000203	J
* Barium, Dissolved	10/28/22 08:43	10/28/22 11:15		1.015	0.0277	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 11:15		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 11:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 11:15		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 11:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Dissolved	10/28/22 08:43	10/28/22 11:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 11:15		1.015	0.00190	mg/L	0.000152	0.001015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 11:15		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Potassium, Dissolved	10/28/22 08:43	10/28/22 11:15		1.015	0.429	mg/L	0.169505	0.5075	J
* Selenium, Dissolved	10/28/22 08:43	10/28/22 11:15		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 11:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/3/22 22:31		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 11:34	10/28/22 11:34		1	1.15	mg/L as N	0.20	0.3	
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/8/22 08:50	11/8/22 15:09		1	10.4	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/27/22 12:00	10/31/22 10:08		1	38.0	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	10.4	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	Not Detected	mg CaCO3/L		0.5	
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/27/22 18:51	10/27/22 18:51		1	Not Detected	mg/L	1.00	2	U

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - PZ-6

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 11:24  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19658

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/27/22 14:51	10/27/22 14:51		1	3.50	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 11:04	10/28/22 11:04		1	Not Detected	mg/L	0.06	0.125	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 09:10	11/1/22 09:10		1	1.70	mg/L	0.6	2	J
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/26/22 11:21	10/26/22 11:21			124.63	uS/cm			FA
pH	10/26/22 11:21	10/26/22 11:21			5.43	SU			FA
Temperature	10/26/22 11:21	10/26/22 11:21			19.30	C			FA
Turbidity	10/26/22 11:21	10/26/22 11:21			3.99	NTU			FA
Sulfide	10/26/22 11:21	10/26/22 11:21			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 11:24  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - PZ-6

**Laboratory ID Number:** BC19658

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19660	Aluminum, Dissolved	mg/L	0.0000549	0.010	0.100	0.141	0.140	0.103	0.0850 to 0.115	99.5	70.0 to 130	0.712	20.0
BC19659	Aluminum, Total	mg/L	0.000961	0.010	0.100	0.111	0.111	0.103	0.0850 to 0.115	99.6	70.0 to 130	0.00	20.0
BC19660	Antimony, Dissolved	mg/L	0.0000571	0.00100	0.100	0.0858	0.0867	0.0871	0.0850 to 0.115	85.0	70.0 to 130	1.04	20.0
BC19659	Antimony, Total	mg/L	0.000028	0.00100	0.100	0.0953	0.0932	0.0918	0.0850 to 0.115	95.3	70.0 to 130	2.23	20.0
BC19660	Arsenic, Dissolved	mg/L	0.0000398	0.000176	0.100	0.0959	0.0990	0.102	0.0850 to 0.115	95.6	70.0 to 130	3.18	20.0
BC19659	Arsenic, Total	mg/L	0.0000953	0.000176	0.100	0.0965	0.0982	0.0989	0.0850 to 0.115	96.5	70.0 to 130	1.75	20.0
BC19660	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.130	0.129	0.0919	0.0850 to 0.115	93.6	70.0 to 130	0.772	20.0
BC19659	Barium, Total	mg/L	-0.0000058	0.00100	0.100	0.148	0.140	0.0970	0.0850 to 0.115	101	70.0 to 130	5.56	20.0
BC19660	Beryllium, Dissolved	mg/L	0.0000222	0.000880	0.100	0.0941	0.0936	0.0966	0.0850 to 0.115	94.1	70.0 to 130	0.533	20.0
BC19659	Beryllium, Total	mg/L	0.0000213	0.000880	0.100	0.0938	0.0947	0.0944	0.0850 to 0.115	93.8	70.0 to 130	0.955	20.0
BC19660	Boron, Dissolved	mg/L	-0.00146	0.0650	1.00	1.08	1.07	0.990	0.850 to 1.15	100	70.0 to 130	0.930	20.0
BC19659	Boron, Total	mg/L	0.00226	0.0650	1.00	0.989	1.01	0.999	0.850 to 1.15	98.9	70.0 to 130	2.10	20.0
BC19660	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0976	0.0979	0.100	0.0850 to 0.115	97.6	70.0 to 130	0.307	20.0
BC19659	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.100	0.100	0.101	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BC19660	Calcium, Dissolved	mg/L	0.00894	0.152	5.00	14.2	14.8	5.08	4.25 to 5.75	93.2	70.0 to 130	4.14	20.0
BC19659	Calcium, Total	mg/L	-0.00258	0.152	5.00	8.26	8.43	5.30	4.25 to 5.75	103	70.0 to 130	2.04	20.0
BC19659	Chloride	mg/L	0.123	1.00	10.0	14.5	14.5	9.95	9.00 to 11.0	105	80.0 to 120	0.00	20.0
BC19660	Chromium, Dissolved	mg/L	0.0000111	0.000440	0.100	0.0975	0.0980	0.102	0.0850 to 0.115	97.5	70.0 to 130	0.512	20.0
BC19659	Chromium, Total	mg/L	0.000129	0.000440	0.100	0.100	0.0986	0.101	0.0850 to 0.115	99.7	70.0 to 130	1.41	20.0
BC19660	Cobalt, Dissolved	mg/L	0.0000002	0.000147	0.100	0.0999	0.101	0.105	0.0850 to 0.115	99.4	70.0 to 130	1.10	20.0
BC19659	Cobalt, Total	mg/L	-0.0000001	0.000147	0.100	0.102	0.101	0.104	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BC19659	Fluoride	mg/L	0.0256	0.125	2.50	2.39	2.51	2.60	2.25 to 2.75	95.6	80.0 to 120	4.90	20.0
BC19660	Iron, Dissolved	mg/L	-0.000185	0.0176	0.2	0.205	0.207	0.202	0.170 to 0.230	102	70.0 to 130	0.971	20.0
BC19659	Iron, Total	mg/L	0.00114	0.0176	0.2	0.218	0.224	0.211	0.170 to 0.230	104	70.0 to 130	2.71	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 11:24  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - PZ-6

**Laboratory ID Number:** BC19658

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19660	Lead, Dissolved	mg/L	0.0000074	0.000147	0.100	0.0998	0.0998	0.102	0.0850 to 0.115	99.8	70.0 to 130	0.00	20.0
BC19659	Lead, Total	mg/L	0.0000062	0.000147	0.100	0.101	0.101	0.0998	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BC19660	Lithium, Dissolved	mg/L	-0.000107	0.0154	0.200	0.213	0.196	0.197	0.170 to 0.230	106	70.0 to 130	8.31	20.0
BC19659	Lithium, Total	mg/L	4.040E-05	0.0154	0.200	0.207	0.211	0.204	0.170 to 0.230	104	70.0 to 130	1.91	20.0
BC19660	Magnesium, Dissolved	mg/L	-0.0132	0.0462	5.00	9.36	9.33	5.18	4.25 to 5.75	101	70.0 to 130	0.321	20.0
BC19659	Magnesium, Total	mg/L	0.000300	0.0462	5.00	6.14	6.26	5.10	4.25 to 5.75	101	70.0 to 130	1.94	20.0
BC19660	Manganese, Dissolved	mg/L	0.0000131	0.00033	0.100	0.120	0.119	0.105	0.0850 to 0.115	100	70.0 to 130	0.837	20.0
BC19659	Manganese, Total	mg/L	0.000128	0.00033	0.100	0.112	0.110	0.104	0.0850 to 0.115	103	70.0 to 130	1.80	20.0
BC19659	Mercury, Total by CVAA	mg/L	1.000E-05	0.000500	0.004	0.00404	0.00422	0.00407	0.00340 to 0.00460	101	70.0 to 130	4.36	20.0
BC19660	Molybdenum, Dissolved	mg/L	0.0000133	0.0002	0.100	0.0942	0.0940	0.0989	0.0850 to 0.115	94.2	70.0 to 130	0.213	20.0
BC19659	Molybdenum, Total	mg/L	-0.000003	0.0002	0.100	0.0990	0.0966	0.0988	0.0850 to 0.115	99.0	70.0 to 130	2.45	20.0
BC19660	Potassium, Dissolved	mg/L	-0.00218	0.367	10.0	10.9	10.8	10.4	8.50 to 11.5	99.2	70.0 to 130	0.922	20.0
BC19659	Potassium, Total	mg/L	0.0461	0.367	10.0	10.6	10.6	10.2	8.50 to 11.5	101	70.0 to 130	0.00	20.0
BC19660	Selenium, Dissolved	mg/L	0.0000887	0.00100	0.100	0.0977	0.0983	0.105	0.0850 to 0.115	96.2	70.0 to 130	0.612	20.0
BC19659	Selenium, Total	mg/L	0.0000408	0.00100	0.100	0.0993	0.101	0.104	0.0850 to 0.115	99.3	70.0 to 130	1.70	20.0
BC19660	Silicon, Dissolved	mg/L	-0.000043	0.0440	1.00	4.66	4.63	1.01	0.850 to 1.15	104	70.0 to 130	0.646	20.0
BC19659	Silicon, Total	mg/L	0.00120	0.0440	1.00	8.27	8.39	1.03	0.850 to 1.15	95.0	70.0 to 130	1.44	20.0
BC19660	Sodium, Dissolved	mg/L	0.000963	0.0660	5.00	10.8	10.1	5.00	4.25 to 5.75	108	70.0 to 130	6.70	20.0
BC19659	Sodium, Total	mg/L	0.00985	0.0660	5.00	8.66	8.83	4.99	4.25 to 5.75	101	70.0 to 130	1.94	20.0
BC19659	Sulfate	mg/L	-0.0301	2.0	20.0	20.7	21.0	20.0	18.0 to 22.0	98.5	80.0 to 120	1.44	20.0
BC19660	Thallium, Dissolved	mg/L	0.000011	0.000147	0.100	0.101	0.0991	0.101	0.0850 to 0.115	101	70.0 to 130	1.90	20.0
BC19659	Thallium, Total	mg/L	0.0000143	0.000147	0.100	0.102	0.100	0.0993	0.0850 to 0.115	102	70.0 to 130	1.98	20.0
BC19659	Total Organic Carbon	mg/L	0.266	1.00	10.0	10.3	11.4	24.2		103	80.0 to 120	10.1	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 11:24  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - PZ-6

**Laboratory ID Number:** BC19658

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19671	Alkalinity to pH 4.5	mg CaCO3/L					178	50.7	45.0 to 55.0			0.563	10.0
BC19659	Nitrogen, Nitrate/Nitrite	mg/L as N	0.07	0.200	2.00	3.02	1.13	2.06	1.80 to 2.20	94.5	90.0 to 110	0.00	15.0
BC19667	Solids, Dissolved	mg/L	0.0000	25.0			177	49.0	40.0 to 60.0			0.563	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond -PZ-5

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 12:23  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19659

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 11:45		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	10/28/22 11:50	11/3/22 11:45		1.015	3.09	mg/L	0.070035	0.406	
* Iron, Total	10/28/22 11:50	11/3/22 11:45		1.015	0.00903	mg/L	0.008120	0.0406	J
* Lithium, Total	10/28/22 11:50	11/3/22 11:45		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/28/22 11:50	11/3/22 11:45		1.015	1.11	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 11:45		1	15.7	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 11:45		1.015	7.32	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/3/22 11:45		1.015	3.59	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 14:00		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Dissolved	10/28/22 08:43	10/31/22 14:00		1.015	2.91	mg/L	0.070035	0.406	
* Iron, Dissolved	10/28/22 08:43	10/31/22 14:00		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Dissolved	10/28/22 08:43	10/31/22 14:00		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 12:33		1.015	1.11	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 14:00		1	15.2	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 14:00		1.015	7.09	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	10/31/22 14:00		1.015	3.79	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 14:22		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Total	10/28/22 11:50	10/28/22 14:22		1.015	0.0114	mg/L	0.006090	0.01015	
* Arsenic, Total	10/28/22 11:50	10/28/22 14:22		1.015	Not Detected	mg/L	0.000081	0.000203	U
* Barium, Total	10/28/22 11:50	10/28/22 14:22		1.015	0.0474	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 14:22		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 14:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/28/22 11:50	10/28/22 14:22		1.015	0.000251	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/28/22 11:50	10/28/22 14:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	10/28/22 11:50	10/28/22 14:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 14:22		1.015	0.00906	mg/L	0.000152	0.001015	
* Molybdenum, Total	10/28/22 11:50	10/28/22 14:22		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Potassium, Total	10/28/22 11:50	10/28/22 14:22		1.015	0.546	mg/L	0.169505	0.5075	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond -PZ-5

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 12:23  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19659

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 14:22		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 14:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 11:19		1.015	0.000862	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 11:19		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 11:19		1.015	0.000163	mg/L	0.000081	0.000203	J
* Barium, Dissolved	10/28/22 08:43	10/28/22 11:19		1.015	0.0463	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 11:19		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 11:19		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 11:19		1.015	0.000231	mg/L	0.000203	0.001015	J
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 11:19		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Dissolved	10/28/22 08:43	10/28/22 11:19		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 11:19		1.015	0.00495	mg/L	0.000152	0.001015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 11:19		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Potassium, Dissolved	10/28/22 08:43	10/28/22 11:19		1.015	0.521	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 11:19		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 11:19		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/3/22 22:35		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 11:36	10/28/22 11:36		1	1.13	mg/L as N	0.20	0.3	
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/8/22 08:50	11/8/22 15:09		1	10.5	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/27/22 12:00	10/31/22 10:08		1	45.3	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	10.5	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	Not Detected	mg CaCO3/L		0.5	
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/27/22 19:05	10/27/22 19:05		1	Not Detected	mg/L	1.00	2	U

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.



# Certificate Of Analysis

**Description:** Gadsden Ash Pond -PZ-5

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 12:23  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19659

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/27/22 14:52	10/27/22 14:52		1	4.03	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 11:05	10/28/22 11:05		1	Not Detected	mg/L	0.06	0.125	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 09:12	11/1/22 09:12		1	0.992	mg/L	0.6	2	J
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/26/22 12:20	10/26/22 12:20			124.69	uS/cm			FA
pH	10/26/22 12:20	10/26/22 12:20			5.31	SU			FA
Temperature	10/26/22 12:20	10/26/22 12:20			16.90	C			FA
Turbidity	10/26/22 12:20	10/26/22 12:20			1.84	NTU			FA
Sulfide	10/26/22 12:20	10/26/22 12:20			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 12:23  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond -PZ-5

**Laboratory ID Number:** BC19659

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19660	Aluminum, Dissolved	mg/L	0.0000549	0.010	0.100	0.141	0.140	0.103	0.0850 to 0.115	99.5	70.0 to 130	0.712	20.0
BC19659	Aluminum, Total	mg/L	0.000961	0.010	0.100	0.111	0.111	0.103	0.0850 to 0.115	99.6	70.0 to 130	0.00	20.0
BC19660	Antimony, Dissolved	mg/L	0.0000571	0.00100	0.100	0.0858	0.0867	0.0871	0.0850 to 0.115	85.0	70.0 to 130	1.04	20.0
BC19659	Antimony, Total	mg/L	0.000028	0.00100	0.100	0.0953	0.0932	0.0918	0.0850 to 0.115	95.3	70.0 to 130	2.23	20.0
BC19660	Arsenic, Dissolved	mg/L	0.0000398	0.000176	0.100	0.0959	0.0990	0.102	0.0850 to 0.115	95.6	70.0 to 130	3.18	20.0
BC19659	Arsenic, Total	mg/L	0.0000953	0.000176	0.100	0.0965	0.0982	0.0989	0.0850 to 0.115	96.5	70.0 to 130	1.75	20.0
BC19660	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.130	0.129	0.0919	0.0850 to 0.115	93.6	70.0 to 130	0.772	20.0
BC19659	Barium, Total	mg/L	-0.0000058	0.00100	0.100	0.148	0.140	0.0970	0.0850 to 0.115	101	70.0 to 130	5.56	20.0
BC19660	Beryllium, Dissolved	mg/L	0.0000222	0.000880	0.100	0.0941	0.0936	0.0966	0.0850 to 0.115	94.1	70.0 to 130	0.533	20.0
BC19659	Beryllium, Total	mg/L	0.0000213	0.000880	0.100	0.0938	0.0947	0.0944	0.0850 to 0.115	93.8	70.0 to 130	0.955	20.0
BC19660	Boron, Dissolved	mg/L	-0.00146	0.0650	1.00	1.08	1.07	0.990	0.850 to 1.15	100	70.0 to 130	0.930	20.0
BC19659	Boron, Total	mg/L	0.00226	0.0650	1.00	0.989	1.01	0.999	0.850 to 1.15	98.9	70.0 to 130	2.10	20.0
BC19660	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0976	0.0979	0.100	0.0850 to 0.115	97.6	70.0 to 130	0.307	20.0
BC19659	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.100	0.100	0.101	0.0850 to 0.115	100	70.0 to 130	0.00	20.0
BC19660	Calcium, Dissolved	mg/L	0.00894	0.152	5.00	14.2	14.8	5.08	4.25 to 5.75	93.2	70.0 to 130	4.14	20.0
BC19659	Calcium, Total	mg/L	-0.00258	0.152	5.00	8.26	8.43	5.30	4.25 to 5.75	103	70.0 to 130	2.04	20.0
BC19659	Chloride	mg/L	0.123	1.00	10.0	14.5	14.5	9.95	9.00 to 11.0	105	80.0 to 120	0.00	20.0
BC19660	Chromium, Dissolved	mg/L	0.0000111	0.000440	0.100	0.0975	0.0980	0.102	0.0850 to 0.115	97.5	70.0 to 130	0.512	20.0
BC19659	Chromium, Total	mg/L	0.000129	0.000440	0.100	0.100	0.0986	0.101	0.0850 to 0.115	99.7	70.0 to 130	1.41	20.0
BC19660	Cobalt, Dissolved	mg/L	0.0000002	0.000147	0.100	0.0999	0.101	0.105	0.0850 to 0.115	99.4	70.0 to 130	1.10	20.0
BC19659	Cobalt, Total	mg/L	-0.0000001	0.000147	0.100	0.102	0.101	0.104	0.0850 to 0.115	102	70.0 to 130	0.985	20.0
BC19659	Fluoride	mg/L	0.0256	0.125	2.50	2.39	2.51	2.60	2.25 to 2.75	95.6	80.0 to 120	4.90	20.0
BC19660	Iron, Dissolved	mg/L	-0.000185	0.0176	0.2	0.205	0.207	0.202	0.170 to 0.230	102	70.0 to 130	0.971	20.0
BC19659	Iron, Total	mg/L	0.00114	0.0176	0.2	0.218	0.224	0.211	0.170 to 0.230	104	70.0 to 130	2.71	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 12:23  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond -PZ-5

**Laboratory ID Number:** BC19659

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19660	Lead, Dissolved	mg/L	0.0000074	0.000147	0.100	0.0998	0.0998	0.102	0.0850 to 0.115	99.8	70.0 to 130	0.00	20.0
BC19659	Lead, Total	mg/L	0.0000062	0.000147	0.100	0.101	0.101	0.0998	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BC19660	Lithium, Dissolved	mg/L	-0.000107	0.0154	0.200	0.213	0.196	0.197	0.170 to 0.230	106	70.0 to 130	8.31	20.0
BC19659	Lithium, Total	mg/L	4.040E-05	0.0154	0.200	0.207	0.211	0.204	0.170 to 0.230	104	70.0 to 130	1.91	20.0
BC19660	Magnesium, Dissolved	mg/L	-0.0132	0.0462	5.00	9.36	9.33	5.18	4.25 to 5.75	101	70.0 to 130	0.321	20.0
BC19659	Magnesium, Total	mg/L	0.000300	0.0462	5.00	6.14	6.26	5.10	4.25 to 5.75	101	70.0 to 130	1.94	20.0
BC19660	Manganese, Dissolved	mg/L	0.0000131	0.00033	0.100	0.120	0.119	0.105	0.0850 to 0.115	100	70.0 to 130	0.837	20.0
BC19659	Manganese, Total	mg/L	0.000128	0.00033	0.100	0.112	0.110	0.104	0.0850 to 0.115	103	70.0 to 130	1.80	20.0
BC19659	Mercury, Total by CVAA	mg/L	1.000E-05	0.000500	0.004	0.00404	0.00422	0.00407	0.00340 to 0.00460	101	70.0 to 130	4.36	20.0
BC19660	Molybdenum, Dissolved	mg/L	0.0000133	0.0002	0.100	0.0942	0.0940	0.0989	0.0850 to 0.115	94.2	70.0 to 130	0.213	20.0
BC19659	Molybdenum, Total	mg/L	-0.000003	0.0002	0.100	0.0990	0.0966	0.0988	0.0850 to 0.115	99.0	70.0 to 130	2.45	20.0
BC19660	Potassium, Dissolved	mg/L	-0.00218	0.367	10.0	10.9	10.8	10.4	8.50 to 11.5	99.2	70.0 to 130	0.922	20.0
BC19659	Potassium, Total	mg/L	0.0461	0.367	10.0	10.6	10.6	10.2	8.50 to 11.5	101	70.0 to 130	0.00	20.0
BC19660	Selenium, Dissolved	mg/L	0.0000887	0.00100	0.100	0.0977	0.0983	0.105	0.0850 to 0.115	96.2	70.0 to 130	0.612	20.0
BC19659	Selenium, Total	mg/L	0.0000408	0.00100	0.100	0.0993	0.101	0.104	0.0850 to 0.115	99.3	70.0 to 130	1.70	20.0
BC19660	Silicon, Dissolved	mg/L	-0.000043	0.0440	1.00	4.66	4.63	1.01	0.850 to 1.15	104	70.0 to 130	0.646	20.0
BC19659	Silicon, Total	mg/L	0.00120	0.0440	1.00	8.27	8.39	1.03	0.850 to 1.15	95.0	70.0 to 130	1.44	20.0
BC19660	Sodium, Dissolved	mg/L	0.000963	0.0660	5.00	10.8	10.1	5.00	4.25 to 5.75	108	70.0 to 130	6.70	20.0
BC19659	Sodium, Total	mg/L	0.00985	0.0660	5.00	8.66	8.83	4.99	4.25 to 5.75	101	70.0 to 130	1.94	20.0
BC19659	Sulfate	mg/L	-0.0301	2.0	20.0	20.7	21.0	20.0	18.0 to 22.0	98.5	80.0 to 120	1.44	20.0
BC19660	Thallium, Dissolved	mg/L	0.000011	0.000147	0.100	0.101	0.0991	0.101	0.0850 to 0.115	101	70.0 to 130	1.90	20.0
BC19659	Thallium, Total	mg/L	0.0000143	0.000147	0.100	0.102	0.100	0.0993	0.0850 to 0.115	102	70.0 to 130	1.98	20.0
BC19659	Total Organic Carbon	mg/L	0.266	1.00	10.0	10.3	11.4	24.2		103	80.0 to 120	10.1	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 12:23  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond -PZ-5

**Laboratory ID Number:** BC19659

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19671	Alkalinity to pH 4.5	mg CaCO3/L					178	50.7	45.0 to 55.0			0.563	10.0
BC19659	Nitrogen, Nitrate/Nitrite	mg/L as N	0.07	0.200	2.00	3.02	1.13	2.06	1.80 to 2.20	94.5	90.0 to 110	0.00	15.0
BC19667	Solids, Dissolved	mg/L	0.0000	25.0			177	49.0	40.0 to 60.0			0.563	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-18H

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 13:30  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19660

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Total	10/28/22 11:50	11/3/22 12:02		1.015	0.0784	mg/L	0.030000	0.1015	J	
* Calcium, Total	10/28/22 11:50	11/3/22 12:02		1.015	10.0	mg/L	0.070035	0.406		
* Iron, Total	10/28/22 11:50	11/3/22 12:02		1.015	Not Detected	mg/L	0.008120	0.0406	U	
* Lithium, Total	10/28/22 11:50	11/3/22 12:02		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	10/28/22 11:50	11/3/22 12:02		1.015	4.16	mg/L	0.021315	0.406		
Silica, Total (calc.)	10/28/22 11:50	11/3/22 12:02		1	7.96	mg/L				
Silicon, Total	10/28/22 11:50	11/3/22 12:02		1.015	3.72	mg/L	0.02030	0.25375		
* Sodium, Total	10/28/22 11:50	11/3/22 12:02		1.015	5.13	mg/L	0.03045	0.406		
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Dissolved	10/28/22 08:43	10/31/22 14:03		1.015	0.0770	mg/L	0.030000	0.1015	J	
* Calcium, Dissolved	10/28/22 08:43	10/31/22 14:03		1.015	9.54	mg/L	0.070035	0.406		
* Iron, Dissolved	10/28/22 08:43	10/31/22 14:03		1.015	Not Detected	mg/L	0.008120	0.0406	U	
* Lithium, Dissolved	10/28/22 08:43	10/31/22 14:03		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 12:36		1.015	4.32	mg/L	0.021315	0.406		
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 14:03		1	7.75	mg/L				
Silicon, Dissolved	10/28/22 08:43	10/31/22 14:03		1.015	3.62	mg/L	0.02030	0.25375		
* Sodium, Dissolved	10/28/22 08:43	10/31/22 14:03		1.015	5.39	mg/L	0.03045	0.406		
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>					
* Antimony, Total	10/28/22 11:50	10/28/22 14:43		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Aluminum, Total	10/28/22 11:50	10/28/22 14:43		1.015	0.0428	mg/L	0.006090	0.01015		
* Arsenic, Total	10/28/22 11:50	10/28/22 14:43		1.015	0.000338	mg/L	0.000081	0.000203		
* Barium, Total	10/28/22 11:50	10/28/22 14:43		1.015	0.0349	mg/L	0.000508	0.001015		
* Beryllium, Total	10/28/22 11:50	10/28/22 14:43		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	10/28/22 11:50	10/28/22 14:43		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	10/28/22 11:50	10/28/22 14:43		1.015	Not Detected	mg/L	0.000203	0.001015	U	
* Cobalt, Total	10/28/22 11:50	10/28/22 14:43		1.015	0.000452	mg/L	0.000068	0.000203		
* Lead, Total	10/28/22 11:50	10/28/22 14:43		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	10/28/22 11:50	10/28/22 14:43		1.015	0.0202	mg/L	0.000152	0.001015		
* Molybdenum, Total	10/28/22 11:50	10/28/22 14:43		1.015	Not Detected	mg/L	0.000102	0.000203	U	
* Potassium, Total	10/28/22 11:50	10/28/22 14:43		1.015	0.972	mg/L	0.169505	0.5075		

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-18H

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 13:30  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19660

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 14:43		1.015	0.00117	mg/L	0.000508	0.001015	
* Thallium, Total	10/28/22 11:50	10/28/22 14:43		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 11:22		1.015	0.000785	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 11:22		1.015	0.0415	mg/L	0.006090	0.01015	
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 11:22		1.015	0.000323	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 11:22		1.015	0.0364	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 11:22		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 11:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 11:22		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 11:22		1.015	0.000496	mg/L	0.000068	0.000203	
* Lead, Dissolved	10/28/22 08:43	10/28/22 11:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 11:22		1.015	0.0200	mg/L	0.000152	0.001015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 11:22		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Potassium, Dissolved	10/28/22 08:43	10/28/22 11:22		1.015	0.978	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 11:22		1.015	0.00152	mg/L	0.000508	0.001015	
* Thallium, Dissolved	10/28/22 08:43	10/28/22 11:22		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/3/22 22:55		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 11:45	10/28/22 11:45		1	1.43	mg/L as N	0.20	0.3	
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/8/22 08:50	11/8/22 15:09		1	3.90	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/27/22 12:00	10/31/22 10:08		1	82.7	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	3.90	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	Not Detected	mg CaCO3/L		0.5	
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/27/22 20:21	10/27/22 20:21		1	1.59	mg/L	1.00	2	J

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-18H

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 13:30  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19660

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/27/22 15:08	10/27/22 15:08		1	5.44	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 11:20	10/28/22 11:20		1	Not Detected	mg/L	0.06	0.125	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 09:31	11/1/22 09:31		1	37.3	mg/L	0.6	2	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/26/22 13:27	10/26/22 13:27			181.03	uS/cm			FA
pH	10/26/22 13:27	10/26/22 13:27			4.81	SU			FA
Temperature	10/26/22 13:27	10/26/22 13:27			17.16	C			FA
Turbidity	10/26/22 13:27	10/26/22 13:27			0.81	NTU			FA
Sulfide	10/26/22 13:27	10/26/22 13:27			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 13:30  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-18H

**Laboratory ID Number:** BC19660

Sample	Analysis	Units	MB	MB		MS	MSD	Standard	Standard		Rec		Prec	Limit
				Limit	Spike				Limit	Prec	Limit	Prec		
BC19660	Aluminum, Dissolved	mg/L	0.0000549	0.010	0.100	0.141	0.140	0.103	0.0850 to 0.115	99.5	70.0 to 130	0.712	20.0	
BC19669	Aluminum, Total	mg/L	0.000961	0.010	0.100	0.0983	0.102	0.103	0.0850 to 0.115	98.3	70.0 to 130	3.69	20.0	
BC19660	Antimony, Dissolved	mg/L	0.0000571	0.00100	0.100	0.0858	0.0867	0.0871	0.0850 to 0.115	85.0	70.0 to 130	1.04	20.0	
BC19669	Antimony, Total	mg/L	0.000028	0.00100	0.100	0.0962	0.0962	0.0918	0.0850 to 0.115	96.2	70.0 to 130	0.00	20.0	
BC19660	Arsenic, Dissolved	mg/L	0.0000398	0.000176	0.100	0.0959	0.0990	0.102	0.0850 to 0.115	95.6	70.0 to 130	3.18	20.0	
BC19669	Arsenic, Total	mg/L	0.0000953	0.000176	0.100	0.0986	0.0975	0.0989	0.0850 to 0.115	98.4	70.0 to 130	1.12	20.0	
BC19660	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.130	0.129	0.0919	0.0850 to 0.115	93.6	70.0 to 130	0.772	20.0	
BC19669	Barium, Total	mg/L	-0.0000058	0.00100	0.100	0.168	0.165	0.0970	0.0850 to 0.115	97.8	70.0 to 130	1.80	20.0	
BC19660	Beryllium, Dissolved	mg/L	0.0000222	0.000880	0.100	0.0941	0.0936	0.0966	0.0850 to 0.115	94.1	70.0 to 130	0.533	20.0	
BC19669	Beryllium, Total	mg/L	0.0000213	0.000880	0.100	0.0935	0.0950	0.0944	0.0850 to 0.115	93.5	70.0 to 130	1.59	20.0	
BC19660	Boron, Dissolved	mg/L	-0.00146	0.0650	1.00	1.08	1.07	0.990	0.850 to 1.15	100	70.0 to 130	0.930	20.0	
BC19669	Boron, Total	mg/L	0.00226	0.0650	1.00	1.07	1.08	0.999	0.850 to 1.15	99.1	70.0 to 130	0.930	20.0	
BC19660	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0976	0.0979	0.100	0.0850 to 0.115	97.6	70.0 to 130	0.307	20.0	
BC19669	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0970	0.0987	0.101	0.0850 to 0.115	97.0	70.0 to 130	1.74	20.0	
BC19660	Calcium, Dissolved	mg/L	0.00894	0.152	5.00	14.2	14.8	5.08	4.25 to 5.75	93.2	70.0 to 130	4.14	20.0	
BC19669	Calcium, Total	mg/L	-0.00258	0.152	5.00	17.3	17.3	5.30	4.25 to 5.75	102	70.0 to 130	0.00	20.0	
BC19669	Chloride	mg/L	0.110	1.00	10.0	19.4	19.4	9.91	9.00 to 11.0	100	80.0 to 120	0.00	20.0	
BC19660	Chromium, Dissolved	mg/L	0.0000111	0.000440	0.100	0.0975	0.0980	0.102	0.0850 to 0.115	97.5	70.0 to 130	0.512	20.0	
BC19669	Chromium, Total	mg/L	0.000129	0.000440	0.100	0.0954	0.0981	0.101	0.0850 to 0.115	95.2	70.0 to 130	2.79	20.0	
BC19660	Cobalt, Dissolved	mg/L	0.0000002	0.000147	0.100	0.0999	0.101	0.105	0.0850 to 0.115	99.4	70.0 to 130	1.10	20.0	
BC19669	Cobalt, Total	mg/L	-0.0000001	0.000147	0.100	0.0990	0.101	0.104	0.0850 to 0.115	97.8	70.0 to 130	2.00	20.0	
BC19669	Fluoride	mg/L	0.0328	0.125	2.50	2.46	2.58	2.36	2.25 to 2.75	98.4	80.0 to 120	4.76	20.0	
BC19660	Iron, Dissolved	mg/L	-0.000185	0.0176	0.2	0.205	0.207	0.202	0.170 to 0.230	102	70.0 to 130	0.971	20.0	
BC19669	Iron, Total	mg/L	0.00114	0.0176	0.2	0.275	0.276	0.211	0.170 to 0.230	103	70.0 to 130	0.363	20.0	

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.



# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 13:30  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-18H

**Laboratory ID Number:** BC19660

Sample	Analysis	Units	MB				Standard		Rec		Prec	Limit	
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec			Limit
BC19660	Lead, Dissolved	mg/L	0.0000074	0.000147	0.100	0.0998	0.0998	0.102	0.0850 to 0.115	99.8	70.0 to 130	0.00	20.0
BC19669	Lead, Total	mg/L	0.0000062	0.000147	0.100	0.100	0.101	0.0998	0.0850 to 0.115	100	70.0 to 130	0.995	20.0
BC19660	Lithium, Dissolved	mg/L	-0.000107	0.0154	0.200	0.213	0.196	0.197	0.170 to 0.230	106	70.0 to 130	8.31	20.0
BC19669	Lithium, Total	mg/L	4.040E-05	0.0154	0.200	0.212	0.214	0.204	0.170 to 0.230	106	70.0 to 130	0.939	20.0
BC19660	Magnesium, Dissolved	mg/L	-0.0132	0.0462	5.00	9.36	9.33	5.18	4.25 to 5.75	101	70.0 to 130	0.321	20.0
BC19669	Magnesium, Total	mg/L	0.000300	0.0462	5.00	8.56	8.62	5.10	4.25 to 5.75	102	70.0 to 130	0.698	20.0
BC19660	Manganese, Dissolved	mg/L	0.0000131	0.00033	0.100	0.120	0.119	0.105	0.0850 to 0.115	100	70.0 to 130	0.837	20.0
BC19669	Manganese, Total	mg/L	0.000128	0.00033	0.100	0.377	0.385	0.104	0.0850 to 0.115	83.0	70.0 to 130	2.10	20.0
BC19669	Mercury, Total by CVAA	mg/L	1.000E-05	0.000500	0.004	0.00418	0.00419	0.00407	0.00340 to 0.00460	104	70.0 to 130	0.239	20.0
BC19660	Molybdenum, Dissolved	mg/L	0.0000133	0.0002	0.100	0.0942	0.0940	0.0989	0.0850 to 0.115	94.2	70.0 to 130	0.213	20.0
BC19669	Molybdenum, Total	mg/L	-0.000003	0.0002	0.100	0.0976	0.0976	0.0988	0.0850 to 0.115	97.6	70.0 to 130	0.00	20.0
BC19660	Potassium, Dissolved	mg/L	-0.00218	0.367	10.0	10.9	10.8	10.4	8.50 to 11.5	99.2	70.0 to 130	0.922	20.0
BC19669	Potassium, Total	mg/L	0.0461	0.367	10.0	10.6	10.8	10.2	8.50 to 11.5	96.3	70.0 to 130	1.87	20.0
BC19660	Selenium, Dissolved	mg/L	0.0000887	0.00100	0.100	0.0977	0.0983	0.105	0.0850 to 0.115	96.2	70.0 to 130	0.612	20.0
BC19669	Selenium, Total	mg/L	0.0000408	0.00100	0.100	0.0978	0.101	0.104	0.0850 to 0.115	97.8	70.0 to 130	3.22	20.0
BC19660	Silicon, Dissolved	mg/L	-0.000043	0.0440	1.00	4.66	4.63	1.01	0.850 to 1.15	104	70.0 to 130	0.646	20.0
BC19669	Silicon, Total	mg/L	0.00120	0.0440	1.00	7.19	7.25	1.03	0.850 to 1.15	102	70.0 to 130	0.831	20.0
BC19660	Sodium, Dissolved	mg/L	0.000963	0.0660	5.00	10.8	10.1	5.00	4.25 to 5.75	108	70.0 to 130	6.70	20.0
BC19669	Sodium, Total	mg/L	0.00985	0.0660	5.00	17.1	17.2	4.99	4.25 to 5.75	106	70.0 to 130	0.583	20.0
BC19669	Sulfate	mg/L	0.620	2.0	20.0	33.8	34.0	19.6	18.0 to 22.0	108	80.0 to 120	0.590	20.0
BC19660	Thallium, Dissolved	mg/L	0.000011	0.000147	0.100	0.101	0.0991	0.101	0.0850 to 0.115	101	70.0 to 130	1.90	20.0
BC19669	Thallium, Total	mg/L	0.0000143	0.000147	0.100	0.101	0.101	0.0993	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BC19669	Total Organic Carbon	mg/L	0.280	1.00	10.0	11.6	12.6	24.5		89.4	80.0 to 120	8.26	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 13:30  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-18H

**Laboratory ID Number:** BC19660

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard Standard	Standard Limit	Rec Rec	Rec Limit	Prec	Prec Limit
BC19671	Alkalinity to pH 4.5	mg CaCO3/L					178	50.7	45.0 to 55.0			0.563	10.0
BC19669	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	1.88	0.052	1.88	1.80 to 2.20	94.0	90.0 to 110	0.00	15.0
BC19667	Solids, Dissolved	mg/L	0.0000	25.0			177	49.0	40.0 to 60.0			0.563	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-1

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 14:11  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19661

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 12:05		1.015	0.977	mg/L	0.030000	0.1015	
* Calcium, Total	10/28/22 11:50	11/4/22 17:31		10.15	200	mg/L	0.70035	4.06	
* Iron, Total	10/28/22 11:50	11/3/22 12:05		1.015	1.76	mg/L	0.008120	0.0406	
* Lithium, Total	10/28/22 11:50	11/3/22 12:05		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/28/22 11:50	11/3/22 12:05		1.015	36.7	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 12:05		1	11.5	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 12:05		1.015	5.36	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/3/22 12:05		1.015	19.2	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 14:19		1.015	0.985	mg/L	0.030000	0.1015	
* Calcium, Dissolved	10/28/22 08:43	11/3/22 10:55		10.15	227	mg/L	0.70035	4.06	
* Iron, Dissolved	10/28/22 08:43	10/31/22 14:19		1.015	1.60	mg/L	0.008120	0.0406	
* Lithium, Dissolved	10/28/22 08:43	10/31/22 14:19		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 12:51		1.015	36.4	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 14:19		1	11.1	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 14:19		1.015	5.18	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	10/31/22 14:19		1.015	17.1	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 14:47		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Total	10/28/22 11:50	10/28/22 14:47		1.015	0.00791	mg/L	0.006090	0.01015	J
* Arsenic, Total	10/28/22 11:50	10/28/22 14:47		1.015	0.00223	mg/L	0.000081	0.000203	
* Barium, Total	10/28/22 11:50	10/28/22 14:47		1.015	0.0280	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 14:47		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 14:47		1.015	0.000130	mg/L	0.000068	0.000203	J
* Chromium, Total	10/28/22 11:50	10/28/22 14:47		1.015	0.000321	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/28/22 11:50	10/28/22 14:47		1.015	0.0152	mg/L	0.000068	0.000203	
* Lead, Total	10/28/22 11:50	10/28/22 14:47		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 20:36		5.075	3.10	mg/L	0.000761	0.005075	
* Molybdenum, Total	10/28/22 11:50	10/28/22 14:47		1.015	0.000198	mg/L	0.000102	0.000203	J
* Potassium, Total	10/28/22 11:50	10/28/22 14:47		1.015	7.87	mg/L	0.169505	0.5075	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-1

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 14:11  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19661

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 14:47		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 14:47		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 11:44		1.015	0.000874	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 11:44		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 11:44		1.015	0.00241	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 11:44		1.015	0.0274	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 11:44		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 11:44		1.015	0.000132	mg/L	0.000068	0.000203	J
* Chromium, Dissolved	10/28/22 08:43	10/28/22 11:44		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 11:44		1.015	0.0151	mg/L	0.000068	0.000203	
* Lead, Dissolved	10/28/22 08:43	10/28/22 11:44		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 19:38		5.075	3.01	mg/L	0.000761	0.005075	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 11:44		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Potassium, Dissolved	10/28/22 08:43	10/28/22 11:44		1.015	7.92	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 11:44		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 11:44		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/3/22 22:59		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 11:47	10/28/22 11:47		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/8/22 08:50	11/8/22 15:09		1	81.3	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/27/22 12:00	10/31/22 10:08		1	840	mg/L		50	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	81.3	mg CaCO3/L		1	A
Carbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	Not Detected	mg CaCO3/L		0.5	A
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/27/22 20:36	10/27/22 20:36		1	2.77	mg/L	1.00	2	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-1

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 14:11  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:30

**Laboratory ID Number:** BC19661

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/27/22 15:09	10/27/22 15:09		1	6.02	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 11:22	10/28/22 11:22		1	Not Detected	mg/L	0.06	0.125	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 09:45	11/1/22 09:45		25	512	mg/L	15.0	50	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: DKG</b>							
Conductivity	10/26/22 14:08	10/26/22 14:08			1082.91	uS/cm			FA
pH	10/26/22 14:08	10/26/22 14:08			5.86	SU			FA
Temperature	10/26/22 14:08	10/26/22 14:08			18.47	C			FA
Turbidity	10/26/22 14:08	10/26/22 14:08			1.15	NTU			FA
Sulfide	10/26/22 14:08	10/26/22 14:08			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 14:11  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-1

**Laboratory ID Number:** BC19661

Sample	Analysis	Units	MB	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
				Limit					Standard	Limit	Rec	Limit		
BC19671	Aluminum, Dissolved	mg/L	0.0000549	0.010	0.100	0.100	0.103	0.103	0.0850 to 0.115	100	70.0 to 130	2.96	20.0	
BC19669	Aluminum, Total	mg/L	0.000961	0.010	0.100	0.0983	0.102	0.103	0.0850 to 0.115	98.3	70.0 to 130	3.69	20.0	
BC19671	Antimony, Dissolved	mg/L	0.0000571	0.00100	0.100	0.0904	0.0921	0.0871	0.0850 to 0.115	89.8	70.0 to 130	1.86	20.0	
BC19669	Antimony, Total	mg/L	0.000028	0.00100	0.100	0.0962	0.0962	0.0918	0.0850 to 0.115	96.2	70.0 to 130	0.00	20.0	
BC19671	Arsenic, Dissolved	mg/L	0.0000398	0.000176	0.100	0.100	0.101	0.102	0.0850 to 0.115	97.1	70.0 to 130	0.995	20.0	
BC19669	Arsenic, Total	mg/L	0.0000953	0.000176	0.100	0.0986	0.0975	0.0989	0.0850 to 0.115	98.4	70.0 to 130	1.12	20.0	
BC19671	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.310	0.295	0.0919	0.0850 to 0.115	96.0	70.0 to 130	4.96	20.0	
BC19669	Barium, Total	mg/L	-0.0000058	0.00100	0.100	0.168	0.165	0.0970	0.0850 to 0.115	97.8	70.0 to 130	1.80	20.0	
BC19671	Beryllium, Dissolved	mg/L	0.0000222	0.000880	0.100	0.0945	0.0935	0.0966	0.0850 to 0.115	94.5	70.0 to 130	1.06	20.0	
BC19669	Beryllium, Total	mg/L	0.0000213	0.000880	0.100	0.0935	0.0950	0.0944	0.0850 to 0.115	93.5	70.0 to 130	1.59	20.0	
BC19671	Boron, Dissolved	mg/L	-0.00146	0.0650	1.00	1.06	1.07	0.990	0.850 to 1.15	101	70.0 to 130	0.939	20.0	
BC19669	Boron, Total	mg/L	0.00226	0.0650	1.00	1.07	1.08	0.999	0.850 to 1.15	99.1	70.0 to 130	0.930	20.0	
BC19671	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0971	0.0991	0.100	0.0850 to 0.115	97.1	70.0 to 130	2.04	20.0	
BC19669	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0970	0.0987	0.101	0.0850 to 0.115	97.0	70.0 to 130	1.74	20.0	
BC19671	Calcium, Dissolved	mg/L	0.00894	0.152	5.00	66.4	66.1	5.08	4.25 to 5.75	-200	70.0 to 130	0.453	20.0	
BC19669	Calcium, Total	mg/L	-0.00258	0.152	5.00	17.3	17.3	5.30	4.25 to 5.75	102	70.0 to 130	0.00	20.0	
BC19669	Chloride	mg/L	0.110	1.00	10.0	19.4	19.4	9.91	9.00 to 11.0	100	80.0 to 120	0.00	20.0	
BC19671	Chromium, Dissolved	mg/L	0.0000111	0.000440	0.100	0.0961	0.0984	0.102	0.0850 to 0.115	96.1	70.0 to 130	2.37	20.0	
BC19669	Chromium, Total	mg/L	0.000129	0.000440	0.100	0.0954	0.0981	0.101	0.0850 to 0.115	95.2	70.0 to 130	2.79	20.0	
BC19671	Cobalt, Dissolved	mg/L	0.0000002	0.000147	0.100	0.101	0.102	0.105	0.0850 to 0.115	98.1	70.0 to 130	0.985	20.0	
BC19669	Cobalt, Total	mg/L	-0.0000001	0.000147	0.100	0.0990	0.101	0.104	0.0850 to 0.115	97.8	70.0 to 130	2.00	20.0	
BC19669	Fluoride	mg/L	0.0328	0.125	2.50	2.46	2.58	2.36	2.25 to 2.75	98.4	80.0 to 120	4.76	20.0	
BC19671	Iron, Dissolved	mg/L	-0.000185	0.0176	0.2	8.47	8.31	0.202	0.170 to 0.230	-745	70.0 to 130	1.91	20.0	
BC19669	Iron, Total	mg/L	0.00114	0.0176	0.2	0.275	0.276	0.211	0.170 to 0.230	103	70.0 to 130	0.363	20.0	

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP

**Sample Date:** 10/26/22 14:11

**Customer ID:**

**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-1

**Laboratory ID Number:** BC19661

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BC19671	Lead, Dissolved	mg/L	0.0000074	0.000147	0.100	0.0995	0.0995	0.102	0.0850 to 0.115	99.5	70.0 to 130	0.00	20.0
BC19669	Lead, Total	mg/L	0.0000062	0.000147	0.100	0.100	0.101	0.0998	0.0850 to 0.115	100	70.0 to 130	0.995	20.0
BC19671	Lithium, Dissolved	mg/L	-0.000107	0.0154	0.200	0.198	0.202	0.197	0.170 to 0.230	99.0	70.0 to 130	2.00	20.0
BC19669	Lithium, Total	mg/L	4.040E-05	0.0154	0.200	0.212	0.214	0.204	0.170 to 0.230	106	70.0 to 130	0.939	20.0
BC19671	Magnesium, Dissolved	mg/L	-0.0132	0.0462	5.00	11.1	11.2	5.18	4.25 to 5.75	102	70.0 to 130	0.897	20.0
BC19669	Magnesium, Total	mg/L	0.000300	0.0462	5.00	8.56	8.62	5.10	4.25 to 5.75	102	70.0 to 130	0.698	20.0
BC19671	Manganese, Dissolved	mg/L	0.0000131	0.00033	0.100	1.72	1.72	0.105	0.0850 to 0.115	90.0	70.0 to 130	0.00	20.0
BC19669	Manganese, Total	mg/L	0.000128	0.00033	0.100	0.377	0.385	0.104	0.0850 to 0.115	83.0	70.0 to 130	2.10	20.0
BC19669	Mercury, Total by CVAA	mg/L	1.000E-05	0.000500	0.004	0.00418	0.00419	0.00407	0.00340 to 0.00460	104	70.0 to 130	0.239	20.0
BC19671	Molybdenum, Dissolved	mg/L	0.0000133	0.0002	0.100	0.0981	0.0988	0.0989	0.0850 to 0.115	97.7	70.0 to 130	0.711	20.0
BC19669	Molybdenum, Total	mg/L	-0.000003	0.0002	0.100	0.0976	0.0976	0.0988	0.0850 to 0.115	97.6	70.0 to 130	0.00	20.0
BC19671	Potassium, Dissolved	mg/L	-0.00218	0.367	10.0	10.3	10.5	10.4	8.50 to 11.5	98.2	70.0 to 130	1.92	20.0
BC19669	Potassium, Total	mg/L	0.0461	0.367	10.0	10.6	10.8	10.2	8.50 to 11.5	96.3	70.0 to 130	1.87	20.0
BC19671	Selenium, Dissolved	mg/L	0.0000887	0.00100	0.100	0.102	0.102	0.105	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BC19669	Selenium, Total	mg/L	0.0000408	0.00100	0.100	0.0978	0.101	0.104	0.0850 to 0.115	97.8	70.0 to 130	3.22	20.0
BC19671	Silicon, Dissolved	mg/L	-0.000043	0.0440	1.00	12.0	12.0	1.01	0.850 to 1.15	110	70.0 to 130	0.00	20.0
BC19669	Silicon, Total	mg/L	0.00120	0.0440	1.00	7.19	7.25	1.03	0.850 to 1.15	102	70.0 to 130	0.831	20.0
BC19671	Sodium, Dissolved	mg/L	0.000963	0.0660	5.00	15.2	15.3	5.00	4.25 to 5.75	96.0	70.0 to 130	0.656	20.0
BC19669	Sodium, Total	mg/L	0.00985	0.0660	5.00	17.1	17.2	4.99	4.25 to 5.75	106	70.0 to 130	0.583	20.0
BC19669	Sulfate	mg/L	0.620	2.0	20.0	33.8	34.0	19.6	18.0 to 22.0	108	80.0 to 120	0.590	20.0
BC19671	Thallium, Dissolved	mg/L	0.000011	0.000147	0.100	0.101	0.0988	0.101	0.0850 to 0.115	101	70.0 to 130	2.20	20.0
BC19669	Thallium, Total	mg/L	0.0000143	0.000147	0.100	0.101	0.101	0.0993	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BC19669	Total Organic Carbon	mg/L	0.280	1.00	10.0	11.6	12.6	24.5		89.4	80.0 to 120	8.26	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 14:11  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:30

**Description:** Gadsden Ash Pond - MW-1

**Laboratory ID Number:** BC19661

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19671	Alkalinity to pH 4.5	mg CaCO3/L					178	50.7	45.0 to 55.0			0.563	10.0
BC19669	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	1.88	0.052	1.88	1.80 to 2.20	94.0	90.0 to 110	0.00	15.0
BC19667	Solids, Dissolved	mg/L	0.0000	25.0			177	49.0	40.0 to 60.0			0.563	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.



# Certificate Of Analysis

**Description:** Gadsden Ash Pond Equipment Blank-1

**Location Code:** WMWGADAPEB  
**Collected:** 10/26/22 14:40  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19662

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Total	10/28/22 11:50	11/3/22 12:08		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Total	10/28/22 11:50	11/3/22 12:08		1.015	Not Detected	mg/L	0.070035	0.406	U	
* Iron, Total	10/28/22 11:50	11/3/22 12:08		1.015	Not Detected	mg/L	0.008120	0.0406	U	
* Lithium, Total	10/28/22 11:50	11/3/22 12:08		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	10/28/22 11:50	11/3/22 12:08		1.015	Not Detected	mg/L	0.021315	0.406	U	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 12:08		1	Not Detected	mg/L				
Silicon, Total	10/28/22 11:50	11/3/22 12:08		1.015	Not Detected	mg/L	0.02030	0.25375	U	
* Sodium, Total	10/28/22 11:50	11/3/22 12:08		1.015	Not Detected	mg/L	0.03045	0.406	U	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>					
* Antimony, Total	10/28/22 11:50	10/28/22 14:51		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Aluminum, Total	10/28/22 11:50	10/28/22 14:51		1.015	Not Detected	mg/L	0.006090	0.01015	U	
* Arsenic, Total	10/28/22 11:50	10/28/22 14:51		1.015	Not Detected	mg/L	0.000081	0.000203	U	
* Barium, Total	10/28/22 11:50	10/28/22 14:51		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Beryllium, Total	10/28/22 11:50	10/28/22 14:51		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	10/28/22 11:50	10/28/22 14:51		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	10/28/22 11:50	10/28/22 14:51		1.015	Not Detected	mg/L	0.000203	0.001015	U	
* Cobalt, Total	10/28/22 11:50	10/28/22 14:51		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Lead, Total	10/28/22 11:50	10/28/22 14:51		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	10/28/22 11:50	10/28/22 14:51		1.015	Not Detected	mg/L	0.000152	0.001015	U	
* Molybdenum, Total	10/28/22 11:50	10/28/22 14:51		1.015	Not Detected	mg/L	0.000102	0.000203	U	
* Potassium, Total	10/28/22 11:50	10/28/22 14:51		1.015	Not Detected	mg/L	0.169505	0.5075	U	
* Selenium, Total	10/28/22 11:50	10/28/22 14:51		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Thallium, Total	10/28/22 11:50	10/28/22 14:51		1.015	Not Detected	mg/L	0.000068	0.000203	U	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>								
* Mercury, Total by CVAA	11/3/22 17:59	11/3/22 23:03		1	Not Detected	mg/L	0.0003	0.0005	U	
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>								
* Nitrogen, Nitrate/Nitrite	10/28/22 11:49	10/28/22 11:49		1	Not Detected	mg/L as N	0.20	0.3	U	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>								
* Solids, Dissolved	10/27/22 12:00	10/31/22 10:08		1	Not Detected	mg/L		25	U	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:**

# Certificate Of Analysis

**Description:** Gadsden Ash Pond Equipment Blank-1

**Location Code:** WMWGADAPEB  
**Collected:** 10/26/22 14:40  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19662

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/27/22 20:53	10/27/22 20:53		1	Not Detected	mg/L	1.00	2	U
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/27/22 15:11	10/27/22 15:11		1	Not Detected	mg/L	0.50	1	U
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 11:23	10/28/22 11:23		1	Not Detected	mg/L	0.06	0.125	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 09:33	11/1/22 09:33		1	1.04	mg/L	0.6	2	J

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MDL's and RL's are adjusted for sample dilution, as applicable

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**Comments:**

# Batch QC Summary

**Customer Account:** WMWGADAPEB

**Sample Date:** 10/26/22 14:40

**Customer ID:**

**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond Equipment Blank-1

**Laboratory ID Number:** BC19662

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BC19669	Aluminum, Total	mg/L	0.000961	0.010	0.100	0.0983	0.102	0.103	0.0850 to 0.115	98.3	70.0 to 130	3.69	20.0
BC19669	Antimony, Total	mg/L	0.000028	0.00100	0.100	0.0962	0.0962	0.0918	0.0850 to 0.115	96.2	70.0 to 130	0.00	20.0
BC19669	Arsenic, Total	mg/L	0.0000953	0.000176	0.100	0.0986	0.0975	0.0989	0.0850 to 0.115	98.4	70.0 to 130	1.12	20.0
BC19669	Barium, Total	mg/L	-0.0000058	0.00100	0.100	0.168	0.165	0.0970	0.0850 to 0.115	97.8	70.0 to 130	1.80	20.0
BC19669	Beryllium, Total	mg/L	0.0000213	0.000880	0.100	0.0935	0.0950	0.0944	0.0850 to 0.115	93.5	70.0 to 130	1.59	20.0
BC19669	Boron, Total	mg/L	0.00226	0.0650	1.00	1.07	1.08	0.999	0.850 to 1.15	99.1	70.0 to 130	0.930	20.0
BC19669	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0970	0.0987	0.101	0.0850 to 0.115	97.0	70.0 to 130	1.74	20.0
BC19669	Calcium, Total	mg/L	-0.00258	0.152	5.00	17.3	17.3	5.30	4.25 to 5.75	102	70.0 to 130	0.00	20.0
BC19669	Chloride	mg/L	0.110	1.00	10.0	19.4	19.4	9.91	9.00 to 11.0	100	80.0 to 120	0.00	20.0
BC19669	Chromium, Total	mg/L	0.000129	0.000440	0.100	0.0954	0.0981	0.101	0.0850 to 0.115	95.2	70.0 to 130	2.79	20.0
BC19669	Cobalt, Total	mg/L	-0.0000001	0.000147	0.100	0.0990	0.101	0.104	0.0850 to 0.115	97.8	70.0 to 130	2.00	20.0
BC19669	Fluoride	mg/L	0.0328	0.125	2.50	2.46	2.58	2.36	2.25 to 2.75	98.4	80.0 to 120	4.76	20.0
BC19669	Iron, Total	mg/L	0.00114	0.0176	0.2	0.275	0.276	0.211	0.170 to 0.230	103	70.0 to 130	0.363	20.0
BC19669	Lead, Total	mg/L	0.0000062	0.000147	0.100	0.100	0.101	0.0998	0.0850 to 0.115	100	70.0 to 130	0.995	20.0
BC19669	Lithium, Total	mg/L	4.040E-05	0.0154	0.200	0.212	0.214	0.204	0.170 to 0.230	106	70.0 to 130	0.939	20.0
BC19669	Magnesium, Total	mg/L	0.000300	0.0462	5.00	8.56	8.62	5.10	4.25 to 5.75	102	70.0 to 130	0.698	20.0
BC19669	Manganese, Total	mg/L	0.000128	0.00033	0.100	0.377	0.385	0.104	0.0850 to 0.115	83.0	70.0 to 130	2.10	20.0
BC19669	Mercury, Total by CVAA	mg/L	1.000E-05	0.000500	0.004	0.00418	0.00419	0.00407	0.00340 to 0.00460	104	70.0 to 130	0.239	20.0
BC19669	Molybdenum, Total	mg/L	-0.000003	0.0002	0.100	0.0976	0.0976	0.0988	0.0850 to 0.115	97.6	70.0 to 130	0.00	20.0
BC19669	Potassium, Total	mg/L	0.0461	0.367	10.0	10.6	10.8	10.2	8.50 to 11.5	96.3	70.0 to 130	1.87	20.0
BC19669	Selenium, Total	mg/L	0.0000408	0.00100	0.100	0.0978	0.101	0.104	0.0850 to 0.115	97.8	70.0 to 130	3.22	20.0
BC19669	Silicon, Total	mg/L	0.00120	0.0440	1.00	7.19	7.25	1.03	0.850 to 1.15	102	70.0 to 130	0.831	20.0
BC19669	Sodium, Total	mg/L	0.00985	0.0660	5.00	17.1	17.2	4.99	4.25 to 5.75	106	70.0 to 130	0.583	20.0
BC19669	Sulfate	mg/L	0.620	2.0	20.0	33.8	34.0	19.6	18.0 to 22.0	108	80.0 to 120	0.590	20.0

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGADAPEB

**Sample Date:** 10/26/22 14:40

**Customer ID:**

**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond Equipment Blank-1

**Laboratory ID Number:** BC19662

Sample	Analysis	Units	MB	MB				MSD	Standard	Standard		Rec		Prec	Limit
				Limit	Spike	MS	Standard			Limit	Rec	Limit	Prec		
BC19669	Thallium, Total	mg/L	0.0000143	0.000147	0.100	0.101	0.101	0.0993	0.0850 to 0.115	101	70.0 to 130	0.00	20.0		
BC19669	Total Organic Carbon	mg/L	0.280	1.00	10.0	11.6	12.6	24.5		89.4	80.0 to 120	8.26	20.0		

**Comments:**

## Batch QC Summary

**Customer Account:** WMWGADAPEB

**Sample Date:** 10/26/22 14:40

**Customer ID:**

**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond Equipment Blank-1

**Laboratory ID Number:** BC19662

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19669	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	1.88	0.052	1.88	1.80 to 2.20	94.0	90.0 to 110	0.00	15.0
BC19667	Solids, Dissolved	mg/L	0.0000	25.0			177	49.0	40.0 to 60.0			0.563	10.0

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**Comments:**

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-17

**Location Code:** WMWGADAP  
**Collected:** 10/25/22 10:12  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19663

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 12:12		1.015	0.0308	mg/L	0.030000	0.1015	J
* Calcium, Total	10/28/22 11:50	11/3/22 12:12		1.015	30.7	mg/L	0.070035	0.406	
* Iron, Total	10/28/22 11:50	11/3/22 12:12		1.015	0.0255	mg/L	0.008120	0.0406	J
* Lithium, Total	10/28/22 11:50	11/3/22 12:12		1.015	0.00897	mg/L	0.007105	0.01999956	J
* Magnesium, Total	10/28/22 11:50	11/3/22 12:12		1.015	5.22	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 12:12		1	17.8	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 12:12		1.015	8.30	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/3/22 12:12		1.015	25.8	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 14:22		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Dissolved	10/28/22 08:43	10/31/22 14:22		1.015	29.4	mg/L	0.070035	0.406	
* Iron, Dissolved	10/28/22 08:43	10/31/22 14:22		1.015	0.0176	mg/L	0.008120	0.0406	J
* Lithium, Dissolved	10/28/22 08:43	10/31/22 14:22		1.015	0.00786	mg/L	0.007105	0.01999956	J
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 12:55		1.015	5.16	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 14:22		1	17.4	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 14:22		1.015	8.15	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	10/31/22 14:22		1.015	24.2	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 14:54		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Total	10/28/22 11:50	10/28/22 14:54		1.015	0.0169	mg/L	0.006090	0.01015	
* Arsenic, Total	10/28/22 11:50	10/28/22 14:54		1.015	0.000572	mg/L	0.000081	0.000203	
* Barium, Total	10/28/22 11:50	10/28/22 14:54		1.015	0.292	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 14:54		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 14:54		1.015	0.000132	mg/L	0.000068	0.000203	J
* Chromium, Total	10/28/22 11:50	10/28/22 14:54		1.015	0.000357	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/28/22 11:50	10/28/22 14:54		1.015	0.000311	mg/L	0.000068	0.000203	
* Lead, Total	10/28/22 11:50	10/28/22 14:54		1.015	0.000196	mg/L	0.000068	0.000203	J
* Manganese, Total	10/28/22 11:50	10/28/22 14:54		1.015	0.0186	mg/L	0.000152	0.001015	
* Molybdenum, Total	10/28/22 11:50	10/28/22 14:54		1.015	0.000466	mg/L	0.000102	0.000203	
* Potassium, Total	10/28/22 11:50	10/28/22 14:54		1.015	0.497	mg/L	0.169505	0.5075	J

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-17

**Location Code:** WMWGADAP  
**Collected:** 10/25/22 10:12  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19663

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 14:54		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 14:54		1.015	0.0000703	mg/L	0.000068	0.000203	J
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 11:48		1.015	0.000777	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 11:48		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 11:48		1.015	0.000362	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 11:48		1.015	0.286	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 11:48		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 11:48		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 11:48		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 11:48		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Dissolved	10/28/22 08:43	10/28/22 11:48		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 11:48		1.015	0.0194	mg/L	0.000152	0.001015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 11:48		1.015	0.000454	mg/L	0.000102	0.000203	
* Potassium, Dissolved	10/28/22 08:43	10/28/22 11:48		1.015	0.515	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 11:48		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 11:48		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/3/22 23:07		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 11:51	10/28/22 11:51		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/8/22 08:50	11/8/22 09:15		1	135	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/27/22 12:00	10/31/22 10:08		1	159	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 09:15		1	133	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 09:15		1	2.22	mg CaCO3/L			
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/27/22 21:10	10/27/22 21:10		1	1.44	mg/L	1.00	2	J

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-17

**Location Code:** WMWGADAP  
**Collected:** 10/25/22 10:12  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19663

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/27/22 15:12	10/27/22 15:12		1	2.88	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 11:24	10/28/22 11:24		1	0.150	mg/L	0.06	0.125	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 09:34	11/1/22 09:34		1	9.25	mg/L	0.6	2	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/25/22 10:08	10/25/22 10:08			274.82	uS/cm			FA
pH	10/25/22 10:08	10/25/22 10:08			7.97	SU			FA
Temperature	10/25/22 10:08	10/25/22 10:08			20.89	C			FA
Turbidity	10/25/22 10:08	10/25/22 10:08			0.84	NTU			FA
Sulfide	10/25/22 10:08	10/25/22 10:08			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.



# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/25/22 10:12  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-17

**Laboratory ID Number:** BC19663

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19671	Aluminum, Dissolved	mg/L	0.0000549	0.010	0.100	0.100	0.103	0.103	0.0850 to 0.115	100	70.0 to 130	2.96	20.0
BC19669	Aluminum, Total	mg/L	0.000961	0.010	0.100	0.0983	0.102	0.103	0.0850 to 0.115	98.3	70.0 to 130	3.69	20.0
BC19671	Antimony, Dissolved	mg/L	0.0000571	0.00100	0.100	0.0904	0.0921	0.0871	0.0850 to 0.115	89.8	70.0 to 130	1.86	20.0
BC19669	Antimony, Total	mg/L	0.000028	0.00100	0.100	0.0962	0.0962	0.0918	0.0850 to 0.115	96.2	70.0 to 130	0.00	20.0
BC19671	Arsenic, Dissolved	mg/L	0.0000398	0.000176	0.100	0.100	0.101	0.102	0.0850 to 0.115	97.1	70.0 to 130	0.995	20.0
BC19669	Arsenic, Total	mg/L	0.0000953	0.000176	0.100	0.0986	0.0975	0.0989	0.0850 to 0.115	98.4	70.0 to 130	1.12	20.0
BC19671	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.310	0.295	0.0919	0.0850 to 0.115	96.0	70.0 to 130	4.96	20.0
BC19669	Barium, Total	mg/L	-0.0000058	0.00100	0.100	0.168	0.165	0.0970	0.0850 to 0.115	97.8	70.0 to 130	1.80	20.0
BC19671	Beryllium, Dissolved	mg/L	0.0000222	0.000880	0.100	0.0945	0.0935	0.0966	0.0850 to 0.115	94.5	70.0 to 130	1.06	20.0
BC19669	Beryllium, Total	mg/L	0.0000213	0.000880	0.100	0.0935	0.0950	0.0944	0.0850 to 0.115	93.5	70.0 to 130	1.59	20.0
BC19671	Boron, Dissolved	mg/L	-0.00146	0.0650	1.00	1.06	1.07	0.990	0.850 to 1.15	101	70.0 to 130	0.939	20.0
BC19669	Boron, Total	mg/L	0.00226	0.0650	1.00	1.07	1.08	0.999	0.850 to 1.15	99.1	70.0 to 130	0.930	20.0
BC19671	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0971	0.0991	0.100	0.0850 to 0.115	97.1	70.0 to 130	2.04	20.0
BC19669	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0970	0.0987	0.101	0.0850 to 0.115	97.0	70.0 to 130	1.74	20.0
BC19671	Calcium, Dissolved	mg/L	0.00894	0.152	5.00	66.4	66.1	5.08	4.25 to 5.75	-200	70.0 to 130	0.453	20.0
BC19669	Calcium, Total	mg/L	-0.00258	0.152	5.00	17.3	17.3	5.30	4.25 to 5.75	102	70.0 to 130	0.00	20.0
BC19669	Chloride	mg/L	0.110	1.00	10.0	19.4	19.4	9.91	9.00 to 11.0	100	80.0 to 120	0.00	20.0
BC19671	Chromium, Dissolved	mg/L	0.0000111	0.000440	0.100	0.0961	0.0984	0.102	0.0850 to 0.115	96.1	70.0 to 130	2.37	20.0
BC19669	Chromium, Total	mg/L	0.000129	0.000440	0.100	0.0954	0.0981	0.101	0.0850 to 0.115	95.2	70.0 to 130	2.79	20.0
BC19671	Cobalt, Dissolved	mg/L	0.0000002	0.000147	0.100	0.101	0.102	0.105	0.0850 to 0.115	98.1	70.0 to 130	0.985	20.0
BC19669	Cobalt, Total	mg/L	-0.0000001	0.000147	0.100	0.0990	0.101	0.104	0.0850 to 0.115	97.8	70.0 to 130	2.00	20.0
BC19669	Fluoride	mg/L	0.0328	0.125	2.50	2.46	2.58	2.36	2.25 to 2.75	98.4	80.0 to 120	4.76	20.0
BC19671	Iron, Dissolved	mg/L	-0.000185	0.0176	0.2	8.47	8.31	0.202	0.170 to 0.230	-745	70.0 to 130	1.91	20.0
BC19669	Iron, Total	mg/L	0.00114	0.0176	0.2	0.275	0.276	0.211	0.170 to 0.230	103	70.0 to 130	0.363	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/25/22 10:12  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-17

**Laboratory ID Number:** BC19663

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19671	Lead, Dissolved	mg/L	0.0000074	0.000147	0.100	0.0995	0.0995	0.102	0.0850 to 0.115	99.5	70.0 to 130	0.00	20.0
BC19669	Lead, Total	mg/L	0.0000062	0.000147	0.100	0.100	0.101	0.0998	0.0850 to 0.115	100	70.0 to 130	0.995	20.0
BC19671	Lithium, Dissolved	mg/L	-0.000107	0.0154	0.200	0.198	0.202	0.197	0.170 to 0.230	99.0	70.0 to 130	2.00	20.0
BC19669	Lithium, Total	mg/L	4.040E-05	0.0154	0.200	0.212	0.214	0.204	0.170 to 0.230	106	70.0 to 130	0.939	20.0
BC19671	Magnesium, Dissolved	mg/L	-0.0132	0.0462	5.00	11.1	11.2	5.18	4.25 to 5.75	102	70.0 to 130	0.897	20.0
BC19669	Magnesium, Total	mg/L	0.000300	0.0462	5.00	8.56	8.62	5.10	4.25 to 5.75	102	70.0 to 130	0.698	20.0
BC19671	Manganese, Dissolved	mg/L	0.0000131	0.00033	0.100	1.72	1.72	0.105	0.0850 to 0.115	90.0	70.0 to 130	0.00	20.0
BC19669	Manganese, Total	mg/L	0.000128	0.00033	0.100	0.377	0.385	0.104	0.0850 to 0.115	83.0	70.0 to 130	2.10	20.0
BC19669	Mercury, Total by CVAA	mg/L	1.000E-05	0.000500	0.004	0.00418	0.00419	0.00407	0.00340 to 0.00460	104	70.0 to 130	0.239	20.0
BC19671	Molybdenum, Dissolved	mg/L	0.0000133	0.0002	0.100	0.0981	0.0988	0.0989	0.0850 to 0.115	97.7	70.0 to 130	0.711	20.0
BC19669	Molybdenum, Total	mg/L	-0.000003	0.0002	0.100	0.0976	0.0976	0.0988	0.0850 to 0.115	97.6	70.0 to 130	0.00	20.0
BC19671	Potassium, Dissolved	mg/L	-0.00218	0.367	10.0	10.3	10.5	10.4	8.50 to 11.5	98.2	70.0 to 130	1.92	20.0
BC19669	Potassium, Total	mg/L	0.0461	0.367	10.0	10.6	10.8	10.2	8.50 to 11.5	96.3	70.0 to 130	1.87	20.0
BC19671	Selenium, Dissolved	mg/L	0.0000887	0.00100	0.100	0.102	0.102	0.105	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BC19669	Selenium, Total	mg/L	0.0000408	0.00100	0.100	0.0978	0.101	0.104	0.0850 to 0.115	97.8	70.0 to 130	3.22	20.0
BC19671	Silicon, Dissolved	mg/L	-0.000043	0.0440	1.00	12.0	12.0	1.01	0.850 to 1.15	110	70.0 to 130	0.00	20.0
BC19669	Silicon, Total	mg/L	0.00120	0.0440	1.00	7.19	7.25	1.03	0.850 to 1.15	102	70.0 to 130	0.831	20.0
BC19671	Sodium, Dissolved	mg/L	0.000963	0.0660	5.00	15.2	15.3	5.00	4.25 to 5.75	96.0	70.0 to 130	0.656	20.0
BC19669	Sodium, Total	mg/L	0.00985	0.0660	5.00	17.1	17.2	4.99	4.25 to 5.75	106	70.0 to 130	0.583	20.0
BC19669	Sulfate	mg/L	0.620	2.0	20.0	33.8	34.0	19.6	18.0 to 22.0	108	80.0 to 120	0.590	20.0
BC19671	Thallium, Dissolved	mg/L	0.000011	0.000147	0.100	0.101	0.0988	0.101	0.0850 to 0.115	101	70.0 to 130	2.20	20.0
BC19669	Thallium, Total	mg/L	0.0000143	0.000147	0.100	0.101	0.101	0.0993	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BC19669	Total Organic Carbon	mg/L	0.280	1.00	10.0	11.6	12.6	24.5		89.4	80.0 to 120	8.26	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/25/22 10:12  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-17

**Laboratory ID Number:** BC19663

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19671	Alkalinity to pH 4.5	mg CaCO3/L					178	50.7	45.0 to 55.0			0.563	10.0
BC19669	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	1.88	0.052	1.88	1.80 to 2.20	94.0	90.0 to 110	0.00	15.0
BC19667	Solids, Dissolved	mg/L	0.0000	25.0			177	49.0	40.0 to 60.0			0.563	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-16

**Location Code:** WMWGADAP  
**Collected:** 10/25/22 11:55  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19664

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 12:15		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	10/28/22 11:50	11/3/22 12:15		1.015	8.46	mg/L	0.070035	0.406	
* Iron, Total	10/28/22 11:50	11/3/22 12:15		1.015	0.0139	mg/L	0.008120	0.0406	J
* Lithium, Total	10/28/22 11:50	11/3/22 12:15		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/28/22 11:50	11/3/22 12:15		1.015	2.52	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 12:15		1	8.50	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 12:15		1.015	3.97	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/3/22 12:15		1.015	2.74	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 14:25		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Dissolved	10/28/22 08:43	10/31/22 14:25		1.015	8.35	mg/L	0.070035	0.406	
* Iron, Dissolved	10/28/22 08:43	10/31/22 14:25		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Dissolved	10/28/22 08:43	10/31/22 14:25		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 12:58		1.015	2.49	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 14:25		1	8.37	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 14:25		1.015	3.91	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	10/31/22 14:25		1.015	2.76	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 14:58		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Total	10/28/22 11:50	10/31/22 15:31		5.075	2.48	mg/L	0.030450	0.05075	
* Arsenic, Total	10/28/22 11:50	10/28/22 14:58		1.015	0.00117	mg/L	0.000081	0.000203	
* Barium, Total	10/28/22 11:50	10/28/22 14:58		1.015	0.0290	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 14:58		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 14:58		1.015	0.000203	mg/L	0.000068	0.000203	J
* Chromium, Total	10/28/22 11:50	10/28/22 14:58		1.015	0.000275	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/28/22 11:50	10/28/22 14:58		1.015	0.0130	mg/L	0.000068	0.000203	
* Lead, Total	10/28/22 11:50	10/28/22 14:58		1.015	0.000634	mg/L	0.000068	0.000203	
* Manganese, Total	10/28/22 11:50	10/28/22 14:58		1.015	0.145	mg/L	0.000152	0.001015	
* Molybdenum, Total	10/28/22 11:50	10/28/22 14:58		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Potassium, Total	10/28/22 11:50	10/28/22 14:58		1.015	0.339	mg/L	0.169505	0.5075	J

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Fluoride may have potential matrix interference.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-16

**Location Code:** WMWGADAP  
**Collected:** 10/25/22 11:55  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19664

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 14:58		1.015	0.00118	mg/L	0.000508	0.001015	
* Thallium, Total	10/28/22 11:50	10/28/22 14:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 11:51		1.015	0.000738	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/31/22 15:13		5.075	2.45	mg/L	0.030450	0.05075	
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 11:51		1.015	0.00114	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 11:51		1.015	0.0285	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 11:51		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 11:51		1.015	0.000278	mg/L	0.000068	0.000203	
* Chromium, Dissolved	10/28/22 08:43	10/28/22 11:51		1.015	0.000224	mg/L	0.000203	0.001015	J
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 11:51		1.015	0.0137	mg/L	0.000068	0.000203	
* Lead, Dissolved	10/28/22 08:43	10/28/22 11:51		1.015	0.000633	mg/L	0.000068	0.000203	
* Manganese, Dissolved	10/28/22 08:43	10/28/22 11:51		1.015	0.150	mg/L	0.000152	0.001015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 11:51		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Potassium, Dissolved	10/28/22 08:43	10/28/22 11:51		1.015	0.352	mg/L	0.169505	0.5075	J
* Selenium, Dissolved	10/28/22 08:43	10/28/22 11:51		1.015	0.00140	mg/L	0.000508	0.001015	
* Thallium, Dissolved	10/28/22 08:43	10/28/22 11:51		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/3/22 23:11		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 11:53	10/28/22 11:53		1	0.901	mg/L as N	0.20	0.3	
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/8/22 08:50	11/8/22 09:22		1	2.44	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/27/22 12:00	10/31/22 10:08		1	72.7	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 09:22		1	2.44	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 09:22		1	Not Detected	mg CaCO3/L		0.5	
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/27/22 21:26	10/27/22 21:26		1	2.03	mg/L	1.00	2	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Fluoride may have potential matrix interference.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-16

**Location Code:** WMWGADAP  
**Collected:** 10/25/22 11:55  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19664

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/27/22 15:13	10/27/22 15:13		1	3.24	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 11:25	10/28/22 11:25		1	Not Detected	mg/L	0.06	0.125	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 09:36	11/1/22 09:36		1	37.1	mg/L	0.6	2	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/25/22 11:50	10/25/22 11:50			124.19	uS/cm			FA
pH	10/25/22 11:50	10/25/22 11:50			4.64	SU			FA
Temperature	10/25/22 11:50	10/25/22 11:50			19.81	C			FA
Turbidity	10/25/22 11:50	10/25/22 11:50			1.43	NTU			FA
Sulfide	10/25/22 11:50	10/25/22 11:50			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Fluoride may have potential matrix interference.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/25/22 11:55  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-16

**Laboratory ID Number:** BC19664

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19671	Aluminum, Dissolved	mg/L	0.0000549	0.010	0.100	0.100	0.103	0.103	0.0850 to 0.115	100	70.0 to 130	2.96	20.0
BC19669	Aluminum, Total	mg/L	0.000961	0.010	0.100	0.0983	0.102	0.103	0.0850 to 0.115	98.3	70.0 to 130	3.69	20.0
BC19671	Antimony, Dissolved	mg/L	0.0000571	0.00100	0.100	0.0904	0.0921	0.0871	0.0850 to 0.115	89.8	70.0 to 130	1.86	20.0
BC19669	Antimony, Total	mg/L	0.000028	0.00100	0.100	0.0962	0.0962	0.0918	0.0850 to 0.115	96.2	70.0 to 130	0.00	20.0
BC19671	Arsenic, Dissolved	mg/L	0.0000398	0.000176	0.100	0.100	0.101	0.102	0.0850 to 0.115	97.1	70.0 to 130	0.995	20.0
BC19669	Arsenic, Total	mg/L	0.0000953	0.000176	0.100	0.0986	0.0975	0.0989	0.0850 to 0.115	98.4	70.0 to 130	1.12	20.0
BC19671	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.310	0.295	0.0919	0.0850 to 0.115	96.0	70.0 to 130	4.96	20.0
BC19669	Barium, Total	mg/L	-0.0000058	0.00100	0.100	0.168	0.165	0.0970	0.0850 to 0.115	97.8	70.0 to 130	1.80	20.0
BC19671	Beryllium, Dissolved	mg/L	0.0000222	0.000880	0.100	0.0945	0.0935	0.0966	0.0850 to 0.115	94.5	70.0 to 130	1.06	20.0
BC19669	Beryllium, Total	mg/L	0.0000213	0.000880	0.100	0.0935	0.0950	0.0944	0.0850 to 0.115	93.5	70.0 to 130	1.59	20.0
BC19671	Boron, Dissolved	mg/L	-0.00146	0.0650	1.00	1.06	1.07	0.990	0.850 to 1.15	101	70.0 to 130	0.939	20.0
BC19669	Boron, Total	mg/L	0.00226	0.0650	1.00	1.07	1.08	0.999	0.850 to 1.15	99.1	70.0 to 130	0.930	20.0
BC19671	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0971	0.0991	0.100	0.0850 to 0.115	97.1	70.0 to 130	2.04	20.0
BC19669	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0970	0.0987	0.101	0.0850 to 0.115	97.0	70.0 to 130	1.74	20.0
BC19671	Calcium, Dissolved	mg/L	0.00894	0.152	5.00	66.4	66.1	5.08	4.25 to 5.75	-200	70.0 to 130	0.453	20.0
BC19669	Calcium, Total	mg/L	-0.00258	0.152	5.00	17.3	17.3	5.30	4.25 to 5.75	102	70.0 to 130	0.00	20.0
BC19669	Chloride	mg/L	0.110	1.00	10.0	19.4	19.4	9.91	9.00 to 11.0	100	80.0 to 120	0.00	20.0
BC19671	Chromium, Dissolved	mg/L	0.0000111	0.000440	0.100	0.0961	0.0984	0.102	0.0850 to 0.115	96.1	70.0 to 130	2.37	20.0
BC19669	Chromium, Total	mg/L	0.000129	0.000440	0.100	0.0954	0.0981	0.101	0.0850 to 0.115	95.2	70.0 to 130	2.79	20.0
BC19671	Cobalt, Dissolved	mg/L	0.0000002	0.000147	0.100	0.101	0.102	0.105	0.0850 to 0.115	98.1	70.0 to 130	0.985	20.0
BC19669	Cobalt, Total	mg/L	-0.0000001	0.000147	0.100	0.0990	0.101	0.104	0.0850 to 0.115	97.8	70.0 to 130	2.00	20.0
BC19669	Fluoride	mg/L	0.0328	0.125	2.50	2.46	2.58	2.36	2.25 to 2.75	98.4	80.0 to 120	4.76	20.0
BC19671	Iron, Dissolved	mg/L	-0.000185	0.0176	0.2	8.47	8.31	0.202	0.170 to 0.230	-745	70.0 to 130	1.91	20.0
BC19669	Iron, Total	mg/L	0.00114	0.0176	0.2	0.275	0.276	0.211	0.170 to 0.230	103	70.0 to 130	0.363	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Fluoride may have potential matrix interference.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/25/22 11:55  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-16

**Laboratory ID Number:** BC19664

Sample	Analysis	Units	MB				Standard		Rec		Prec	Limit	
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec			Limit
BC19671	Lead, Dissolved	mg/L	0.0000074	0.000147	0.100	0.0995	0.0995	0.102	0.0850 to 0.115	99.5	70.0 to 130	0.00	20.0
BC19669	Lead, Total	mg/L	0.0000062	0.000147	0.100	0.100	0.101	0.0998	0.0850 to 0.115	100	70.0 to 130	0.995	20.0
BC19671	Lithium, Dissolved	mg/L	-0.000107	0.0154	0.200	0.198	0.202	0.197	0.170 to 0.230	99.0	70.0 to 130	2.00	20.0
BC19669	Lithium, Total	mg/L	4.040E-05	0.0154	0.200	0.212	0.214	0.204	0.170 to 0.230	106	70.0 to 130	0.939	20.0
BC19671	Magnesium, Dissolved	mg/L	-0.0132	0.0462	5.00	11.1	11.2	5.18	4.25 to 5.75	102	70.0 to 130	0.897	20.0
BC19669	Magnesium, Total	mg/L	0.000300	0.0462	5.00	8.56	8.62	5.10	4.25 to 5.75	102	70.0 to 130	0.698	20.0
BC19671	Manganese, Dissolved	mg/L	0.0000131	0.00033	0.100	1.72	1.72	0.105	0.0850 to 0.115	90.0	70.0 to 130	0.00	20.0
BC19669	Manganese, Total	mg/L	0.000128	0.00033	0.100	0.377	0.385	0.104	0.0850 to 0.115	83.0	70.0 to 130	2.10	20.0
BC19669	Mercury, Total by CVAA	mg/L	1.000E-05	0.000500	0.004	0.00418	0.00419	0.00407	0.00340 to 0.00460	104	70.0 to 130	0.239	20.0
BC19671	Molybdenum, Dissolved	mg/L	0.0000133	0.0002	0.100	0.0981	0.0988	0.0989	0.0850 to 0.115	97.7	70.0 to 130	0.711	20.0
BC19669	Molybdenum, Total	mg/L	-0.000003	0.0002	0.100	0.0976	0.0976	0.0988	0.0850 to 0.115	97.6	70.0 to 130	0.00	20.0
BC19671	Potassium, Dissolved	mg/L	-0.00218	0.367	10.0	10.3	10.5	10.4	8.50 to 11.5	98.2	70.0 to 130	1.92	20.0
BC19669	Potassium, Total	mg/L	0.0461	0.367	10.0	10.6	10.8	10.2	8.50 to 11.5	96.3	70.0 to 130	1.87	20.0
BC19671	Selenium, Dissolved	mg/L	0.0000887	0.00100	0.100	0.102	0.102	0.105	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BC19669	Selenium, Total	mg/L	0.0000408	0.00100	0.100	0.0978	0.101	0.104	0.0850 to 0.115	97.8	70.0 to 130	3.22	20.0
BC19671	Silicon, Dissolved	mg/L	-0.000043	0.0440	1.00	12.0	12.0	1.01	0.850 to 1.15	110	70.0 to 130	0.00	20.0
BC19669	Silicon, Total	mg/L	0.00120	0.0440	1.00	7.19	7.25	1.03	0.850 to 1.15	102	70.0 to 130	0.831	20.0
BC19671	Sodium, Dissolved	mg/L	0.000963	0.0660	5.00	15.2	15.3	5.00	4.25 to 5.75	96.0	70.0 to 130	0.656	20.0
BC19669	Sodium, Total	mg/L	0.00985	0.0660	5.00	17.1	17.2	4.99	4.25 to 5.75	106	70.0 to 130	0.583	20.0
BC19669	Sulfate	mg/L	0.620	2.0	20.0	33.8	34.0	19.6	18.0 to 22.0	108	80.0 to 120	0.590	20.0
BC19671	Thallium, Dissolved	mg/L	0.000011	0.000147	0.100	0.101	0.0988	0.101	0.0850 to 0.115	101	70.0 to 130	2.20	20.0
BC19669	Thallium, Total	mg/L	0.0000143	0.000147	0.100	0.101	0.101	0.0993	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BC19669	Total Organic Carbon	mg/L	0.280	1.00	10.0	11.6	12.6	24.5		89.4	80.0 to 120	8.26	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Fluoride may have potential matrix interference.



## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/25/22 11:55  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-16

**Laboratory ID Number:** BC19664

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19671	Alkalinity to pH 4.5	mg CaCO3/L					178	50.7	45.0 to 55.0			0.563	10.0
BC19669	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	1.88	0.052	1.88	1.80 to 2.20	94.0	90.0 to 110	0.00	15.0
BC19667	Solids, Dissolved	mg/L	0.0000	25.0			177	49.0	40.0 to 60.0			0.563	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Fluoride may have potential matrix interference.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - PZ-1

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 09:00  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19665

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 12:18		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	10/28/22 11:50	11/3/22 12:18		1.015	23.1	mg/L	0.070035	0.406	
* Iron, Total	10/28/22 11:50	11/3/22 12:18		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Total	10/28/22 11:50	11/3/22 12:18		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/28/22 11:50	11/3/22 12:18		1.015	3.26	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 12:18		1	16.6	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 12:18		1.015	7.76	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/3/22 12:18		1.015	3.85	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 14:28		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Dissolved	10/28/22 08:43	10/31/22 14:28		1.015	22.0	mg/L	0.070035	0.406	
* Iron, Dissolved	10/28/22 08:43	10/31/22 14:28		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Dissolved	10/28/22 08:43	10/31/22 14:28		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 13:01		1.015	3.15	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 14:28		1	16.2	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 14:28		1.015	7.56	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	10/31/22 14:28		1.015	3.84	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 15:02		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Total	10/28/22 11:50	10/28/22 15:02		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Total	10/28/22 11:50	10/28/22 15:02		1.015	0.000164	mg/L	0.000081	0.000203	J
* Barium, Total	10/28/22 11:50	10/28/22 15:02		1.015	0.0682	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 15:02		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 15:02		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/28/22 11:50	10/28/22 15:02		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	10/28/22 11:50	10/28/22 15:02		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Total	10/28/22 11:50	10/28/22 15:02		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 15:02		1.015	0.0108	mg/L	0.000152	0.001015	
* Molybdenum, Total	10/28/22 11:50	10/28/22 15:02		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Potassium, Total	10/28/22 11:50	10/28/22 15:02		1.015	0.434	mg/L	0.169505	0.5075	J

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - PZ-1

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 09:00  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19665

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 15:02		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 15:02		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 11:55		1.015	0.000694	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 11:55		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 11:55		1.015	0.000219	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 11:55		1.015	0.0671	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 11:55		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 11:55		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 11:55		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 11:55		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Dissolved	10/28/22 08:43	10/28/22 11:55		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 11:55		1.015	0.00933	mg/L	0.000152	0.001015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 11:55		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Potassium, Dissolved	10/28/22 08:43	10/28/22 11:55		1.015	0.435	mg/L	0.169505	0.5075	J
* Selenium, Dissolved	10/28/22 08:43	10/28/22 11:55		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 11:55		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/3/22 23:15		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 11:55	10/28/22 11:55		1	0.801	mg/L as N	0.20	0.3	
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/8/22 08:50	11/8/22 15:09		1	65.5	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/27/22 12:00	10/31/22 10:08		1	96.0	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	65.3	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	Not Detected	mg CaCO3/L		0.5	
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/27/22 21:43	10/27/22 21:43		1	1.32	mg/L	1.00	2	J

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - PZ-1

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 09:00  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19665

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/27/22 15:14	10/27/22 15:14		1	3.39	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 11:26	10/28/22 11:26		1	Not Detected	mg/L	0.06	0.125	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 09:37	11/1/22 09:37		1	3.43	mg/L	0.6	2	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/26/22 08:56	10/26/22 08:56			162.02	uS/cm			FA
pH	10/26/22 08:56	10/26/22 08:56			6.66	SU			FA
Temperature	10/26/22 08:56	10/26/22 08:56			19.28	C			FA
Turbidity	10/26/22 08:56	10/26/22 08:56			0.02	NTU			FA
Sulfide	10/26/22 08:56	10/26/22 08:56			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 09:00  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - PZ-1

**Laboratory ID Number:** BC19665

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19671	Aluminum, Dissolved	mg/L	0.0000549	0.010	0.100	0.100	0.103	0.103	0.0850 to 0.115	100	70.0 to 130	2.96	20.0
BC19669	Aluminum, Total	mg/L	0.000961	0.010	0.100	0.0983	0.102	0.103	0.0850 to 0.115	98.3	70.0 to 130	3.69	20.0
BC19671	Antimony, Dissolved	mg/L	0.0000571	0.00100	0.100	0.0904	0.0921	0.0871	0.0850 to 0.115	89.8	70.0 to 130	1.86	20.0
BC19669	Antimony, Total	mg/L	0.000028	0.00100	0.100	0.0962	0.0962	0.0918	0.0850 to 0.115	96.2	70.0 to 130	0.00	20.0
BC19671	Arsenic, Dissolved	mg/L	0.0000398	0.000176	0.100	0.100	0.101	0.102	0.0850 to 0.115	97.1	70.0 to 130	0.995	20.0
BC19669	Arsenic, Total	mg/L	0.0000953	0.000176	0.100	0.0986	0.0975	0.0989	0.0850 to 0.115	98.4	70.0 to 130	1.12	20.0
BC19671	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.310	0.295	0.0919	0.0850 to 0.115	96.0	70.0 to 130	4.96	20.0
BC19669	Barium, Total	mg/L	-0.0000058	0.00100	0.100	0.168	0.165	0.0970	0.0850 to 0.115	97.8	70.0 to 130	1.80	20.0
BC19671	Beryllium, Dissolved	mg/L	0.0000222	0.000880	0.100	0.0945	0.0935	0.0966	0.0850 to 0.115	94.5	70.0 to 130	1.06	20.0
BC19669	Beryllium, Total	mg/L	0.0000213	0.000880	0.100	0.0935	0.0950	0.0944	0.0850 to 0.115	93.5	70.0 to 130	1.59	20.0
BC19671	Boron, Dissolved	mg/L	-0.00146	0.0650	1.00	1.06	1.07	0.990	0.850 to 1.15	101	70.0 to 130	0.939	20.0
BC19669	Boron, Total	mg/L	0.00226	0.0650	1.00	1.07	1.08	0.999	0.850 to 1.15	99.1	70.0 to 130	0.930	20.0
BC19671	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0971	0.0991	0.100	0.0850 to 0.115	97.1	70.0 to 130	2.04	20.0
BC19669	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0970	0.0987	0.101	0.0850 to 0.115	97.0	70.0 to 130	1.74	20.0
BC19671	Calcium, Dissolved	mg/L	0.00894	0.152	5.00	66.4	66.1	5.08	4.25 to 5.75	-200	70.0 to 130	0.453	20.0
BC19669	Calcium, Total	mg/L	-0.00258	0.152	5.00	17.3	17.3	5.30	4.25 to 5.75	102	70.0 to 130	0.00	20.0
BC19669	Chloride	mg/L	0.110	1.00	10.0	19.4	19.4	9.91	9.00 to 11.0	100	80.0 to 120	0.00	20.0
BC19671	Chromium, Dissolved	mg/L	0.0000111	0.000440	0.100	0.0961	0.0984	0.102	0.0850 to 0.115	96.1	70.0 to 130	2.37	20.0
BC19669	Chromium, Total	mg/L	0.000129	0.000440	0.100	0.0954	0.0981	0.101	0.0850 to 0.115	95.2	70.0 to 130	2.79	20.0
BC19671	Cobalt, Dissolved	mg/L	0.0000002	0.000147	0.100	0.101	0.102	0.105	0.0850 to 0.115	98.1	70.0 to 130	0.985	20.0
BC19669	Cobalt, Total	mg/L	-0.0000001	0.000147	0.100	0.0990	0.101	0.104	0.0850 to 0.115	97.8	70.0 to 130	2.00	20.0
BC19669	Fluoride	mg/L	0.0328	0.125	2.50	2.46	2.58	2.36	2.25 to 2.75	98.4	80.0 to 120	4.76	20.0
BC19671	Iron, Dissolved	mg/L	-0.000185	0.0176	0.2	8.47	8.31	0.202	0.170 to 0.230	-745	70.0 to 130	1.91	20.0
BC19669	Iron, Total	mg/L	0.00114	0.0176	0.2	0.275	0.276	0.211	0.170 to 0.230	103	70.0 to 130	0.363	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 09:00  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - PZ-1

**Laboratory ID Number:** BC19665

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19671	Lead, Dissolved	mg/L	0.0000074	0.000147	0.100	0.0995	0.0995	0.102	0.0850 to 0.115	99.5	70.0 to 130	0.00	20.0
BC19669	Lead, Total	mg/L	0.0000062	0.000147	0.100	0.100	0.101	0.0998	0.0850 to 0.115	100	70.0 to 130	0.995	20.0
BC19671	Lithium, Dissolved	mg/L	-0.000107	0.0154	0.200	0.198	0.202	0.197	0.170 to 0.230	99.0	70.0 to 130	2.00	20.0
BC19669	Lithium, Total	mg/L	4.040E-05	0.0154	0.200	0.212	0.214	0.204	0.170 to 0.230	106	70.0 to 130	0.939	20.0
BC19671	Magnesium, Dissolved	mg/L	-0.0132	0.0462	5.00	11.1	11.2	5.18	4.25 to 5.75	102	70.0 to 130	0.897	20.0
BC19669	Magnesium, Total	mg/L	0.000300	0.0462	5.00	8.56	8.62	5.10	4.25 to 5.75	102	70.0 to 130	0.698	20.0
BC19671	Manganese, Dissolved	mg/L	0.0000131	0.00033	0.100	1.72	1.72	0.105	0.0850 to 0.115	90.0	70.0 to 130	0.00	20.0
BC19669	Manganese, Total	mg/L	0.000128	0.00033	0.100	0.377	0.385	0.104	0.0850 to 0.115	83.0	70.0 to 130	2.10	20.0
BC19669	Mercury, Total by CVAA	mg/L	1.000E-05	0.000500	0.004	0.00418	0.00419	0.00407	0.00340 to 0.00460	104	70.0 to 130	0.239	20.0
BC19671	Molybdenum, Dissolved	mg/L	0.0000133	0.0002	0.100	0.0981	0.0988	0.0989	0.0850 to 0.115	97.7	70.0 to 130	0.711	20.0
BC19669	Molybdenum, Total	mg/L	-0.000003	0.0002	0.100	0.0976	0.0976	0.0988	0.0850 to 0.115	97.6	70.0 to 130	0.00	20.0
BC19671	Potassium, Dissolved	mg/L	-0.00218	0.367	10.0	10.3	10.5	10.4	8.50 to 11.5	98.2	70.0 to 130	1.92	20.0
BC19669	Potassium, Total	mg/L	0.0461	0.367	10.0	10.6	10.8	10.2	8.50 to 11.5	96.3	70.0 to 130	1.87	20.0
BC19671	Selenium, Dissolved	mg/L	0.0000887	0.00100	0.100	0.102	0.102	0.105	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BC19669	Selenium, Total	mg/L	0.0000408	0.00100	0.100	0.0978	0.101	0.104	0.0850 to 0.115	97.8	70.0 to 130	3.22	20.0
BC19671	Silicon, Dissolved	mg/L	-0.000043	0.0440	1.00	12.0	12.0	1.01	0.850 to 1.15	110	70.0 to 130	0.00	20.0
BC19669	Silicon, Total	mg/L	0.00120	0.0440	1.00	7.19	7.25	1.03	0.850 to 1.15	102	70.0 to 130	0.831	20.0
BC19671	Sodium, Dissolved	mg/L	0.000963	0.0660	5.00	15.2	15.3	5.00	4.25 to 5.75	96.0	70.0 to 130	0.656	20.0
BC19669	Sodium, Total	mg/L	0.00985	0.0660	5.00	17.1	17.2	4.99	4.25 to 5.75	106	70.0 to 130	0.583	20.0
BC19669	Sulfate	mg/L	0.620	2.0	20.0	33.8	34.0	19.6	18.0 to 22.0	108	80.0 to 120	0.590	20.0
BC19671	Thallium, Dissolved	mg/L	0.000011	0.000147	0.100	0.101	0.0988	0.101	0.0850 to 0.115	101	70.0 to 130	2.20	20.0
BC19669	Thallium, Total	mg/L	0.0000143	0.000147	0.100	0.101	0.101	0.0993	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BC19669	Total Organic Carbon	mg/L	0.280	1.00	10.0	11.6	12.6	24.5		89.4	80.0 to 120	8.26	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 09:00  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - PZ-1

**Laboratory ID Number:** BC19665

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19671	Alkalinity to pH 4.5	mg CaCO3/L					178	50.7	45.0 to 55.0			0.563	10.0
BC19669	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	1.88	0.052	1.88	1.80 to 2.20	94.0	90.0 to 110	0.00	15.0
BC19667	Solids, Dissolved	mg/L	0.0000	25.0			177	49.0	40.0 to 60.0			0.563	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-5

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 09:50  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19666

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 12:22		1.015	0.230	mg/L	0.030000	0.1015	
* Calcium, Total	10/28/22 11:50	11/3/22 12:22		1.015	39.6	mg/L	0.070035	0.406	
* Iron, Total	10/28/22 11:50	11/3/22 12:22		1.015	0.163	mg/L	0.008120	0.0406	
* Lithium, Total	10/28/22 11:50	11/3/22 12:22		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/28/22 11:50	11/3/22 12:22		1.015	7.87	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 12:22		1	16.3	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 12:22		1.015	7.62	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/3/22 12:22		1.015	14.7	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 14:32		1.015	0.232	mg/L	0.030000	0.1015	
* Calcium, Dissolved	10/28/22 08:43	10/31/22 14:32		1.015	37.4	mg/L	0.070035	0.406	
* Iron, Dissolved	10/28/22 08:43	10/31/22 14:32		1.015	0.117	mg/L	0.008120	0.0406	
* Lithium, Dissolved	10/28/22 08:43	10/31/22 14:32		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 13:04		1.015	7.76	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 14:32		1	15.8	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 14:32		1.015	7.38	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	10/31/22 14:32		1.015	14.1	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 15:05		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Total	10/28/22 11:50	10/28/22 15:05		1.015	0.0428	mg/L	0.006090	0.01015	
* Arsenic, Total	10/28/22 11:50	10/28/22 15:05		1.015	0.000250	mg/L	0.000081	0.000203	
* Barium, Total	10/28/22 11:50	10/28/22 15:05		1.015	0.231	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 15:05		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 15:05		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/28/22 11:50	10/28/22 15:05		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	10/28/22 11:50	10/28/22 15:05		1.015	0.000936	mg/L	0.000068	0.000203	
* Lead, Total	10/28/22 11:50	10/28/22 15:05		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 15:05		1.015	0.168	mg/L	0.000152	0.001015	
* Molybdenum, Total	10/28/22 11:50	10/28/22 15:05		1.015	0.000371	mg/L	0.000102	0.000203	
* Potassium, Total	10/28/22 11:50	10/28/22 15:05		1.015	0.711	mg/L	0.169505	0.5075	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.



# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-5

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 09:50  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19666

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 15:05		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 15:05		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 11:58		1.015	0.000790	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 11:58		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 11:58		1.015	0.000257	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 11:58		1.015	0.224	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 11:58		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 11:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 11:58		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 11:58		1.015	0.000899	mg/L	0.000068	0.000203	
* Lead, Dissolved	10/28/22 08:43	10/28/22 11:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 11:58		1.015	0.167	mg/L	0.000152	0.001015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 11:58		1.015	0.000332	mg/L	0.000102	0.000203	
* Potassium, Dissolved	10/28/22 08:43	10/28/22 11:58		1.015	0.740	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 11:58		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 11:58		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/3/22 23:19		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 11:55	10/28/22 11:55		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/8/22 08:50	11/8/22 15:09		1	129	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/27/22 12:00	10/31/22 10:08		1	178	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	129	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	Not Detected	mg CaCO3/L		0.5	
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/27/22 21:56	10/27/22 21:56		1	3.39	mg/L	1.00	2	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-5

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 09:50  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19666

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/27/22 15:15	10/27/22 15:15		1	6.40	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 11:28	10/28/22 11:28		1	0.0845	mg/L	0.06	0.125	J
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 09:38	11/1/22 09:38		1	16.1	mg/L	0.6	2	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/26/22 09:49	10/26/22 09:49			297.31	uS/cm			FA
pH	10/26/22 09:49	10/26/22 09:49			6.44	SU			FA
Temperature	10/26/22 09:49	10/26/22 09:49			20.50	C			FA
Turbidity	10/26/22 09:49	10/26/22 09:49			2.35	NTU			FA
Sulfide	10/26/22 09:49	10/26/22 09:49			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 09:50  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-5

**Laboratory ID Number:** BC19666

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19671	Aluminum, Dissolved	mg/L	0.0000549	0.010	0.100	0.100	0.103	0.103	0.0850 to 0.115	100	70.0 to 130	2.96	20.0
BC19669	Aluminum, Total	mg/L	0.000961	0.010	0.100	0.0983	0.102	0.103	0.0850 to 0.115	98.3	70.0 to 130	3.69	20.0
BC19671	Antimony, Dissolved	mg/L	0.0000571	0.00100	0.100	0.0904	0.0921	0.0871	0.0850 to 0.115	89.8	70.0 to 130	1.86	20.0
BC19669	Antimony, Total	mg/L	0.000028	0.00100	0.100	0.0962	0.0962	0.0918	0.0850 to 0.115	96.2	70.0 to 130	0.00	20.0
BC19671	Arsenic, Dissolved	mg/L	0.0000398	0.000176	0.100	0.100	0.101	0.102	0.0850 to 0.115	97.1	70.0 to 130	0.995	20.0
BC19669	Arsenic, Total	mg/L	0.0000953	0.000176	0.100	0.0986	0.0975	0.0989	0.0850 to 0.115	98.4	70.0 to 130	1.12	20.0
BC19671	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.310	0.295	0.0919	0.0850 to 0.115	96.0	70.0 to 130	4.96	20.0
BC19669	Barium, Total	mg/L	-0.0000058	0.00100	0.100	0.168	0.165	0.0970	0.0850 to 0.115	97.8	70.0 to 130	1.80	20.0
BC19671	Beryllium, Dissolved	mg/L	0.0000222	0.000880	0.100	0.0945	0.0935	0.0966	0.0850 to 0.115	94.5	70.0 to 130	1.06	20.0
BC19669	Beryllium, Total	mg/L	0.0000213	0.000880	0.100	0.0935	0.0950	0.0944	0.0850 to 0.115	93.5	70.0 to 130	1.59	20.0
BC19671	Boron, Dissolved	mg/L	-0.00146	0.0650	1.00	1.06	1.07	0.990	0.850 to 1.15	101	70.0 to 130	0.939	20.0
BC19669	Boron, Total	mg/L	0.00226	0.0650	1.00	1.07	1.08	0.999	0.850 to 1.15	99.1	70.0 to 130	0.930	20.0
BC19671	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0971	0.0991	0.100	0.0850 to 0.115	97.1	70.0 to 130	2.04	20.0
BC19669	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0970	0.0987	0.101	0.0850 to 0.115	97.0	70.0 to 130	1.74	20.0
BC19671	Calcium, Dissolved	mg/L	0.00894	0.152	5.00	66.4	66.1	5.08	4.25 to 5.75	-200	70.0 to 130	0.453	20.0
BC19669	Calcium, Total	mg/L	-0.00258	0.152	5.00	17.3	17.3	5.30	4.25 to 5.75	102	70.0 to 130	0.00	20.0
BC19669	Chloride	mg/L	0.110	1.00	10.0	19.4	19.4	9.91	9.00 to 11.0	100	80.0 to 120	0.00	20.0
BC19671	Chromium, Dissolved	mg/L	0.0000111	0.000440	0.100	0.0961	0.0984	0.102	0.0850 to 0.115	96.1	70.0 to 130	2.37	20.0
BC19669	Chromium, Total	mg/L	0.000129	0.000440	0.100	0.0954	0.0981	0.101	0.0850 to 0.115	95.2	70.0 to 130	2.79	20.0
BC19671	Cobalt, Dissolved	mg/L	0.0000002	0.000147	0.100	0.101	0.102	0.105	0.0850 to 0.115	98.1	70.0 to 130	0.985	20.0
BC19669	Cobalt, Total	mg/L	-0.0000001	0.000147	0.100	0.0990	0.101	0.104	0.0850 to 0.115	97.8	70.0 to 130	2.00	20.0
BC19669	Fluoride	mg/L	0.0328	0.125	2.50	2.46	2.58	2.36	2.25 to 2.75	98.4	80.0 to 120	4.76	20.0
BC19671	Iron, Dissolved	mg/L	-0.000185	0.0176	0.2	8.47	8.31	0.202	0.170 to 0.230	-745	70.0 to 130	1.91	20.0
BC19669	Iron, Total	mg/L	0.00114	0.0176	0.2	0.275	0.276	0.211	0.170 to 0.230	103	70.0 to 130	0.363	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 09:50  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-5

**Laboratory ID Number:** BC19666

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19671	Lead, Dissolved	mg/L	0.0000074	0.000147	0.100	0.0995	0.0995	0.102	0.0850 to 0.115	99.5	70.0 to 130	0.00	20.0
BC19669	Lead, Total	mg/L	0.0000062	0.000147	0.100	0.100	0.101	0.0998	0.0850 to 0.115	100	70.0 to 130	0.995	20.0
BC19671	Lithium, Dissolved	mg/L	-0.000107	0.0154	0.200	0.198	0.202	0.197	0.170 to 0.230	99.0	70.0 to 130	2.00	20.0
BC19669	Lithium, Total	mg/L	4.040E-05	0.0154	0.200	0.212	0.214	0.204	0.170 to 0.230	106	70.0 to 130	0.939	20.0
BC19671	Magnesium, Dissolved	mg/L	-0.0132	0.0462	5.00	11.1	11.2	5.18	4.25 to 5.75	102	70.0 to 130	0.897	20.0
BC19669	Magnesium, Total	mg/L	0.000300	0.0462	5.00	8.56	8.62	5.10	4.25 to 5.75	102	70.0 to 130	0.698	20.0
BC19671	Manganese, Dissolved	mg/L	0.0000131	0.00033	0.100	1.72	1.72	0.105	0.0850 to 0.115	90.0	70.0 to 130	0.00	20.0
BC19669	Manganese, Total	mg/L	0.000128	0.00033	0.100	0.377	0.385	0.104	0.0850 to 0.115	83.0	70.0 to 130	2.10	20.0
BC19669	Mercury, Total by CVAA	mg/L	1.000E-05	0.000500	0.004	0.00418	0.00419	0.00407	0.00340 to 0.00460	104	70.0 to 130	0.239	20.0
BC19671	Molybdenum, Dissolved	mg/L	0.0000133	0.0002	0.100	0.0981	0.0988	0.0989	0.0850 to 0.115	97.7	70.0 to 130	0.711	20.0
BC19669	Molybdenum, Total	mg/L	-0.000003	0.0002	0.100	0.0976	0.0976	0.0988	0.0850 to 0.115	97.6	70.0 to 130	0.00	20.0
BC19671	Potassium, Dissolved	mg/L	-0.00218	0.367	10.0	10.3	10.5	10.4	8.50 to 11.5	98.2	70.0 to 130	1.92	20.0
BC19669	Potassium, Total	mg/L	0.0461	0.367	10.0	10.6	10.8	10.2	8.50 to 11.5	96.3	70.0 to 130	1.87	20.0
BC19671	Selenium, Dissolved	mg/L	0.0000887	0.00100	0.100	0.102	0.102	0.105	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BC19669	Selenium, Total	mg/L	0.0000408	0.00100	0.100	0.0978	0.101	0.104	0.0850 to 0.115	97.8	70.0 to 130	3.22	20.0
BC19671	Silicon, Dissolved	mg/L	-0.000043	0.0440	1.00	12.0	12.0	1.01	0.850 to 1.15	110	70.0 to 130	0.00	20.0
BC19669	Silicon, Total	mg/L	0.00120	0.0440	1.00	7.19	7.25	1.03	0.850 to 1.15	102	70.0 to 130	0.831	20.0
BC19671	Sodium, Dissolved	mg/L	0.000963	0.0660	5.00	15.2	15.3	5.00	4.25 to 5.75	96.0	70.0 to 130	0.656	20.0
BC19669	Sodium, Total	mg/L	0.00985	0.0660	5.00	17.1	17.2	4.99	4.25 to 5.75	106	70.0 to 130	0.583	20.0
BC19669	Sulfate	mg/L	0.620	2.0	20.0	33.8	34.0	19.6	18.0 to 22.0	108	80.0 to 120	0.590	20.0
BC19671	Thallium, Dissolved	mg/L	0.000011	0.000147	0.100	0.101	0.0988	0.101	0.0850 to 0.115	101	70.0 to 130	2.20	20.0
BC19669	Thallium, Total	mg/L	0.0000143	0.000147	0.100	0.101	0.101	0.0993	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BC19669	Total Organic Carbon	mg/L	0.280	1.00	10.0	11.6	12.6	24.5		89.4	80.0 to 120	8.26	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 09:50  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-5

**Laboratory ID Number:** BC19666

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19671	Alkalinity to pH 4.5	mg CaCO3/L					178	50.7	45.0 to 55.0			0.563	10.0
BC19669	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	1.88	0.052	1.88	1.80 to 2.20	94.0	90.0 to 110	0.00	15.0
BC19667	Solids, Dissolved	mg/L	0.0000	25.0			177	49.0	40.0 to 60.0			0.563	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-5 Dup

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 09:50  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19667

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Total	10/28/22 11:50	11/3/22 12:25		1.015	0.231	mg/L	0.030000	0.1015		
* Calcium, Total	10/28/22 11:50	11/3/22 12:25		1.015	39.5	mg/L	0.070035	0.406		
* Iron, Total	10/28/22 11:50	11/3/22 12:25		1.015	0.160	mg/L	0.008120	0.0406		
* Lithium, Total	10/28/22 11:50	11/3/22 12:25		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	10/28/22 11:50	11/3/22 12:25		1.015	7.84	mg/L	0.021315	0.406		
Silica, Total (calc.)	10/28/22 11:50	11/3/22 12:25		1	16.3	mg/L				
Silicon, Total	10/28/22 11:50	11/3/22 12:25		1.015	7.62	mg/L	0.02030	0.25375		
* Sodium, Total	10/28/22 11:50	11/3/22 12:25		1.015	14.6	mg/L	0.03045	0.406		
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Dissolved	10/28/22 08:43	10/31/22 14:35		1.015	0.235	mg/L	0.030000	0.1015		
* Calcium, Dissolved	10/28/22 08:43	10/31/22 14:35		1.015	36.7	mg/L	0.070035	0.406		
* Iron, Dissolved	10/28/22 08:43	10/31/22 14:35		1.015	0.119	mg/L	0.008120	0.0406		
* Lithium, Dissolved	10/28/22 08:43	10/31/22 14:35		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 13:07		1.015	7.78	mg/L	0.021315	0.406		
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 14:35		1	15.6	mg/L				
Silicon, Dissolved	10/28/22 08:43	10/31/22 14:35		1.015	7.31	mg/L	0.02030	0.25375		
* Sodium, Dissolved	10/28/22 08:43	10/31/22 14:35		1.015	14.2	mg/L	0.03045	0.406		
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>					
* Antimony, Total	10/28/22 11:50	10/28/22 15:09		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Aluminum, Total	10/28/22 11:50	10/28/22 15:09		1.015	0.0392	mg/L	0.006090	0.01015		
* Arsenic, Total	10/28/22 11:50	10/28/22 15:09		1.015	0.000222	mg/L	0.000081	0.000203		
* Barium, Total	10/28/22 11:50	10/28/22 15:09		1.015	0.229	mg/L	0.000508	0.001015		
* Beryllium, Total	10/28/22 11:50	10/28/22 15:09		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	10/28/22 11:50	10/28/22 15:09		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	10/28/22 11:50	10/28/22 15:09		1.015	Not Detected	mg/L	0.000203	0.001015	U	
* Cobalt, Total	10/28/22 11:50	10/28/22 15:09		1.015	0.000948	mg/L	0.000068	0.000203		
* Lead, Total	10/28/22 11:50	10/28/22 15:09		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	10/28/22 11:50	10/28/22 15:09		1.015	0.171	mg/L	0.000152	0.001015		
* Molybdenum, Total	10/28/22 11:50	10/28/22 15:09		1.015	0.000421	mg/L	0.000102	0.000203		
* Potassium, Total	10/28/22 11:50	10/28/22 15:09		1.015	0.733	mg/L	0.169505	0.5075		

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-5 Dup

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 09:50  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19667

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 15:09		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 15:09		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 12:02		1.015	0.000669	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 12:02		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 12:02		1.015	0.000213	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 12:02		1.015	0.225	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 12:02		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 12:02		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 12:02		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 12:02		1.015	0.000898	mg/L	0.000068	0.000203	
* Lead, Dissolved	10/28/22 08:43	10/28/22 12:02		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 12:02		1.015	0.169	mg/L	0.000152	0.001015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 12:02		1.015	0.000358	mg/L	0.000102	0.000203	
* Potassium, Dissolved	10/28/22 08:43	10/28/22 12:02		1.015	0.711	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 12:02		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 12:02		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/3/22 23:22		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 11:56	10/28/22 11:56		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/8/22 08:50	11/8/22 15:09		1	130	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/27/22 12:00	10/31/22 10:08		1	178	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	130	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	Not Detected	mg CaCO3/L		0.5	
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/27/22 22:09	10/27/22 22:09		1	3.69	mg/L	1.00	2	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-5 Dup

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 09:50  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19667

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/27/22 15:17	10/27/22 15:17		1	6.46	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 11:29	10/28/22 11:29		1	0.0708	mg/L	0.06	0.125	J
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 09:39	11/1/22 09:39		1	16.6	mg/L	0.6	2	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/26/22 09:49	10/26/22 09:49			297.31	uS/cm			FA
pH	10/26/22 09:49	10/26/22 09:49			6.44	SU			FA
Temperature	10/26/22 09:49	10/26/22 09:49			20.50	C			FA
Turbidity	10/26/22 09:49	10/26/22 09:49			2.35	NTU			FA
Sulfide	10/26/22 09:49	10/26/22 09:49			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.



# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 09:50  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-5 Dup

**Laboratory ID Number:** BC19667

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19671	Aluminum, Dissolved	mg/L	0.0000549	0.010	0.100	0.100	0.103	0.103	0.0850 to 0.115	100	70.0 to 130	2.96	20.0
BC19669	Aluminum, Total	mg/L	0.000961	0.010	0.100	0.0983	0.102	0.103	0.0850 to 0.115	98.3	70.0 to 130	3.69	20.0
BC19671	Antimony, Dissolved	mg/L	0.0000571	0.00100	0.100	0.0904	0.0921	0.0871	0.0850 to 0.115	89.8	70.0 to 130	1.86	20.0
BC19669	Antimony, Total	mg/L	0.000028	0.00100	0.100	0.0962	0.0962	0.0918	0.0850 to 0.115	96.2	70.0 to 130	0.00	20.0
BC19671	Arsenic, Dissolved	mg/L	0.0000398	0.000176	0.100	0.100	0.101	0.102	0.0850 to 0.115	97.1	70.0 to 130	0.995	20.0
BC19669	Arsenic, Total	mg/L	0.0000953	0.000176	0.100	0.0986	0.0975	0.0989	0.0850 to 0.115	98.4	70.0 to 130	1.12	20.0
BC19671	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.310	0.295	0.0919	0.0850 to 0.115	96.0	70.0 to 130	4.96	20.0
BC19669	Barium, Total	mg/L	-0.0000058	0.00100	0.100	0.168	0.165	0.0970	0.0850 to 0.115	97.8	70.0 to 130	1.80	20.0
BC19671	Beryllium, Dissolved	mg/L	0.0000222	0.000880	0.100	0.0945	0.0935	0.0966	0.0850 to 0.115	94.5	70.0 to 130	1.06	20.0
BC19669	Beryllium, Total	mg/L	0.0000213	0.000880	0.100	0.0935	0.0950	0.0944	0.0850 to 0.115	93.5	70.0 to 130	1.59	20.0
BC19671	Boron, Dissolved	mg/L	-0.00146	0.0650	1.00	1.06	1.07	0.990	0.850 to 1.15	101	70.0 to 130	0.939	20.0
BC19669	Boron, Total	mg/L	0.00226	0.0650	1.00	1.07	1.08	0.999	0.850 to 1.15	99.1	70.0 to 130	0.930	20.0
BC19671	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0971	0.0991	0.100	0.0850 to 0.115	97.1	70.0 to 130	2.04	20.0
BC19669	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0970	0.0987	0.101	0.0850 to 0.115	97.0	70.0 to 130	1.74	20.0
BC19671	Calcium, Dissolved	mg/L	0.00894	0.152	5.00	66.4	66.1	5.08	4.25 to 5.75	-200	70.0 to 130	0.453	20.0
BC19669	Calcium, Total	mg/L	-0.00258	0.152	5.00	17.3	17.3	5.30	4.25 to 5.75	102	70.0 to 130	0.00	20.0
BC19669	Chloride	mg/L	0.110	1.00	10.0	19.4	19.4	9.91	9.00 to 11.0	100	80.0 to 120	0.00	20.0
BC19671	Chromium, Dissolved	mg/L	0.0000111	0.000440	0.100	0.0961	0.0984	0.102	0.0850 to 0.115	96.1	70.0 to 130	2.37	20.0
BC19669	Chromium, Total	mg/L	0.000129	0.000440	0.100	0.0954	0.0981	0.101	0.0850 to 0.115	95.2	70.0 to 130	2.79	20.0
BC19671	Cobalt, Dissolved	mg/L	0.0000002	0.000147	0.100	0.101	0.102	0.105	0.0850 to 0.115	98.1	70.0 to 130	0.985	20.0
BC19669	Cobalt, Total	mg/L	-0.0000001	0.000147	0.100	0.0990	0.101	0.104	0.0850 to 0.115	97.8	70.0 to 130	2.00	20.0
BC19669	Fluoride	mg/L	0.0328	0.125	2.50	2.46	2.58	2.36	2.25 to 2.75	98.4	80.0 to 120	4.76	20.0
BC19671	Iron, Dissolved	mg/L	-0.000185	0.0176	0.2	8.47	8.31	0.202	0.170 to 0.230	-745	70.0 to 130	1.91	20.0
BC19669	Iron, Total	mg/L	0.00114	0.0176	0.2	0.275	0.276	0.211	0.170 to 0.230	103	70.0 to 130	0.363	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 09:50  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-5 Dup

**Laboratory ID Number:** BC19667

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19671	Lead, Dissolved	mg/L	0.0000074	0.000147	0.100	0.0995	0.0995	0.102	0.0850 to 0.115	99.5	70.0 to 130	0.00	20.0
BC19669	Lead, Total	mg/L	0.0000062	0.000147	0.100	0.100	0.101	0.0998	0.0850 to 0.115	100	70.0 to 130	0.995	20.0
BC19671	Lithium, Dissolved	mg/L	-0.000107	0.0154	0.200	0.198	0.202	0.197	0.170 to 0.230	99.0	70.0 to 130	2.00	20.0
BC19669	Lithium, Total	mg/L	4.040E-05	0.0154	0.200	0.212	0.214	0.204	0.170 to 0.230	106	70.0 to 130	0.939	20.0
BC19671	Magnesium, Dissolved	mg/L	-0.0132	0.0462	5.00	11.1	11.2	5.18	4.25 to 5.75	102	70.0 to 130	0.897	20.0
BC19669	Magnesium, Total	mg/L	0.000300	0.0462	5.00	8.56	8.62	5.10	4.25 to 5.75	102	70.0 to 130	0.698	20.0
BC19671	Manganese, Dissolved	mg/L	0.0000131	0.00033	0.100	1.72	1.72	0.105	0.0850 to 0.115	90.0	70.0 to 130	0.00	20.0
BC19669	Manganese, Total	mg/L	0.000128	0.00033	0.100	0.377	0.385	0.104	0.0850 to 0.115	83.0	70.0 to 130	2.10	20.0
BC19669	Mercury, Total by CVAA	mg/L	1.000E-05	0.000500	0.004	0.00418	0.00419	0.00407	0.00340 to 0.00460	104	70.0 to 130	0.239	20.0
BC19671	Molybdenum, Dissolved	mg/L	0.0000133	0.0002	0.100	0.0981	0.0988	0.0989	0.0850 to 0.115	97.7	70.0 to 130	0.711	20.0
BC19669	Molybdenum, Total	mg/L	-0.000003	0.0002	0.100	0.0976	0.0976	0.0988	0.0850 to 0.115	97.6	70.0 to 130	0.00	20.0
BC19671	Potassium, Dissolved	mg/L	-0.00218	0.367	10.0	10.3	10.5	10.4	8.50 to 11.5	98.2	70.0 to 130	1.92	20.0
BC19669	Potassium, Total	mg/L	0.0461	0.367	10.0	10.6	10.8	10.2	8.50 to 11.5	96.3	70.0 to 130	1.87	20.0
BC19671	Selenium, Dissolved	mg/L	0.0000887	0.00100	0.100	0.102	0.102	0.105	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BC19669	Selenium, Total	mg/L	0.0000408	0.00100	0.100	0.0978	0.101	0.104	0.0850 to 0.115	97.8	70.0 to 130	3.22	20.0
BC19671	Silicon, Dissolved	mg/L	-0.000043	0.0440	1.00	12.0	12.0	1.01	0.850 to 1.15	110	70.0 to 130	0.00	20.0
BC19669	Silicon, Total	mg/L	0.00120	0.0440	1.00	7.19	7.25	1.03	0.850 to 1.15	102	70.0 to 130	0.831	20.0
BC19671	Sodium, Dissolved	mg/L	0.000963	0.0660	5.00	15.2	15.3	5.00	4.25 to 5.75	96.0	70.0 to 130	0.656	20.0
BC19669	Sodium, Total	mg/L	0.00985	0.0660	5.00	17.1	17.2	4.99	4.25 to 5.75	106	70.0 to 130	0.583	20.0
BC19669	Sulfate	mg/L	0.620	2.0	20.0	33.8	34.0	19.6	18.0 to 22.0	108	80.0 to 120	0.590	20.0
BC19671	Thallium, Dissolved	mg/L	0.000011	0.000147	0.100	0.101	0.0988	0.101	0.0850 to 0.115	101	70.0 to 130	2.20	20.0
BC19669	Thallium, Total	mg/L	0.0000143	0.000147	0.100	0.101	0.101	0.0993	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BC19669	Total Organic Carbon	mg/L	0.280	1.00	10.0	11.6	12.6	24.5		89.4	80.0 to 120	8.26	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 09:50  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-5 Dup

**Laboratory ID Number:** BC19667

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19671	Alkalinity to pH 4.5	mg CaCO3/L					178	50.7	45.0 to 55.0			0.563	10.0
BC19669	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	1.88	0.052	1.88	1.80 to 2.20	94.0	90.0 to 110	0.00	15.0
BC19667	Solids, Dissolved	mg/L	0.0000	25.0			177	49.0	40.0 to 60.0			0.563	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - PZ-2

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 10:58  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19668

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 12:29		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Total	10/28/22 11:50	11/3/22 12:29		1.015	27.5	mg/L	0.070035	0.406	
* Iron, Total	10/28/22 11:50	11/3/22 12:29		1.015	0.209	mg/L	0.008120	0.0406	
* Lithium, Total	10/28/22 11:50	11/3/22 12:29		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/28/22 11:50	11/3/22 12:29		1.015	4.79	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 12:29		1	17.4	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 12:29		1.015	8.13	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/3/22 12:29		1.015	6.87	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 14:38		1.015	Not Detected	mg/L	0.030000	0.1015	U
* Calcium, Dissolved	10/28/22 08:43	10/31/22 14:38		1.015	24.9	mg/L	0.070035	0.406	
* Iron, Dissolved	10/28/22 08:43	10/31/22 14:38		1.015	0.186	mg/L	0.008120	0.0406	
* Lithium, Dissolved	10/28/22 08:43	10/31/22 14:38		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 13:10		1.015	4.68	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 14:38		1	17.1	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 14:38		1.015	8.00	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	10/31/22 14:38		1.015	6.86	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 15:13		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Total	10/28/22 11:50	10/28/22 15:13		1.015	0.00632	mg/L	0.006090	0.01015	J
* Arsenic, Total	10/28/22 11:50	10/28/22 15:13		1.015	0.000188	mg/L	0.000081	0.000203	J
* Barium, Total	10/28/22 11:50	10/28/22 15:13		1.015	0.133	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 15:13		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 15:13		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/28/22 11:50	10/28/22 15:13		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	10/28/22 11:50	10/28/22 15:13		1.015	0.00210	mg/L	0.000068	0.000203	
* Lead, Total	10/28/22 11:50	10/28/22 15:13		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 15:13		1.015	0.226	mg/L	0.000152	0.001015	
* Molybdenum, Total	10/28/22 11:50	10/28/22 15:13		1.015	0.000220	mg/L	0.000102	0.000203	
* Potassium, Total	10/28/22 11:50	10/28/22 15:13		1.015	0.529	mg/L	0.169505	0.5075	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - PZ-2

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 10:58  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19668

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 15:13		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 15:13		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 12:06		1.015	0.000762	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 12:06		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 12:06		1.015	0.000241	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 12:06		1.015	0.125	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 12:06		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 12:06		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 12:06		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 12:06		1.015	0.00213	mg/L	0.000068	0.000203	
* Lead, Dissolved	10/28/22 08:43	10/28/22 12:06		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 12:06		1.015	0.222	mg/L	0.000152	0.001015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 12:06		1.015	0.000210	mg/L	0.000102	0.000203	
* Potassium, Dissolved	10/28/22 08:43	10/28/22 12:06		1.015	0.515	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 12:06		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 12:06		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/3/22 23:26		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 11:57	10/28/22 11:57		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/8/22 08:50	11/8/22 15:09		1	90.9	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/28/22 13:05	11/1/22 10:25		1	119	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	90.8	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	Not Detected	mg CaCO3/L		0.5	
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/27/22 22:24	10/27/22 22:24		1	4.29	mg/L	1.00	2	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - PZ-2

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 10:58  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19668

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/27/22 15:18	10/27/22 15:18		1	5.09	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 11:30	10/28/22 11:30		1	Not Detected	mg/L	0.06	0.125	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 09:40	11/1/22 09:40		1	3.32	mg/L	0.6	2	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/26/22 10:55	10/26/22 10:55			204.73	uS/cm			FA
pH	10/26/22 10:55	10/26/22 10:55			6.16	SU			FA
Temperature	10/26/22 10:55	10/26/22 10:55			20.42	C			FA
Turbidity	10/26/22 10:55	10/26/22 10:55			0.37	NTU			FA
Sulfide	10/26/22 10:55	10/26/22 10:55			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 10:58  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - PZ-2

**Laboratory ID Number:** BC19668

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19671	Aluminum, Dissolved	mg/L	0.0000549	0.010	0.100	0.100	0.103	0.103	0.0850 to 0.115	100	70.0 to 130	2.96	20.0
BC19669	Aluminum, Total	mg/L	0.000961	0.010	0.100	0.0983	0.102	0.103	0.0850 to 0.115	98.3	70.0 to 130	3.69	20.0
BC19671	Antimony, Dissolved	mg/L	0.0000571	0.00100	0.100	0.0904	0.0921	0.0871	0.0850 to 0.115	89.8	70.0 to 130	1.86	20.0
BC19669	Antimony, Total	mg/L	0.000028	0.00100	0.100	0.0962	0.0962	0.0918	0.0850 to 0.115	96.2	70.0 to 130	0.00	20.0
BC19671	Arsenic, Dissolved	mg/L	0.0000398	0.000176	0.100	0.100	0.101	0.102	0.0850 to 0.115	97.1	70.0 to 130	0.995	20.0
BC19669	Arsenic, Total	mg/L	0.0000953	0.000176	0.100	0.0986	0.0975	0.0989	0.0850 to 0.115	98.4	70.0 to 130	1.12	20.0
BC19671	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.310	0.295	0.0919	0.0850 to 0.115	96.0	70.0 to 130	4.96	20.0
BC19669	Barium, Total	mg/L	-0.0000058	0.00100	0.100	0.168	0.165	0.0970	0.0850 to 0.115	97.8	70.0 to 130	1.80	20.0
BC19671	Beryllium, Dissolved	mg/L	0.0000222	0.000880	0.100	0.0945	0.0935	0.0966	0.0850 to 0.115	94.5	70.0 to 130	1.06	20.0
BC19669	Beryllium, Total	mg/L	0.0000213	0.000880	0.100	0.0935	0.0950	0.0944	0.0850 to 0.115	93.5	70.0 to 130	1.59	20.0
BC19671	Boron, Dissolved	mg/L	-0.00146	0.0650	1.00	1.06	1.07	0.990	0.850 to 1.15	101	70.0 to 130	0.939	20.0
BC19669	Boron, Total	mg/L	0.00226	0.0650	1.00	1.07	1.08	0.999	0.850 to 1.15	99.1	70.0 to 130	0.930	20.0
BC19671	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0971	0.0991	0.100	0.0850 to 0.115	97.1	70.0 to 130	2.04	20.0
BC19669	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0970	0.0987	0.101	0.0850 to 0.115	97.0	70.0 to 130	1.74	20.0
BC19671	Calcium, Dissolved	mg/L	0.00894	0.152	5.00	66.4	66.1	5.08	4.25 to 5.75	-200	70.0 to 130	0.453	20.0
BC19669	Calcium, Total	mg/L	-0.00258	0.152	5.00	17.3	17.3	5.30	4.25 to 5.75	102	70.0 to 130	0.00	20.0
BC19669	Chloride	mg/L	0.110	1.00	10.0	19.4	19.4	9.91	9.00 to 11.0	100	80.0 to 120	0.00	20.0
BC19671	Chromium, Dissolved	mg/L	0.0000111	0.000440	0.100	0.0961	0.0984	0.102	0.0850 to 0.115	96.1	70.0 to 130	2.37	20.0
BC19669	Chromium, Total	mg/L	0.000129	0.000440	0.100	0.0954	0.0981	0.101	0.0850 to 0.115	95.2	70.0 to 130	2.79	20.0
BC19671	Cobalt, Dissolved	mg/L	0.0000002	0.000147	0.100	0.101	0.102	0.105	0.0850 to 0.115	98.1	70.0 to 130	0.985	20.0
BC19669	Cobalt, Total	mg/L	-0.0000001	0.000147	0.100	0.0990	0.101	0.104	0.0850 to 0.115	97.8	70.0 to 130	2.00	20.0
BC19669	Fluoride	mg/L	0.0328	0.125	2.50	2.46	2.58	2.36	2.25 to 2.75	98.4	80.0 to 120	4.76	20.0
BC19671	Iron, Dissolved	mg/L	-0.000185	0.0176	0.2	8.47	8.31	0.202	0.170 to 0.230	-745	70.0 to 130	1.91	20.0
BC19669	Iron, Total	mg/L	0.00114	0.0176	0.2	0.275	0.276	0.211	0.170 to 0.230	103	70.0 to 130	0.363	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 10:58  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - PZ-2

**Laboratory ID Number:** BC19668

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19671	Lead, Dissolved	mg/L	0.0000074	0.000147	0.100	0.0995	0.0995	0.102	0.0850 to 0.115	99.5	70.0 to 130	0.00	20.0
BC19669	Lead, Total	mg/L	0.0000062	0.000147	0.100	0.100	0.101	0.0998	0.0850 to 0.115	100	70.0 to 130	0.995	20.0
BC19671	Lithium, Dissolved	mg/L	-0.000107	0.0154	0.200	0.198	0.202	0.197	0.170 to 0.230	99.0	70.0 to 130	2.00	20.0
BC19669	Lithium, Total	mg/L	4.040E-05	0.0154	0.200	0.212	0.214	0.204	0.170 to 0.230	106	70.0 to 130	0.939	20.0
BC19671	Magnesium, Dissolved	mg/L	-0.0132	0.0462	5.00	11.1	11.2	5.18	4.25 to 5.75	102	70.0 to 130	0.897	20.0
BC19669	Magnesium, Total	mg/L	0.000300	0.0462	5.00	8.56	8.62	5.10	4.25 to 5.75	102	70.0 to 130	0.698	20.0
BC19671	Manganese, Dissolved	mg/L	0.0000131	0.00033	0.100	1.72	1.72	0.105	0.0850 to 0.115	90.0	70.0 to 130	0.00	20.0
BC19669	Manganese, Total	mg/L	0.000128	0.00033	0.100	0.377	0.385	0.104	0.0850 to 0.115	83.0	70.0 to 130	2.10	20.0
BC19669	Mercury, Total by CVAA	mg/L	1.000E-05	0.000500	0.004	0.00418	0.00419	0.00407	0.00340 to 0.00460	104	70.0 to 130	0.239	20.0
BC19671	Molybdenum, Dissolved	mg/L	0.0000133	0.0002	0.100	0.0981	0.0988	0.0989	0.0850 to 0.115	97.7	70.0 to 130	0.711	20.0
BC19669	Molybdenum, Total	mg/L	-0.000003	0.0002	0.100	0.0976	0.0976	0.0988	0.0850 to 0.115	97.6	70.0 to 130	0.00	20.0
BC19671	Potassium, Dissolved	mg/L	-0.00218	0.367	10.0	10.3	10.5	10.4	8.50 to 11.5	98.2	70.0 to 130	1.92	20.0
BC19669	Potassium, Total	mg/L	0.0461	0.367	10.0	10.6	10.8	10.2	8.50 to 11.5	96.3	70.0 to 130	1.87	20.0
BC19671	Selenium, Dissolved	mg/L	0.0000887	0.00100	0.100	0.102	0.102	0.105	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BC19669	Selenium, Total	mg/L	0.0000408	0.00100	0.100	0.0978	0.101	0.104	0.0850 to 0.115	97.8	70.0 to 130	3.22	20.0
BC19671	Silicon, Dissolved	mg/L	-0.000043	0.0440	1.00	12.0	12.0	1.01	0.850 to 1.15	110	70.0 to 130	0.00	20.0
BC19669	Silicon, Total	mg/L	0.00120	0.0440	1.00	7.19	7.25	1.03	0.850 to 1.15	102	70.0 to 130	0.831	20.0
BC19671	Sodium, Dissolved	mg/L	0.000963	0.0660	5.00	15.2	15.3	5.00	4.25 to 5.75	96.0	70.0 to 130	0.656	20.0
BC19669	Sodium, Total	mg/L	0.00985	0.0660	5.00	17.1	17.2	4.99	4.25 to 5.75	106	70.0 to 130	0.583	20.0
BC19669	Sulfate	mg/L	0.620	2.0	20.0	33.8	34.0	19.6	18.0 to 22.0	108	80.0 to 120	0.590	20.0
BC19671	Thallium, Dissolved	mg/L	0.000011	0.000147	0.100	0.101	0.0988	0.101	0.0850 to 0.115	101	70.0 to 130	2.20	20.0
BC19669	Thallium, Total	mg/L	0.0000143	0.000147	0.100	0.101	0.101	0.0993	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BC19669	Total Organic Carbon	mg/L	0.280	1.00	10.0	11.6	12.6	24.5		89.4	80.0 to 120	8.26	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.



## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 10:58  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - PZ-2

**Laboratory ID Number:** BC19668

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19671	Alkalinity to pH 4.5	mg CaCO3/L					178	50.7	45.0 to 55.0			0.563	10.0
BC19669	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	1.88	0.052	1.88	1.80 to 2.20	94.0	90.0 to 110	0.00	15.0
BC19677	Solids, Dissolved	mg/L	1.00	25.0			329	51.0	40.0 to 60.0			0.304	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-6

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 11:55  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19669

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 12:32		1.015	0.0788	mg/L	0.030000	0.1015	J
* Calcium, Total	10/28/22 11:50	11/3/22 12:32		1.015	12.2	mg/L	0.070035	0.406	
* Iron, Total	10/28/22 11:50	11/3/22 12:32		1.015	0.0693	mg/L	0.008120	0.0406	
* Lithium, Total	10/28/22 11:50	11/3/22 12:32		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/28/22 11:50	11/3/22 12:32		1.015	3.47	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 12:32		1	13.2	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 12:32		1.015	6.17	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/3/22 12:32		1.015	11.8	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 14:41		1.015	0.0777	mg/L	0.030000	0.1015	J
* Calcium, Dissolved	10/28/22 08:43	10/31/22 14:41		1.015	11.3	mg/L	0.070035	0.406	
* Iron, Dissolved	10/28/22 08:43	10/31/22 14:41		1.015	0.0629	mg/L	0.008120	0.0406	
* Lithium, Dissolved	10/28/22 08:43	10/31/22 14:41		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 13:14		1.015	3.44	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 14:41		1	12.9	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 14:41		1.015	6.01	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	10/31/22 14:41		1.015	11.8	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 15:17		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Total	10/28/22 11:50	10/28/22 15:17		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Total	10/28/22 11:50	10/28/22 15:17		1.015	0.000151	mg/L	0.000081	0.000203	J
* Barium, Total	10/28/22 11:50	10/28/22 15:17		1.015	0.0702	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 15:17		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 15:17		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/28/22 11:50	10/28/22 15:17		1.015	0.000222	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/28/22 11:50	10/28/22 15:17		1.015	0.00120	mg/L	0.000068	0.000203	
* Lead, Total	10/28/22 11:50	10/28/22 15:17		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 15:17		1.015	0.294	mg/L	0.000152	0.001015	
* Molybdenum, Total	10/28/22 11:50	10/28/22 15:17		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Potassium, Total	10/28/22 11:50	10/28/22 15:17		1.015	0.966	mg/L	0.169505	0.5075	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-6

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 11:55  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19669

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 15:17		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 15:17		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 12:09		1.015	0.000615	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 12:09		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 12:09		1.015	0.000139	mg/L	0.000081	0.000203	J
* Barium, Dissolved	10/28/22 08:43	10/28/22 12:09		1.015	0.0715	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 12:09		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 12:09		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 12:09		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 12:09		1.015	0.00123	mg/L	0.000068	0.000203	
* Lead, Dissolved	10/28/22 08:43	10/28/22 12:09		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 12:09		1.015	0.288	mg/L	0.000152	0.001015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 12:09		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Potassium, Dissolved	10/28/22 08:43	10/28/22 12:09		1.015	0.922	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 12:09		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 12:09		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/3/22 23:30		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 11:58	10/28/22 11:58		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/8/22 08:50	11/8/22 15:09		1	45.6	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/28/22 13:05	11/1/22 10:25		1	91.3	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	45.5	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	Not Detected	mg CaCO3/L		0.5	
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/27/22 22:39	10/27/22 22:39		1	2.66	mg/L	1.00	2	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-6

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 11:55  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19669

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/27/22 15:19	10/27/22 15:19		1	9.40	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 11:31	10/28/22 11:31		1	Not Detected	mg/L	0.06	0.125	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 09:42	11/1/22 09:42		1	12.2	mg/L	0.6	2	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/26/22 11:53	10/26/22 11:53			145.68	uS/cm			FA
pH	10/26/22 11:53	10/26/22 11:53			5.98	SU			FA
Temperature	10/26/22 11:53	10/26/22 11:53			19.56	C			FA
Turbidity	10/26/22 11:53	10/26/22 11:53			0.09	NTU			FA
Sulfide	10/26/22 11:53	10/26/22 11:53			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 11:55  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-6

**Laboratory ID Number:** BC19669

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19671	Aluminum, Dissolved	mg/L	0.0000549	0.010	0.100	0.100	0.103	0.103	0.0850 to 0.115	100	70.0 to 130	2.96	20.0
BC19669	Aluminum, Total	mg/L	0.000961	0.010	0.100	0.0983	0.102	0.103	0.0850 to 0.115	98.3	70.0 to 130	3.69	20.0
BC19671	Antimony, Dissolved	mg/L	0.0000571	0.00100	0.100	0.0904	0.0921	0.0871	0.0850 to 0.115	89.8	70.0 to 130	1.86	20.0
BC19669	Antimony, Total	mg/L	0.000028	0.00100	0.100	0.0962	0.0962	0.0918	0.0850 to 0.115	96.2	70.0 to 130	0.00	20.0
BC19671	Arsenic, Dissolved	mg/L	0.0000398	0.000176	0.100	0.100	0.101	0.102	0.0850 to 0.115	97.1	70.0 to 130	0.995	20.0
BC19669	Arsenic, Total	mg/L	0.0000953	0.000176	0.100	0.0986	0.0975	0.0989	0.0850 to 0.115	98.4	70.0 to 130	1.12	20.0
BC19671	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.310	0.295	0.0919	0.0850 to 0.115	96.0	70.0 to 130	4.96	20.0
BC19669	Barium, Total	mg/L	-0.0000058	0.00100	0.100	0.168	0.165	0.0970	0.0850 to 0.115	97.8	70.0 to 130	1.80	20.0
BC19671	Beryllium, Dissolved	mg/L	0.0000222	0.000880	0.100	0.0945	0.0935	0.0966	0.0850 to 0.115	94.5	70.0 to 130	1.06	20.0
BC19669	Beryllium, Total	mg/L	0.0000213	0.000880	0.100	0.0935	0.0950	0.0944	0.0850 to 0.115	93.5	70.0 to 130	1.59	20.0
BC19671	Boron, Dissolved	mg/L	-0.00146	0.0650	1.00	1.06	1.07	0.990	0.850 to 1.15	101	70.0 to 130	0.939	20.0
BC19669	Boron, Total	mg/L	0.00226	0.0650	1.00	1.07	1.08	0.999	0.850 to 1.15	99.1	70.0 to 130	0.930	20.0
BC19671	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0971	0.0991	0.100	0.0850 to 0.115	97.1	70.0 to 130	2.04	20.0
BC19669	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0970	0.0987	0.101	0.0850 to 0.115	97.0	70.0 to 130	1.74	20.0
BC19671	Calcium, Dissolved	mg/L	0.00894	0.152	5.00	66.4	66.1	5.08	4.25 to 5.75	-200	70.0 to 130	0.453	20.0
BC19669	Calcium, Total	mg/L	-0.00258	0.152	5.00	17.3	17.3	5.30	4.25 to 5.75	102	70.0 to 130	0.00	20.0
BC19669	Chloride	mg/L	0.110	1.00	10.0	19.4	19.4	9.91	9.00 to 11.0	100	80.0 to 120	0.00	20.0
BC19671	Chromium, Dissolved	mg/L	0.0000111	0.000440	0.100	0.0961	0.0984	0.102	0.0850 to 0.115	96.1	70.0 to 130	2.37	20.0
BC19669	Chromium, Total	mg/L	0.000129	0.000440	0.100	0.0954	0.0981	0.101	0.0850 to 0.115	95.2	70.0 to 130	2.79	20.0
BC19671	Cobalt, Dissolved	mg/L	0.0000002	0.000147	0.100	0.101	0.102	0.105	0.0850 to 0.115	98.1	70.0 to 130	0.985	20.0
BC19669	Cobalt, Total	mg/L	-0.0000001	0.000147	0.100	0.0990	0.101	0.104	0.0850 to 0.115	97.8	70.0 to 130	2.00	20.0
BC19669	Fluoride	mg/L	0.0328	0.125	2.50	2.46	2.58	2.36	2.25 to 2.75	98.4	80.0 to 120	4.76	20.0
BC19671	Iron, Dissolved	mg/L	-0.000185	0.0176	0.2	8.47	8.31	0.202	0.170 to 0.230	-745	70.0 to 130	1.91	20.0
BC19669	Iron, Total	mg/L	0.00114	0.0176	0.2	0.275	0.276	0.211	0.170 to 0.230	103	70.0 to 130	0.363	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 11:55  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-6

**Laboratory ID Number:** BC19669

Sample	Analysis	Units	MB					Standard		Rec			Prec Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19671	Lead, Dissolved	mg/L	0.0000074	0.000147	0.100	0.0995	0.0995	0.102	0.0850 to 0.115	99.5	70.0 to 130	0.00	20.0
BC19669	Lead, Total	mg/L	0.0000062	0.000147	0.100	0.100	0.101	0.0998	0.0850 to 0.115	100	70.0 to 130	0.995	20.0
BC19671	Lithium, Dissolved	mg/L	-0.000107	0.0154	0.200	0.198	0.202	0.197	0.170 to 0.230	99.0	70.0 to 130	2.00	20.0
BC19669	Lithium, Total	mg/L	4.040E-05	0.0154	0.200	0.212	0.214	0.204	0.170 to 0.230	106	70.0 to 130	0.939	20.0
BC19671	Magnesium, Dissolved	mg/L	-0.0132	0.0462	5.00	11.1	11.2	5.18	4.25 to 5.75	102	70.0 to 130	0.897	20.0
BC19669	Magnesium, Total	mg/L	0.000300	0.0462	5.00	8.56	8.62	5.10	4.25 to 5.75	102	70.0 to 130	0.698	20.0
BC19671	Manganese, Dissolved	mg/L	0.0000131	0.00033	0.100	1.72	1.72	0.105	0.0850 to 0.115	90.0	70.0 to 130	0.00	20.0
BC19669	Manganese, Total	mg/L	0.000128	0.00033	0.100	0.377	0.385	0.104	0.0850 to 0.115	83.0	70.0 to 130	2.10	20.0
BC19669	Mercury, Total by CVAA	mg/L	1.000E-05	0.000500	0.004	0.00418	0.00419	0.00407	0.00340 to 0.00460	104	70.0 to 130	0.239	20.0
BC19671	Molybdenum, Dissolved	mg/L	0.0000133	0.0002	0.100	0.0981	0.0988	0.0989	0.0850 to 0.115	97.7	70.0 to 130	0.711	20.0
BC19669	Molybdenum, Total	mg/L	-0.000003	0.0002	0.100	0.0976	0.0976	0.0988	0.0850 to 0.115	97.6	70.0 to 130	0.00	20.0
BC19671	Potassium, Dissolved	mg/L	-0.00218	0.367	10.0	10.3	10.5	10.4	8.50 to 11.5	98.2	70.0 to 130	1.92	20.0
BC19669	Potassium, Total	mg/L	0.0461	0.367	10.0	10.6	10.8	10.2	8.50 to 11.5	96.3	70.0 to 130	1.87	20.0
BC19671	Selenium, Dissolved	mg/L	0.0000887	0.00100	0.100	0.102	0.102	0.105	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BC19669	Selenium, Total	mg/L	0.0000408	0.00100	0.100	0.0978	0.101	0.104	0.0850 to 0.115	97.8	70.0 to 130	3.22	20.0
BC19671	Silicon, Dissolved	mg/L	-0.000043	0.0440	1.00	12.0	12.0	1.01	0.850 to 1.15	110	70.0 to 130	0.00	20.0
BC19669	Silicon, Total	mg/L	0.00120	0.0440	1.00	7.19	7.25	1.03	0.850 to 1.15	102	70.0 to 130	0.831	20.0
BC19671	Sodium, Dissolved	mg/L	0.000963	0.0660	5.00	15.2	15.3	5.00	4.25 to 5.75	96.0	70.0 to 130	0.656	20.0
BC19669	Sodium, Total	mg/L	0.00985	0.0660	5.00	17.1	17.2	4.99	4.25 to 5.75	106	70.0 to 130	0.583	20.0
BC19669	Sulfate	mg/L	0.620	2.0	20.0	33.8	34.0	19.6	18.0 to 22.0	108	80.0 to 120	0.590	20.0
BC19671	Thallium, Dissolved	mg/L	0.000011	0.000147	0.100	0.101	0.0988	0.101	0.0850 to 0.115	101	70.0 to 130	2.20	20.0
BC19669	Thallium, Total	mg/L	0.0000143	0.000147	0.100	0.101	0.101	0.0993	0.0850 to 0.115	101	70.0 to 130	0.00	20.0
BC19669	Total Organic Carbon	mg/L	0.280	1.00	10.0	11.6	12.6	24.5		89.4	80.0 to 120	8.26	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 11:55  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-6

**Laboratory ID Number:** BC19669

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19671	Alkalinity to pH 4.5	mg CaCO3/L					178	50.7	45.0 to 55.0			0.563	10.0
BC19669	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	1.88	0.052	1.88	1.80 to 2.20	94.0	90.0 to 110	0.00	15.0
BC19677	Solids, Dissolved	mg/L	1.00	25.0			329	51.0	40.0 to 60.0			0.304	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-7

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 12:50  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19670

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 12:56		1.015	0.0839	mg/L	0.030000	0.1015	J
* Calcium, Total	10/28/22 11:50	11/3/22 12:56		1.015	21.4	mg/L	0.070035	0.406	
* Iron, Total	10/28/22 11:50	11/3/22 12:56		1.015	0.0123	mg/L	0.008120	0.0406	J
* Lithium, Total	10/28/22 11:50	11/3/22 12:56		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/28/22 11:50	11/3/22 12:56		1.015	3.89	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 12:56		1	17.0	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 12:56		1.015	7.95	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/3/22 12:56		1.015	17.9	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 14:44		1.015	0.0822	mg/L	0.030000	0.1015	J
* Calcium, Dissolved	10/28/22 08:43	10/31/22 14:44		1.015	20.2	mg/L	0.070035	0.406	
* Iron, Dissolved	10/28/22 08:43	10/31/22 14:44		1.015	Not Detected	mg/L	0.008120	0.0406	U
* Lithium, Dissolved	10/28/22 08:43	10/31/22 14:44		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 13:17		1.015	3.82	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 14:44		1	16.6	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 14:44		1.015	7.75	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	10/31/22 14:44		1.015	17.6	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 15:46		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Total	10/28/22 11:50	10/28/22 15:46		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Total	10/28/22 11:50	10/28/22 15:46		1.015	0.000105	mg/L	0.000081	0.000203	J
* Barium, Total	10/28/22 11:50	10/28/22 15:46		1.015	0.0852	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 15:46		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 15:46		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/28/22 11:50	10/28/22 15:46		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	10/28/22 11:50	10/28/22 15:46		1.015	0.000160	mg/L	0.000068	0.000203	J
* Lead, Total	10/28/22 11:50	10/28/22 15:46		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 15:46		1.015	0.0380	mg/L	0.000152	0.001015	
* Molybdenum, Total	10/28/22 11:50	10/28/22 15:46		1.015	0.000169	mg/L	0.000102	0.000203	J
* Potassium, Total	10/28/22 11:50	10/28/22 15:46		1.015	0.267	mg/L	0.169505	0.5075	J

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.



# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-7

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 12:50  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19670

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 15:46		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 15:46		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 12:13		1.015	0.000629	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 12:13		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 12:13		1.015	0.000147	mg/L	0.000081	0.000203	J
* Barium, Dissolved	10/28/22 08:43	10/28/22 12:13		1.015	0.0849	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 12:13		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 12:13		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 12:13		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 12:13		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Dissolved	10/28/22 08:43	10/28/22 12:13		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 12:13		1.015	0.0362	mg/L	0.000152	0.001015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 12:13		1.015	0.000154	mg/L	0.000102	0.000203	J
* Potassium, Dissolved	10/28/22 08:43	10/28/22 12:13		1.015	0.321	mg/L	0.169505	0.5075	J
* Selenium, Dissolved	10/28/22 08:43	10/28/22 12:13		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 12:13		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/3/22 23:58		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 13:47	10/28/22 13:47		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/8/22 08:50	11/8/22 15:09		1	83.6	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/28/22 13:05	11/1/22 10:25		1	121	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	83.5	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	Not Detected	mg CaCO3/L		0.5	
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/28/22 11:56	10/28/22 11:56		1	3.42	mg/L	1.00	2	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-7

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 12:50  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19670

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/28/22 09:23	10/28/22 09:23		1	7.09	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 12:36	10/28/22 12:36		1	0.128	mg/L	0.06	0.125	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 09:59	11/1/22 09:59		1	11.4	mg/L	0.6	2	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/26/22 12:46	10/26/22 12:46			204.38	uS/cm			FA
pH	10/26/22 12:46	10/26/22 12:46			6.44	SU			FA
Temperature	10/26/22 12:46	10/26/22 12:46			18.76	C			FA
Turbidity	10/26/22 12:46	10/26/22 12:46			0.13	NTU			FA
Sulfide	10/26/22 12:46	10/26/22 12:46			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 12:50  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-7

**Laboratory ID Number:** BC19670

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19671	Aluminum, Dissolved	mg/L	0.0000549	0.010	0.100	0.100	0.103	0.103	0.0850 to 0.115	100	70.0 to 130	2.96	20.0
BC19679	Aluminum, Total	mg/L	0.000929	0.010	0.100	0.131	0.128	0.0988	0.0850 to 0.115	101	70.0 to 130	2.32	20.0
BC19671	Antimony, Dissolved	mg/L	0.0000571	0.00100	0.100	0.0904	0.0921	0.0871	0.0850 to 0.115	89.8	70.0 to 130	1.86	20.0
BC19679	Antimony, Total	mg/L	0.000512	0.00100	0.100	0.105	0.0995	0.0897	0.0850 to 0.115	105	70.0 to 130	5.38	20.0
BC19671	Arsenic, Dissolved	mg/L	0.0000398	0.000176	0.100	0.100	0.101	0.102	0.0850 to 0.115	97.1	70.0 to 130	0.995	20.0
BC19679	Arsenic, Total	mg/L	0.000109	0.000176	0.100	0.0954	0.0965	0.0954	0.0850 to 0.115	95.0	70.0 to 130	1.15	20.0
BC19671	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.310	0.295	0.0919	0.0850 to 0.115	96.0	70.0 to 130	4.96	20.0
BC19679	Barium, Total	mg/L	-0.0000087	0.00100	0.100	0.583	0.566	0.0981	0.0850 to 0.115	109	70.0 to 130	2.96	20.0
BC19671	Beryllium, Dissolved	mg/L	0.0000222	0.000880	0.100	0.0945	0.0935	0.0966	0.0850 to 0.115	94.5	70.0 to 130	1.06	20.0
BC19679	Beryllium, Total	mg/L	0.0000169	0.000880	0.100	0.0958	0.0932	0.0929	0.0850 to 0.115	95.8	70.0 to 130	2.75	20.0
BC19671	Boron, Dissolved	mg/L	-0.00146	0.0650	1.00	1.06	1.07	0.990	0.850 to 1.15	101	70.0 to 130	0.939	20.0
BC19679	Boron, Total	mg/L	0.00261	0.0650	1.00	1.07	1.06	0.993	0.850 to 1.15	101	70.0 to 130	0.939	20.0
BC19671	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0971	0.0991	0.100	0.0850 to 0.115	97.1	70.0 to 130	2.04	20.0
BC19679	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0994	0.0994	0.0989	0.0850 to 0.115	99.4	70.0 to 130	0.00	20.0
BC19671	Calcium, Dissolved	mg/L	0.00894	0.152	5.00	66.4	66.1	5.08	4.25 to 5.75	-200	70.0 to 130	0.453	20.0
BC19679	Calcium, Total	mg/L	-0.00674	0.152	5.00	27.9	27.9	5.33	4.25 to 5.75	98.0	70.0 to 130	0.00	20.0
BC19679	Chloride	mg/L	0.0693	1.00	10.0	16.0	16.1	10.2	9.00 to 11.0	105	80.0 to 120	0.623	20.0
BC19671	Chromium, Dissolved	mg/L	0.0000111	0.000440	0.100	0.0961	0.0984	0.102	0.0850 to 0.115	96.1	70.0 to 130	2.37	20.0
BC19679	Chromium, Total	mg/L	0.0000059	0.000440	0.100	0.0966	0.0971	0.0970	0.0850 to 0.115	96.4	70.0 to 130	0.516	20.0
BC19671	Cobalt, Dissolved	mg/L	0.0000002	0.000147	0.100	0.101	0.102	0.105	0.0850 to 0.115	98.1	70.0 to 130	0.985	20.0
BC19679	Cobalt, Total	mg/L	-0.0000038	0.000147	0.100	0.0997	0.0995	0.0998	0.0850 to 0.115	99.7	70.0 to 130	0.201	20.0
BC19679	Fluoride	mg/L	0.0113	0.125	2.50	2.81	2.83	2.39	2.25 to 2.75	106	80.0 to 120	0.709	20.0
BC19671	Iron, Dissolved	mg/L	-0.000185	0.0176	0.2	8.47	8.31	0.202	0.170 to 0.230	-745	70.0 to 130	1.91	20.0
BC19679	Iron, Total	mg/L	-0.00129	0.0176	0.2	0.587	0.579	0.208	0.170 to 0.230	104	70.0 to 130	1.37	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 12:50  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-7

**Laboratory ID Number:** BC19670

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BC19671	Lead, Dissolved	mg/L	0.0000074	0.000147	0.100	0.0995	0.0995	0.102	0.0850 to 0.115	99.5	70.0 to 130	0.00	20.0
BC19679	Lead, Total	mg/L	0.0000002	0.000147	0.100	0.0993	0.0992	0.0984	0.0850 to 0.115	99.3	70.0 to 130	0.101	20.0
BC19671	Lithium, Dissolved	mg/L	-0.000107	0.0154	0.200	0.198	0.202	0.197	0.170 to 0.230	99.0	70.0 to 130	2.00	20.0
BC19679	Lithium, Total	mg/L	5.090E-05	0.0154	0.200	0.251	0.247	0.203	0.170 to 0.230	114	70.0 to 130	1.61	20.0
BC19671	Magnesium, Dissolved	mg/L	-0.0132	0.0462	5.00	11.1	11.2	5.18	4.25 to 5.75	102	70.0 to 130	0.897	20.0
BC19679	Magnesium, Total	mg/L	0.00114	0.0462	5.00	10.3	10.2	5.10	4.25 to 5.75	100	70.0 to 130	0.976	20.0
BC19671	Manganese, Dissolved	mg/L	0.0000131	0.00033	0.100	1.72	1.72	0.105	0.0850 to 0.115	90.0	70.0 to 130	0.00	20.0
BC19679	Manganese, Total	mg/L	0.0000544	0.00033	0.100	0.143	0.142	0.0995	0.0850 to 0.115	99.5	70.0 to 130	0.702	20.0
BC19679	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00413	0.00416	0.00415	0.00340 to 0.00460	103	70.0 to 130	0.724	20.0
BC19671	Molybdenum, Dissolved	mg/L	0.0000133	0.0002	0.100	0.0981	0.0988	0.0989	0.0850 to 0.115	97.7	70.0 to 130	0.711	20.0
BC19679	Molybdenum, Total	mg/L	-0.0000074	0.0002	0.100	0.101	0.0984	0.0970	0.0850 to 0.115	99.6	70.0 to 130	2.61	20.0
BC19671	Potassium, Dissolved	mg/L	-0.00218	0.367	10.0	10.3	10.5	10.4	8.50 to 11.5	98.2	70.0 to 130	1.92	20.0
BC19679	Potassium, Total	mg/L	-0.00235	0.367	10.0	10.8	10.6	9.81	8.50 to 11.5	100	70.0 to 130	1.87	20.0
BC19671	Selenium, Dissolved	mg/L	0.0000887	0.00100	0.100	0.102	0.102	0.105	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BC19679	Selenium, Total	mg/L	-0.00002	0.00100	0.100	0.0994	0.0975	0.0999	0.0850 to 0.115	99.4	70.0 to 130	1.93	20.0
BC19671	Silicon, Dissolved	mg/L	-0.000043	0.0440	1.00	12.0	12.0	1.01	0.850 to 1.15	110	70.0 to 130	0.00	20.0
BC19679	Silicon, Total	mg/L	0.000258	0.0440	1.00	10.4	10.3	1.03	0.850 to 1.15	107	70.0 to 130	0.966	20.0
BC19671	Sodium, Dissolved	mg/L	0.000963	0.0660	5.00	15.2	15.3	5.00	4.25 to 5.75	96.0	70.0 to 130	0.656	20.0
BC19679	Sodium, Total	mg/L	0.000766	0.0660	5.00	80.3	76.1	4.89	4.25 to 5.75	66.0	70.0 to 130	5.37	20.0
BC19679	Sulfate	mg/L	0.429	2.0	20.0	21.8	22.0	20.1	18.0 to 22.0	97.2	80.0 to 120	0.913	20.0
BC19671	Thallium, Dissolved	mg/L	0.000011	0.000147	0.100	0.101	0.0988	0.101	0.0850 to 0.115	101	70.0 to 130	2.20	20.0
BC19679	Thallium, Total	mg/L	0.0000103	0.000147	0.100	0.0997	0.0988	0.0976	0.0850 to 0.115	99.7	70.0 to 130	0.907	20.0
BC19679	Total Organic Carbon	mg/L	0.269	1.00	10.0	13.7	11.1	23.7		93.4	80.0 to 120	21.0	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 12:50  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-7

**Laboratory ID Number:** BC19670

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19671	Alkalinity to pH 4.5	mg CaCO3/L					178	50.7	45.0 to 55.0			0.563	10.0
BC19679	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	1.95	0.055	2.04	1.80 to 2.20	97.5	90.0 to 110	0.00	15.0
BC19677	Solids, Dissolved	mg/L	1.00	25.0			329	51.0	40.0 to 60.0			0.304	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-8

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 13:49  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19671

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 12:59		1.015	0.0526	mg/L	0.030000	0.1015	J
* Calcium, Total	10/28/22 11:50	11/4/22 17:34		10.15	63.7	mg/L	0.70035	4.06	
* Iron, Total	10/28/22 11:50	11/4/22 17:34		10.15	8.94	mg/L	0.08120	0.406	
* Lithium, Total	10/28/22 11:50	11/3/22 12:59		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/28/22 11:50	11/3/22 12:59		1.015	6.03	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 12:59		1	24.6	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 12:59		1.015	11.5	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/3/22 12:59		1.015	10.8	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 14:47		1.015	0.0490	mg/L	0.030000	0.1015	J
* Calcium, Dissolved	10/28/22 08:43	11/3/22 10:58		10.15	76.4	mg/L	0.70035	4.06	RA
* Iron, Dissolved	10/28/22 08:43	11/3/22 10:58		10.15	9.96	mg/L	0.08120	0.406	RA
* Lithium, Dissolved	10/28/22 08:43	10/31/22 14:47		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 13:20		1.015	6.01	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 14:47		1	23.3	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 14:47		1.015	10.9	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	10/31/22 14:47		1.015	10.4	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 15:49		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Total	10/28/22 11:50	10/28/22 15:49		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Total	10/28/22 11:50	10/28/22 15:49		1.015	0.00330	mg/L	0.000081	0.000203	
* Barium, Total	10/28/22 11:50	10/28/22 15:49		1.015	0.224	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 15:49		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 15:49		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/28/22 11:50	10/28/22 15:49		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	10/28/22 11:50	10/28/22 15:49		1.015	0.00266	mg/L	0.000068	0.000203	
* Lead, Total	10/28/22 11:50	10/28/22 15:49		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 20:39		5.075	1.59	mg/L	0.000761	0.005075	
* Molybdenum, Total	10/28/22 11:50	10/28/22 15:49		1.015	0.000422	mg/L	0.000102	0.000203	
* Potassium, Total	10/28/22 11:50	10/28/22 15:49		1.015	0.416	mg/L	0.169505	0.5075	J

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-8

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 13:49  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19671

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 15:49		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 15:49		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 12:17		1.015	0.000582	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 12:17		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 12:17		1.015	0.00293	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 12:17		1.015	0.214	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 12:17		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 12:17		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 12:17		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 12:17		1.015	0.00288	mg/L	0.000068	0.000203	
* Lead, Dissolved	10/28/22 08:43	10/28/22 12:17		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 19:41		5.075	1.63	mg/L	0.000761	0.005075	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 12:17		1.015	0.000434	mg/L	0.000102	0.000203	
* Potassium, Dissolved	10/28/22 08:43	10/28/22 12:17		1.015	0.480	mg/L	0.169505	0.5075	J
* Selenium, Dissolved	10/28/22 08:43	10/28/22 12:17		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 12:17		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/4/22 00:02		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 13:49	10/28/22 13:49		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/8/22 08:50	11/8/22 15:09		1	177	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/28/22 13:05	11/1/22 10:25		1	226	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	177	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/8/22 08:50	11/8/22 15:09		1	Not Detected	mg CaCO3/L		0.5	
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/28/22 12:11	10/28/22 12:11		1	5.18	mg/L	1.00	2	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-8

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 13:49  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19671

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/28/22 09:24	10/28/22 09:24		1	5.72	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 12:37	10/28/22 12:37		1	0.0911	mg/L	0.06	0.125	J
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 10:00	11/1/22 10:00		1	10.1	mg/L	0.6	2	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/26/22 13:45	10/26/22 13:45			374.40	uS/cm			FA
pH	10/26/22 13:45	10/26/22 13:45			6.68	SU			FA
Temperature	10/26/22 13:45	10/26/22 13:45			18.33	C			FA
Turbidity	10/26/22 13:45	10/26/22 13:45			3.37	NTU			FA
Sulfide	10/26/22 13:45	10/26/22 13:45			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.



# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 13:49  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-8

**Laboratory ID Number:** BC19671

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19671	Aluminum, Dissolved	mg/L	0.0000549	0.010	0.100	0.100	0.103	0.103	0.0850 to 0.115	100	70.0 to 130	2.96	20.0
BC19679	Aluminum, Total	mg/L	0.000929	0.010	0.100	0.131	0.128	0.0988	0.0850 to 0.115	101	70.0 to 130	2.32	20.0
BC19671	Antimony, Dissolved	mg/L	0.0000571	0.00100	0.100	0.0904	0.0921	0.0871	0.0850 to 0.115	89.8	70.0 to 130	1.86	20.0
BC19679	Antimony, Total	mg/L	0.000512	0.00100	0.100	0.105	0.0995	0.0897	0.0850 to 0.115	105	70.0 to 130	5.38	20.0
BC19671	Arsenic, Dissolved	mg/L	0.0000398	0.000176	0.100	0.100	0.101	0.102	0.0850 to 0.115	97.1	70.0 to 130	0.995	20.0
BC19679	Arsenic, Total	mg/L	0.000109	0.000176	0.100	0.0954	0.0965	0.0954	0.0850 to 0.115	95.0	70.0 to 130	1.15	20.0
BC19671	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.310	0.295	0.0919	0.0850 to 0.115	96.0	70.0 to 130	4.96	20.0
BC19679	Barium, Total	mg/L	-0.0000087	0.00100	0.100	0.583	0.566	0.0981	0.0850 to 0.115	109	70.0 to 130	2.96	20.0
BC19671	Beryllium, Dissolved	mg/L	0.0000222	0.000880	0.100	0.0945	0.0935	0.0966	0.0850 to 0.115	94.5	70.0 to 130	1.06	20.0
BC19679	Beryllium, Total	mg/L	0.0000169	0.000880	0.100	0.0958	0.0932	0.0929	0.0850 to 0.115	95.8	70.0 to 130	2.75	20.0
BC19671	Boron, Dissolved	mg/L	-0.00146	0.0650	1.00	1.06	1.07	0.990	0.850 to 1.15	101	70.0 to 130	0.939	20.0
BC19679	Boron, Total	mg/L	0.00261	0.0650	1.00	1.07	1.06	0.993	0.850 to 1.15	101	70.0 to 130	0.939	20.0
BC19671	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0971	0.0991	0.100	0.0850 to 0.115	97.1	70.0 to 130	2.04	20.0
BC19679	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0994	0.0994	0.0989	0.0850 to 0.115	99.4	70.0 to 130	0.00	20.0
BC19671	Calcium, Dissolved	mg/L	0.00894	0.152	5.00	66.4	66.1	5.08	4.25 to 5.75	-200	70.0 to 130	0.453	20.0
BC19679	Calcium, Total	mg/L	-0.00674	0.152	5.00	27.9	27.9	5.33	4.25 to 5.75	98.0	70.0 to 130	0.00	20.0
BC19679	Chloride	mg/L	0.0693	1.00	10.0	16.0	16.1	10.2	9.00 to 11.0	105	80.0 to 120	0.623	20.0
BC19671	Chromium, Dissolved	mg/L	0.0000111	0.000440	0.100	0.0961	0.0984	0.102	0.0850 to 0.115	96.1	70.0 to 130	2.37	20.0
BC19679	Chromium, Total	mg/L	0.0000059	0.000440	0.100	0.0966	0.0971	0.0970	0.0850 to 0.115	96.4	70.0 to 130	0.516	20.0
BC19671	Cobalt, Dissolved	mg/L	0.0000002	0.000147	0.100	0.101	0.102	0.105	0.0850 to 0.115	98.1	70.0 to 130	0.985	20.0
BC19679	Cobalt, Total	mg/L	-0.0000038	0.000147	0.100	0.0997	0.0995	0.0998	0.0850 to 0.115	99.7	70.0 to 130	0.201	20.0
BC19679	Fluoride	mg/L	0.0113	0.125	2.50	2.81	2.83	2.39	2.25 to 2.75	106	80.0 to 120	0.709	20.0
BC19671	Iron, Dissolved	mg/L	-0.000185	0.0176	0.2	8.47	8.31	0.202	0.170 to 0.230	-745	70.0 to 130	1.91	20.0
BC19679	Iron, Total	mg/L	-0.00129	0.0176	0.2	0.587	0.579	0.208	0.170 to 0.230	104	70.0 to 130	1.37	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 13:49  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-8

**Laboratory ID Number:** BC19671

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BC19671	Lead, Dissolved	mg/L	0.0000074	0.000147	0.100	0.0995	0.0995	0.102	0.0850 to 0.115	99.5	70.0 to 130	0.00	20.0
BC19679	Lead, Total	mg/L	0.0000002	0.000147	0.100	0.0993	0.0992	0.0984	0.0850 to 0.115	99.3	70.0 to 130	0.101	20.0
BC19671	Lithium, Dissolved	mg/L	-0.000107	0.0154	0.200	0.198	0.202	0.197	0.170 to 0.230	99.0	70.0 to 130	2.00	20.0
BC19679	Lithium, Total	mg/L	5.090E-05	0.0154	0.200	0.251	0.247	0.203	0.170 to 0.230	114	70.0 to 130	1.61	20.0
BC19671	Magnesium, Dissolved	mg/L	-0.0132	0.0462	5.00	11.1	11.2	5.18	4.25 to 5.75	102	70.0 to 130	0.897	20.0
BC19679	Magnesium, Total	mg/L	0.00114	0.0462	5.00	10.3	10.2	5.10	4.25 to 5.75	100	70.0 to 130	0.976	20.0
BC19671	Manganese, Dissolved	mg/L	0.0000131	0.00033	0.100	1.72	1.72	0.105	0.0850 to 0.115	90.0	70.0 to 130	0.00	20.0
BC19679	Manganese, Total	mg/L	0.0000544	0.00033	0.100	0.143	0.142	0.0995	0.0850 to 0.115	99.5	70.0 to 130	0.702	20.0
BC19679	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00413	0.00416	0.00415	0.00340 to 0.00460	103	70.0 to 130	0.724	20.0
BC19671	Molybdenum, Dissolved	mg/L	0.0000133	0.0002	0.100	0.0981	0.0988	0.0989	0.0850 to 0.115	97.7	70.0 to 130	0.711	20.0
BC19679	Molybdenum, Total	mg/L	-0.0000074	0.0002	0.100	0.101	0.0984	0.0970	0.0850 to 0.115	99.6	70.0 to 130	2.61	20.0
BC19671	Potassium, Dissolved	mg/L	-0.00218	0.367	10.0	10.3	10.5	10.4	8.50 to 11.5	98.2	70.0 to 130	1.92	20.0
BC19679	Potassium, Total	mg/L	-0.00235	0.367	10.0	10.8	10.6	9.81	8.50 to 11.5	100	70.0 to 130	1.87	20.0
BC19671	Selenium, Dissolved	mg/L	0.0000887	0.00100	0.100	0.102	0.102	0.105	0.0850 to 0.115	102	70.0 to 130	0.00	20.0
BC19679	Selenium, Total	mg/L	-0.00002	0.00100	0.100	0.0994	0.0975	0.0999	0.0850 to 0.115	99.4	70.0 to 130	1.93	20.0
BC19671	Silicon, Dissolved	mg/L	-0.000043	0.0440	1.00	12.0	12.0	1.01	0.850 to 1.15	110	70.0 to 130	0.00	20.0
BC19679	Silicon, Total	mg/L	0.000258	0.0440	1.00	10.4	10.3	1.03	0.850 to 1.15	107	70.0 to 130	0.966	20.0
BC19671	Sodium, Dissolved	mg/L	0.000963	0.0660	5.00	15.2	15.3	5.00	4.25 to 5.75	96.0	70.0 to 130	0.656	20.0
BC19679	Sodium, Total	mg/L	0.000766	0.0660	5.00	80.3	76.1	4.89	4.25 to 5.75	66.0	70.0 to 130	5.37	20.0
BC19679	Sulfate	mg/L	0.429	2.0	20.0	21.8	22.0	20.1	18.0 to 22.0	97.2	80.0 to 120	0.913	20.0
BC19671	Thallium, Dissolved	mg/L	0.000011	0.000147	0.100	0.101	0.0988	0.101	0.0850 to 0.115	101	70.0 to 130	2.20	20.0
BC19679	Thallium, Total	mg/L	0.0000103	0.000147	0.100	0.0997	0.0988	0.0976	0.0850 to 0.115	99.7	70.0 to 130	0.907	20.0
BC19679	Total Organic Carbon	mg/L	0.269	1.00	10.0	13.7	11.1	23.7		93.4	80.0 to 120	21.0	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 13:49  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-8

**Laboratory ID Number:** BC19671

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19671	Alkalinity to pH 4.5	mg CaCO3/L					178	50.7	45.0 to 55.0			0.563	10.0
BC19679	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	1.95	0.055	2.04	1.80 to 2.20	97.5	90.0 to 110	0.00	15.0
BC19677	Solids, Dissolved	mg/L	1.00	25.0			329	51.0	40.0 to 60.0			0.304	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-9

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 14:40  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19672

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 13:02		1.015	0.0595	mg/L	0.030000	0.1015	J
* Calcium, Total	10/28/22 11:50	11/4/22 17:37		10.15	47.7	mg/L	0.70035	4.06	
* Iron, Total	10/28/22 11:50	11/3/22 13:02		1.015	1.04	mg/L	0.008120	0.0406	
* Lithium, Total	10/28/22 11:50	11/3/22 13:02		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/28/22 11:50	11/3/22 13:02		1.015	7.25	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 13:02		1	21.6	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 13:02		1.015	10.1	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/3/22 13:02		1.015	14.1	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 15:09		1.015	0.0578	mg/L	0.030000	0.1015	J
* Calcium, Dissolved	10/28/22 08:43	11/3/22 11:07		10.15	58.0	mg/L	0.70035	4.06	
* Iron, Dissolved	10/28/22 08:43	10/31/22 15:09		1.015	1.09	mg/L	0.008120	0.0406	
* Lithium, Dissolved	10/28/22 08:43	10/31/22 15:09		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 13:42		1.015	7.22	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 15:09		1	21.2	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 15:09		1.015	9.89	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	10/31/22 15:09		1.015	13.6	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 15:53		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Total	10/28/22 11:50	10/28/22 15:53		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Total	10/28/22 11:50	10/28/22 15:53		1.015	0.000618	mg/L	0.000081	0.000203	
* Barium, Total	10/28/22 11:50	10/28/22 15:53		1.015	0.154	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 15:53		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 15:53		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/28/22 11:50	10/28/22 15:53		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	10/28/22 11:50	10/28/22 15:53		1.015	0.000812	mg/L	0.000068	0.000203	
* Lead, Total	10/28/22 11:50	10/28/22 15:53		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 20:43		5.075	1.55	mg/L	0.000761	0.005075	
* Molybdenum, Total	10/28/22 11:50	10/28/22 15:53		1.015	0.000276	mg/L	0.000102	0.000203	
* Potassium, Total	10/28/22 11:50	10/28/22 15:53		1.015	1.75	mg/L	0.169505	0.5075	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-9

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 14:40  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19672

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 15:53		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 15:53		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 12:46		1.015	0.000950	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 12:46		1.015	0.0128	mg/L	0.006090	0.01015	
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 12:46		1.015	0.000649	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 12:46		1.015	0.154	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 12:46		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 12:46		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 12:46		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 12:46		1.015	0.000723	mg/L	0.000068	0.000203	
* Lead, Dissolved	10/28/22 08:43	10/28/22 12:46		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 19:52		5.075	1.52	mg/L	0.000761	0.005075	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 12:46		1.015	0.000307	mg/L	0.000102	0.000203	
* Potassium, Dissolved	10/28/22 08:43	10/28/22 12:46		1.015	1.73	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 12:46		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 12:46		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/4/22 00:06		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 13:51	10/28/22 13:51		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/9/22 07:58	11/9/22 10:58		1	145	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/28/22 13:05	11/1/22 10:25		1	194	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/9/22 07:58	11/9/22 10:58		1	144	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/9/22 07:58	11/9/22 10:58		1	0.566	mg CaCO3/L			
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/28/22 12:27	10/28/22 12:27		1	3.54	mg/L	1.00	2	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-9

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 14:40  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19672

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/28/22 09:25	10/28/22 09:25		1	6.99	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 12:38	10/28/22 12:38		1	0.119	mg/L	0.06	0.125	J
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 10:01	11/1/22 10:01		1	13.8	mg/L	0.6	2	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/26/22 14:36	10/26/22 14:36			314.94	uS/cm			FA
pH	10/26/22 14:36	10/26/22 14:36			7.07	SU			FA
Temperature	10/26/22 14:36	10/26/22 14:36			18.45	C			FA
Turbidity	10/26/22 14:36	10/26/22 14:36			0.8	NTU			FA
Sulfide	10/26/22 14:36	10/26/22 14:36			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 14:40  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-9

**Laboratory ID Number:** BC19672

Sample	Analysis	Units	MB	MB		Spike	MS	MSD	Standard		Rec		Prec Limit	
				Limit					Standard	Limit	Rec	Limit		Prec
BC19683	Aluminum, Dissolved	mg/L	0.000354	0.010		0.100	0.0979	0.101	0.100	0.0850 to 0.115	97.9	70.0 to 130	3.12	20.0
BC19679	Aluminum, Total	mg/L	0.000929	0.010		0.100	0.131	0.128	0.0988	0.0850 to 0.115	101	70.0 to 130	2.32	20.0
BC19683	Antimony, Dissolved	mg/L	0.0000461	0.00100		0.100	0.0879	0.0897	0.0886	0.0850 to 0.115	87.9	70.0 to 130	2.03	20.0
BC19679	Antimony, Total	mg/L	0.000512	0.00100		0.100	0.105	0.0995	0.0897	0.0850 to 0.115	105	70.0 to 130	5.38	20.0
BC19683	Arsenic, Dissolved	mg/L	0.000	0.000176		0.100	0.0967	0.0961	0.0965	0.0850 to 0.115	96.5	70.0 to 130	0.622	20.0
BC19679	Arsenic, Total	mg/L	0.000109	0.000176		0.100	0.0954	0.0965	0.0954	0.0850 to 0.115	95.0	70.0 to 130	1.15	20.0
BC19683	Barium, Dissolved	mg/L	-0.0000196	0.00100		0.100	0.129	0.124	0.0976	0.0850 to 0.115	94.3	70.0 to 130	3.95	20.0
BC19679	Barium, Total	mg/L	-0.0000087	0.00100		0.100	0.583	0.566	0.0981	0.0850 to 0.115	109	70.0 to 130	2.96	20.0
BC19683	Beryllium, Dissolved	mg/L	0.0000167	0.000880		0.100	0.0938	0.0933	0.0933	0.0850 to 0.115	93.8	70.0 to 130	0.534	20.0
BC19679	Beryllium, Total	mg/L	0.0000169	0.000880		0.100	0.0958	0.0932	0.0929	0.0850 to 0.115	95.8	70.0 to 130	2.75	20.0
BC19683	Boron, Dissolved	mg/L	-0.00117	0.0650		1.00	1.11	1.10	0.993	0.850 to 1.15	101	70.0 to 130	0.905	20.0
BC19679	Boron, Total	mg/L	0.00261	0.0650		1.00	1.07	1.06	0.993	0.850 to 1.15	101	70.0 to 130	0.939	20.0
BC19683	Cadmium, Dissolved	mg/L	0.000	0.000147		0.100	0.0975	0.0994	0.0990	0.0850 to 0.115	97.2	70.0 to 130	1.93	20.0
BC19679	Cadmium, Total	mg/L	0.000	0.000147		0.100	0.0994	0.0994	0.0989	0.0850 to 0.115	99.4	70.0 to 130	0.00	20.0
BC19683	Calcium, Dissolved	mg/L	-0.00440	0.152		5.00	80.5	65.7	4.88	4.25 to 5.75	388	70.0 to 130	20.2	20.0
BC19679	Calcium, Total	mg/L	-0.00674	0.152		5.00	27.9	27.9	5.33	4.25 to 5.75	98.0	70.0 to 130	0.00	20.0
BC19679	Chloride	mg/L	0.0693	1.00		10.0	16.0	16.1	10.2	9.00 to 11.0	105	80.0 to 120	0.623	20.0
BC19683	Chromium, Dissolved	mg/L	-0.0000262	0.000440		0.100	0.0939	0.0980	0.101	0.0850 to 0.115	93.7	70.0 to 130	4.27	20.0
BC19679	Chromium, Total	mg/L	0.0000059	0.000440		0.100	0.0966	0.0971	0.0970	0.0850 to 0.115	96.4	70.0 to 130	0.516	20.0
BC19683	Cobalt, Dissolved	mg/L	0.0000035	0.000147		0.100	0.102	0.105	0.103	0.0850 to 0.115	96.1	70.0 to 130	2.90	20.0
BC19679	Cobalt, Total	mg/L	-0.0000038	0.000147		0.100	0.0997	0.0995	0.0998	0.0850 to 0.115	99.7	70.0 to 130	0.201	20.0
BC19679	Fluoride	mg/L	0.0113	0.125		2.50	2.81	2.83	2.39	2.25 to 2.75	106	80.0 to 120	0.709	20.0
BC19683	Iron, Dissolved	mg/L	-0.000156	0.0176		0.2	0.293	0.291	0.201	0.170 to 0.230	101	70.0 to 130	0.685	20.0
BC19679	Iron, Total	mg/L	-0.00129	0.0176		0.2	0.587	0.579	0.208	0.170 to 0.230	104	70.0 to 130	1.37	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 14:40  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-9

**Laboratory ID Number:** BC19672

Sample	Analysis	Units	MB					Standard		Rec			Prec Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19683	Lead, Dissolved	mg/L	0.0000049	0.000147	0.100	0.0975	0.0993	0.0990	0.0850 to 0.115	97.4	70.0 to 130	1.83	20.0
BC19679	Lead, Total	mg/L	0.000002	0.000147	0.100	0.0993	0.0992	0.0984	0.0850 to 0.115	99.3	70.0 to 130	0.101	20.0
BC19683	Lithium, Dissolved	mg/L	0.000386	0.0154	0.200	0.201	0.204	0.198	0.170 to 0.230	100	70.0 to 130	1.48	20.0
BC19679	Lithium, Total	mg/L	5.090E-05	0.0154	0.200	0.251	0.247	0.203	0.170 to 0.230	114	70.0 to 130	1.61	20.0
BC19683	Magnesium, Dissolved	mg/L	-0.0191	0.0462	5.00	33.1	32.9	5.11	4.25 to 5.75	102	70.0 to 130	0.606	20.0
BC19679	Magnesium, Total	mg/L	0.00114	0.0462	5.00	10.3	10.2	5.10	4.25 to 5.75	100	70.0 to 130	0.976	20.0
BC19683	Manganese, Dissolved	mg/L	0.0000393	0.00033	0.100	2.28	2.35	0.104	0.0850 to 0.115	80.0	70.0 to 130	3.02	20.0
BC19679	Manganese, Total	mg/L	0.0000544	0.00033	0.100	0.143	0.142	0.0995	0.0850 to 0.115	99.5	70.0 to 130	0.702	20.0
BC19679	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00413	0.00416	0.00415	0.00340 to 0.00460	103	70.0 to 130	0.724	20.0
BC19683	Molybdenum, Dissolved	mg/L	0.0000454	0.0002	0.100	0.0956	0.0972	0.0972	0.0850 to 0.115	95.6	70.0 to 130	1.66	20.0
BC19679	Molybdenum, Total	mg/L	-0.0000074	0.0002	0.100	0.101	0.0984	0.0970	0.0850 to 0.115	99.6	70.0 to 130	2.61	20.0
BC19683	Potassium, Dissolved	mg/L	0.00340	0.367	10.0	10.6	10.8	10.1	8.50 to 11.5	97.2	70.0 to 130	1.87	20.0
BC19679	Potassium, Total	mg/L	-0.00235	0.367	10.0	10.8	10.6	9.81	8.50 to 11.5	100	70.0 to 130	1.87	20.0
BC19683	Selenium, Dissolved	mg/L	-0.0000279	0.00100	0.100	0.0991	0.0977	0.101	0.0850 to 0.115	99.1	70.0 to 130	1.42	20.0
BC19679	Selenium, Total	mg/L	-0.00002	0.00100	0.100	0.0994	0.0975	0.0999	0.0850 to 0.115	99.4	70.0 to 130	1.93	20.0
BC19683	Silicon, Dissolved	mg/L	-0.000298	0.0440	1.00	9.47	9.47	1.01	0.850 to 1.15	90.0	70.0 to 130	0.00	20.0
BC19679	Silicon, Total	mg/L	0.000258	0.0440	1.00	10.4	10.3	1.03	0.850 to 1.15	107	70.0 to 130	0.966	20.0
BC19683	Sodium, Dissolved	mg/L	0.00481	0.0660	5.00	20.7	21.1	5.03	4.25 to 5.75	96.0	70.0 to 130	1.91	20.0
BC19679	Sodium, Total	mg/L	0.000766	0.0660	5.00	80.3	76.1	4.89	4.25 to 5.75	66.0	70.0 to 130	5.37	20.0
BC19679	Sulfate	mg/L	0.429	2.0	20.0	21.8	22.0	20.1	18.0 to 22.0	97.2	80.0 to 120	0.913	20.0
BC19683	Thallium, Dissolved	mg/L	0.0000136	0.000147	0.100	0.0973	0.0989	0.0976	0.0850 to 0.115	97.3	70.0 to 130	1.63	20.0
BC19679	Thallium, Total	mg/L	0.0000103	0.000147	0.100	0.0997	0.0988	0.0976	0.0850 to 0.115	99.7	70.0 to 130	0.907	20.0
BC19679	Total Organic Carbon	mg/L	0.269	1.00	10.0	13.7	11.1	23.7		93.4	80.0 to 120	21.0	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.



## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 14:40  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-9

**Laboratory ID Number:** BC19672

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19683	Alkalinity to pH 4.5	mg CaCO3/L					37.1	50.8	45.0 to 55.0			1.60	10.0
BC19679	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	1.95	0.055	2.04	1.80 to 2.20	97.5	90.0 to 110	0.00	15.0
BC19677	Solids, Dissolved	mg/L	1.00	25.0			329	51.0	40.0 to 60.0			0.304	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-10

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 15:23  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19673

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 13:06		1.015	0.0868	mg/L	0.030000	0.1015	J
* Calcium, Total	10/28/22 11:50	11/3/22 13:06		1.015	39.5	mg/L	0.070035	0.406	
* Iron, Total	10/28/22 11:50	11/4/22 17:47		10.15	20.9	mg/L	0.08120	0.406	
* Lithium, Total	10/28/22 11:50	11/3/22 13:06		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/28/22 11:50	11/3/22 13:06		1.015	6.18	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 13:06		1	35.7	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 13:06		1.015	16.7	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/3/22 13:06		1.015	12.4	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 15:13		1.015	0.0812	mg/L	0.030000	0.1015	J
* Calcium, Dissolved	10/28/22 08:43	10/31/22 15:13		1.015	40.2	mg/L	0.070035	0.406	
* Iron, Dissolved	10/28/22 08:43	11/3/22 11:17		10.15	22.8	mg/L	0.08120	0.406	
* Lithium, Dissolved	10/28/22 08:43	10/31/22 15:13		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 13:45		1.015	6.23	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 15:13		1	35.1	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 15:13		1.015	16.4	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	10/31/22 15:13		1.015	12.3	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 15:57		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Total	10/28/22 11:50	10/28/22 15:57		1.015	0.0139	mg/L	0.006090	0.01015	
* Arsenic, Total	10/28/22 11:50	10/28/22 15:57		1.015	0.00414	mg/L	0.000081	0.000203	
* Barium, Total	10/28/22 11:50	10/28/22 15:57		1.015	0.278	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 15:57		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 15:57		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/28/22 11:50	10/28/22 15:57		1.015	0.000207	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/28/22 11:50	10/28/22 15:57		1.015	0.000907	mg/L	0.000068	0.000203	
* Lead, Total	10/28/22 11:50	10/28/22 15:57		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 15:57		1.015	0.697	mg/L	0.000152	0.001015	
* Molybdenum, Total	10/28/22 11:50	10/28/22 15:57		1.015	0.000438	mg/L	0.000102	0.000203	
* Potassium, Total	10/28/22 11:50	10/28/22 15:57		1.015	0.561	mg/L	0.169505	0.5075	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-10

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 15:23  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19673

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 15:57		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 15:57		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 12:49		1.015	0.000796	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 12:49		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 12:49		1.015	0.00400	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 12:49		1.015	0.265	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 12:49		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 12:49		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 12:49		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 12:49		1.015	0.000924	mg/L	0.000068	0.000203	
* Lead, Dissolved	10/28/22 08:43	10/28/22 12:49		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 12:49		1.015	0.702	mg/L	0.000152	0.001015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 12:49		1.015	0.000452	mg/L	0.000102	0.000203	
* Potassium, Dissolved	10/28/22 08:43	10/28/22 12:49		1.015	0.558	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 12:49		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 12:49		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/4/22 00:10		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 13:53	10/28/22 13:53		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/9/22 07:58	11/9/22 10:58		1	139	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/28/22 13:05	11/1/22 10:25		1	202	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/9/22 07:58	11/9/22 10:58		1	138	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/9/22 07:58	11/9/22 10:58		1	0.555	mg CaCO3/L			
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/28/22 12:42	10/28/22 12:42		1	4.99	mg/L	1.00	2	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-10

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 15:23  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:31

**Laboratory ID Number:** BC19673

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/28/22 09:27	10/28/22 09:27		1	5.87	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 12:40	10/28/22 12:40		1	0.0929	mg/L	0.06	0.125	J
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 10:03	11/1/22 10:03		1	4.42	mg/L	0.6	2	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: TJD</b>							
Conductivity	10/26/22 15:19	10/26/22 15:19			330.76	uS/cm			FA
pH	10/26/22 15:19	10/26/22 15:19			6.84	SU			FA
Temperature	10/26/22 15:19	10/26/22 15:19			19.46	C			FA
Turbidity	10/26/22 15:19	10/26/22 15:19			3.59	NTU			FA
Sulfide	10/26/22 15:19	10/26/22 15:19			0	mg/L			FA

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MDL's and RL's are adjusted for sample dilution, as applicable

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**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 15:23  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-10

**Laboratory ID Number:** BC19673

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19683	Aluminum, Dissolved	mg/L	0.000354	0.010	0.100	0.0979	0.101	0.100	0.0850 to 0.115	97.9	70.0 to 130	3.12	20.0
BC19679	Aluminum, Total	mg/L	0.000929	0.010	0.100	0.131	0.128	0.0988	0.0850 to 0.115	101	70.0 to 130	2.32	20.0
BC19683	Antimony, Dissolved	mg/L	0.0000461	0.00100	0.100	0.0879	0.0897	0.0886	0.0850 to 0.115	87.9	70.0 to 130	2.03	20.0
BC19679	Antimony, Total	mg/L	0.000512	0.00100	0.100	0.105	0.0995	0.0897	0.0850 to 0.115	105	70.0 to 130	5.38	20.0
BC19683	Arsenic, Dissolved	mg/L	0.000	0.000176	0.100	0.0967	0.0961	0.0965	0.0850 to 0.115	96.5	70.0 to 130	0.622	20.0
BC19679	Arsenic, Total	mg/L	0.000109	0.000176	0.100	0.0954	0.0965	0.0954	0.0850 to 0.115	95.0	70.0 to 130	1.15	20.0
BC19683	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.129	0.124	0.0976	0.0850 to 0.115	94.3	70.0 to 130	3.95	20.0
BC19679	Barium, Total	mg/L	-0.0000087	0.00100	0.100	0.583	0.566	0.0981	0.0850 to 0.115	109	70.0 to 130	2.96	20.0
BC19683	Beryllium, Dissolved	mg/L	0.0000167	0.000880	0.100	0.0938	0.0933	0.0933	0.0850 to 0.115	93.8	70.0 to 130	0.534	20.0
BC19679	Beryllium, Total	mg/L	0.0000169	0.000880	0.100	0.0958	0.0932	0.0929	0.0850 to 0.115	95.8	70.0 to 130	2.75	20.0
BC19683	Boron, Dissolved	mg/L	-0.00117	0.0650	1.00	1.11	1.10	0.993	0.850 to 1.15	101	70.0 to 130	0.905	20.0
BC19679	Boron, Total	mg/L	0.00261	0.0650	1.00	1.07	1.06	0.993	0.850 to 1.15	101	70.0 to 130	0.939	20.0
BC19683	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0975	0.0994	0.0990	0.0850 to 0.115	97.2	70.0 to 130	1.93	20.0
BC19679	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0994	0.0994	0.0989	0.0850 to 0.115	99.4	70.0 to 130	0.00	20.0
BC19683	Calcium, Dissolved	mg/L	-0.00440	0.152	5.00	80.5	65.7	4.88	4.25 to 5.75	388	70.0 to 130	20.2	20.0
BC19679	Calcium, Total	mg/L	-0.00674	0.152	5.00	27.9	27.9	5.33	4.25 to 5.75	98.0	70.0 to 130	0.00	20.0
BC19679	Chloride	mg/L	0.0693	1.00	10.0	16.0	16.1	10.2	9.00 to 11.0	105	80.0 to 120	0.623	20.0
BC19683	Chromium, Dissolved	mg/L	-0.0000262	0.000440	0.100	0.0939	0.0980	0.101	0.0850 to 0.115	93.7	70.0 to 130	4.27	20.0
BC19679	Chromium, Total	mg/L	0.0000059	0.000440	0.100	0.0966	0.0971	0.0970	0.0850 to 0.115	96.4	70.0 to 130	0.516	20.0
BC19683	Cobalt, Dissolved	mg/L	0.0000035	0.000147	0.100	0.102	0.105	0.103	0.0850 to 0.115	96.1	70.0 to 130	2.90	20.0
BC19679	Cobalt, Total	mg/L	-0.0000038	0.000147	0.100	0.0997	0.0995	0.0998	0.0850 to 0.115	99.7	70.0 to 130	0.201	20.0
BC19679	Fluoride	mg/L	0.0113	0.125	2.50	2.81	2.83	2.39	2.25 to 2.75	106	80.0 to 120	0.709	20.0
BC19683	Iron, Dissolved	mg/L	-0.000156	0.0176	0.2	0.293	0.291	0.201	0.170 to 0.230	101	70.0 to 130	0.685	20.0
BC19679	Iron, Total	mg/L	-0.00129	0.0176	0.2	0.587	0.579	0.208	0.170 to 0.230	104	70.0 to 130	1.37	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 15:23  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-10

**Laboratory ID Number:** BC19673

Sample	Analysis	Units	MB					Standard		Rec			Prec Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19683	Lead, Dissolved	mg/L	0.0000049	0.000147	0.100	0.0975	0.0993	0.0990	0.0850 to 0.115	97.4	70.0 to 130	1.83	20.0
BC19679	Lead, Total	mg/L	0.000002	0.000147	0.100	0.0993	0.0992	0.0984	0.0850 to 0.115	99.3	70.0 to 130	0.101	20.0
BC19683	Lithium, Dissolved	mg/L	0.000386	0.0154	0.200	0.201	0.204	0.198	0.170 to 0.230	100	70.0 to 130	1.48	20.0
BC19679	Lithium, Total	mg/L	5.090E-05	0.0154	0.200	0.251	0.247	0.203	0.170 to 0.230	114	70.0 to 130	1.61	20.0
BC19683	Magnesium, Dissolved	mg/L	-0.0191	0.0462	5.00	33.1	32.9	5.11	4.25 to 5.75	102	70.0 to 130	0.606	20.0
BC19679	Magnesium, Total	mg/L	0.00114	0.0462	5.00	10.3	10.2	5.10	4.25 to 5.75	100	70.0 to 130	0.976	20.0
BC19683	Manganese, Dissolved	mg/L	0.0000393	0.00033	0.100	2.28	2.35	0.104	0.0850 to 0.115	80.0	70.0 to 130	3.02	20.0
BC19679	Manganese, Total	mg/L	0.0000544	0.00033	0.100	0.143	0.142	0.0995	0.0850 to 0.115	99.5	70.0 to 130	0.702	20.0
BC19679	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00413	0.00416	0.00415	0.00340 to 0.00460	103	70.0 to 130	0.724	20.0
BC19683	Molybdenum, Dissolved	mg/L	0.0000454	0.0002	0.100	0.0956	0.0972	0.0972	0.0850 to 0.115	95.6	70.0 to 130	1.66	20.0
BC19679	Molybdenum, Total	mg/L	-0.0000074	0.0002	0.100	0.101	0.0984	0.0970	0.0850 to 0.115	99.6	70.0 to 130	2.61	20.0
BC19683	Potassium, Dissolved	mg/L	0.00340	0.367	10.0	10.6	10.8	10.1	8.50 to 11.5	97.2	70.0 to 130	1.87	20.0
BC19679	Potassium, Total	mg/L	-0.00235	0.367	10.0	10.8	10.6	9.81	8.50 to 11.5	100	70.0 to 130	1.87	20.0
BC19683	Selenium, Dissolved	mg/L	-0.0000279	0.00100	0.100	0.0991	0.0977	0.101	0.0850 to 0.115	99.1	70.0 to 130	1.42	20.0
BC19679	Selenium, Total	mg/L	-0.00002	0.00100	0.100	0.0994	0.0975	0.0999	0.0850 to 0.115	99.4	70.0 to 130	1.93	20.0
BC19683	Silicon, Dissolved	mg/L	-0.000298	0.0440	1.00	9.47	9.47	1.01	0.850 to 1.15	90.0	70.0 to 130	0.00	20.0
BC19679	Silicon, Total	mg/L	0.000258	0.0440	1.00	10.4	10.3	1.03	0.850 to 1.15	107	70.0 to 130	0.966	20.0
BC19683	Sodium, Dissolved	mg/L	0.00481	0.0660	5.00	20.7	21.1	5.03	4.25 to 5.75	96.0	70.0 to 130	1.91	20.0
BC19679	Sodium, Total	mg/L	0.000766	0.0660	5.00	80.3	76.1	4.89	4.25 to 5.75	66.0	70.0 to 130	5.37	20.0
BC19679	Sulfate	mg/L	0.429	2.0	20.0	21.8	22.0	20.1	18.0 to 22.0	97.2	80.0 to 120	0.913	20.0
BC19683	Thallium, Dissolved	mg/L	0.0000136	0.000147	0.100	0.0973	0.0989	0.0976	0.0850 to 0.115	97.3	70.0 to 130	1.63	20.0
BC19679	Thallium, Total	mg/L	0.0000103	0.000147	0.100	0.0997	0.0988	0.0976	0.0850 to 0.115	99.7	70.0 to 130	0.907	20.0
BC19679	Total Organic Carbon	mg/L	0.269	1.00	10.0	13.7	11.1	23.7		93.4	80.0 to 120	21.0	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 15:23  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:31

**Description:** Gadsden Ash Pond - MW-10

**Laboratory ID Number:** BC19673

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19683	Alkalinity to pH 4.5	mg CaCO3/L					37.1	50.8	45.0 to 55.0			1.60	10.0
BC19679	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	1.95	0.055	2.04	1.80 to 2.20	97.5	90.0 to 110	0.00	15.0
BC19677	Solids, Dissolved	mg/L	1.00	25.0			329	51.0	40.0 to 60.0			0.304	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-14

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 08:20  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19674

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Total	10/28/22 11:50	11/3/22 13:09		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Total	10/28/22 11:50	11/3/22 13:09		1.015	8.97	mg/L	0.070035	0.406		
* Iron, Total	10/28/22 11:50	11/3/22 13:09		1.015	0.0142	mg/L	0.008120	0.0406	J	
* Lithium, Total	10/28/22 11:50	11/3/22 13:09		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	10/28/22 11:50	11/3/22 13:09		1.015	3.09	mg/L	0.021315	0.406		
Silica, Total (calc.)	10/28/22 11:50	11/3/22 13:09		1	8.54	mg/L				
Silicon, Total	10/28/22 11:50	11/3/22 13:09		1.015	3.99	mg/L	0.02030	0.25375		
* Sodium, Total	10/28/22 11:50	11/3/22 13:09		1.015	1.80	mg/L	0.03045	0.406		
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Dissolved	10/28/22 08:43	10/31/22 15:16		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Dissolved	10/28/22 08:43	10/31/22 15:16		1.015	8.61	mg/L	0.070035	0.406		
* Iron, Dissolved	10/28/22 08:43	10/31/22 15:16		1.015	Not Detected	mg/L	0.008120	0.0406	U	
* Lithium, Dissolved	10/28/22 08:43	10/31/22 15:16		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 13:48		1.015	3.06	mg/L	0.021315	0.406		
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 15:16		1	8.37	mg/L				
Silicon, Dissolved	10/28/22 08:43	10/31/22 15:16		1.015	3.91	mg/L	0.02030	0.25375		
* Sodium, Dissolved	10/28/22 08:43	10/31/22 15:16		1.015	1.99	mg/L	0.03045	0.406		
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>					
* Antimony, Total	10/28/22 11:50	10/28/22 16:00		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Aluminum, Total	10/28/22 11:50	10/31/22 15:35		5.075	4.89	mg/L	0.030450	0.05075		
* Arsenic, Total	10/28/22 11:50	10/28/22 16:00		1.015	0.00107	mg/L	0.000081	0.000203		
* Barium, Total	10/28/22 11:50	10/28/22 16:00		1.015	0.0238	mg/L	0.000508	0.001015		
* Beryllium, Total	10/28/22 11:50	10/28/22 16:00		1.015	0.000798	mg/L	0.000406	0.001015	J	
* Cadmium, Total	10/28/22 11:50	10/28/22 16:00		1.015	0.000245	mg/L	0.000068	0.000203		
* Chromium, Total	10/28/22 11:50	10/28/22 16:00		1.015	0.000428	mg/L	0.000203	0.001015	J	
* Cobalt, Total	10/28/22 11:50	10/28/22 16:00		1.015	0.0201	mg/L	0.000068	0.000203		
* Lead, Total	10/28/22 11:50	10/28/22 16:00		1.015	0.00134	mg/L	0.000068	0.000203		
* Manganese, Total	10/28/22 11:50	10/28/22 16:00		1.015	0.284	mg/L	0.000152	0.001015		
* Molybdenum, Total	10/28/22 11:50	10/28/22 16:00		1.015	Not Detected	mg/L	0.000102	0.000203	U	
* Potassium, Total	10/28/22 11:50	10/28/22 16:00		1.015	0.309	mg/L	0.169505	0.5075	J	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Fluoride may have potential matrix interference.  
 Alkalinity could not be performed, pH below titration end point of 4.5 SU.



# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-14

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 08:20  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19674

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 16:00		1.015	0.00151	mg/L	0.000508	0.001015	
* Thallium, Total	10/28/22 11:50	10/28/22 16:00		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 12:53		1.015	0.000590	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/31/22 15:17		5.075	4.60	mg/L	0.030450	0.05075	
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 12:53		1.015	0.00114	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 12:53		1.015	0.0226	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 12:53		1.015	0.000772	mg/L	0.000406	0.001015	J
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 12:53		1.015	0.000366	mg/L	0.000068	0.000203	
* Chromium, Dissolved	10/28/22 08:43	10/28/22 12:53		1.015	0.000345	mg/L	0.000203	0.001015	J
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 12:53		1.015	0.0202	mg/L	0.000068	0.000203	
* Lead, Dissolved	10/28/22 08:43	10/28/22 12:53		1.015	0.00150	mg/L	0.000068	0.000203	
* Manganese, Dissolved	10/28/22 08:43	10/28/22 12:53		1.015	0.287	mg/L	0.000152	0.001015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 12:53		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Potassium, Dissolved	10/28/22 08:43	10/28/22 12:53		1.015	0.328	mg/L	0.169505	0.5075	J
* Selenium, Dissolved	10/28/22 08:43	10/28/22 12:53		1.015	0.00136	mg/L	0.000508	0.001015	
* Thallium, Dissolved	10/28/22 08:43	10/28/22 12:53		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/4/22 00:13		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 13:54	10/28/22 13:54		1	0.395	mg/L as N	0.20	0.3	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/28/22 13:05	11/1/22 10:25		1	98.0	mg/L		25	
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/28/22 12:58	10/28/22 12:58		1	3.41	mg/L	1.00	2	
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/28/22 09:28	10/28/22 09:28		1	2.56	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 12:41	10/28/22 12:41		1	Not Detected	mg/L	0.06	0.125	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 10:13	11/1/22 10:13		3	50.7	mg/L	1.8	6	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Fluoride may have potential matrix interference.  
 Alkalinity could not be performed, pH below titration end point of 4.5 SU.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-14

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 08:20  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19674

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: Field Measurements</b>		<b>Analyst: AWG</b>							
Conductivity	10/26/22 08:18	10/26/22 08:18			178.64	uS/cm			FA
pH	10/26/22 08:18	10/26/22 08:18			4.07	SU			FA
Temperature	10/26/22 08:18	10/26/22 08:18			18.74	C			FA
Turbidity	10/26/22 08:18	10/26/22 08:18			2.21	NTU			FA
Sulfide	10/26/22 08:18	10/26/22 08:18			0	mg/L			FA

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MDL's and RL's are adjusted for sample dilution, as applicable

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**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Fluoride may have potential matrix interference.  
 Alkalinity could not be performed, pH below titration end point of 4.5 SU.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 08:20  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-14

**Laboratory ID Number:** BC19674

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19683	Aluminum, Dissolved	mg/L	0.000354	0.010	0.100	0.0979	0.101	0.100	0.0850 to 0.115	97.9	70.0 to 130	3.12	20.0
BC19679	Aluminum, Total	mg/L	0.000929	0.010	0.100	0.131	0.128	0.0988	0.0850 to 0.115	101	70.0 to 130	2.32	20.0
BC19683	Antimony, Dissolved	mg/L	0.0000461	0.00100	0.100	0.0879	0.0897	0.0886	0.0850 to 0.115	87.9	70.0 to 130	2.03	20.0
BC19679	Antimony, Total	mg/L	0.000512	0.00100	0.100	0.105	0.0995	0.0897	0.0850 to 0.115	105	70.0 to 130	5.38	20.0
BC19683	Arsenic, Dissolved	mg/L	0.000	0.000176	0.100	0.0967	0.0961	0.0965	0.0850 to 0.115	96.5	70.0 to 130	0.622	20.0
BC19679	Arsenic, Total	mg/L	0.000109	0.000176	0.100	0.0954	0.0965	0.0954	0.0850 to 0.115	95.0	70.0 to 130	1.15	20.0
BC19683	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.129	0.124	0.0976	0.0850 to 0.115	94.3	70.0 to 130	3.95	20.0
BC19679	Barium, Total	mg/L	-0.0000087	0.00100	0.100	0.583	0.566	0.0981	0.0850 to 0.115	109	70.0 to 130	2.96	20.0
BC19683	Beryllium, Dissolved	mg/L	0.0000167	0.000880	0.100	0.0938	0.0933	0.0933	0.0850 to 0.115	93.8	70.0 to 130	0.534	20.0
BC19679	Beryllium, Total	mg/L	0.0000169	0.000880	0.100	0.0958	0.0932	0.0929	0.0850 to 0.115	95.8	70.0 to 130	2.75	20.0
BC19683	Boron, Dissolved	mg/L	-0.00117	0.0650	1.00	1.11	1.10	0.993	0.850 to 1.15	101	70.0 to 130	0.905	20.0
BC19679	Boron, Total	mg/L	0.00261	0.0650	1.00	1.07	1.06	0.993	0.850 to 1.15	101	70.0 to 130	0.939	20.0
BC19683	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0975	0.0994	0.0990	0.0850 to 0.115	97.2	70.0 to 130	1.93	20.0
BC19679	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0994	0.0994	0.0989	0.0850 to 0.115	99.4	70.0 to 130	0.00	20.0
BC19683	Calcium, Dissolved	mg/L	-0.00440	0.152	5.00	80.5	65.7	4.88	4.25 to 5.75	388	70.0 to 130	20.2	20.0
BC19679	Calcium, Total	mg/L	-0.00674	0.152	5.00	27.9	27.9	5.33	4.25 to 5.75	98.0	70.0 to 130	0.00	20.0
BC19679	Chloride	mg/L	0.0693	1.00	10.0	16.0	16.1	10.2	9.00 to 11.0	105	80.0 to 120	0.623	20.0
BC19683	Chromium, Dissolved	mg/L	-0.0000262	0.000440	0.100	0.0939	0.0980	0.101	0.0850 to 0.115	93.7	70.0 to 130	4.27	20.0
BC19679	Chromium, Total	mg/L	0.0000059	0.000440	0.100	0.0966	0.0971	0.0970	0.0850 to 0.115	96.4	70.0 to 130	0.516	20.0
BC19683	Cobalt, Dissolved	mg/L	0.0000035	0.000147	0.100	0.102	0.105	0.103	0.0850 to 0.115	96.1	70.0 to 130	2.90	20.0
BC19679	Cobalt, Total	mg/L	-0.0000038	0.000147	0.100	0.0997	0.0995	0.0998	0.0850 to 0.115	99.7	70.0 to 130	0.201	20.0
BC19679	Fluoride	mg/L	0.0113	0.125	2.50	2.81	2.83	2.39	2.25 to 2.75	106	80.0 to 120	0.709	20.0
BC19683	Iron, Dissolved	mg/L	-0.000156	0.0176	0.2	0.293	0.291	0.201	0.170 to 0.230	101	70.0 to 130	0.685	20.0
BC19679	Iron, Total	mg/L	-0.00129	0.0176	0.2	0.587	0.579	0.208	0.170 to 0.230	104	70.0 to 130	1.37	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Fluoride may have potential matrix interference.  
 Alkalinity could not be performed, pH below titration end point of 4.5 SU.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 08:20  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-14

**Laboratory ID Number:** BC19674

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19683	Lead, Dissolved	mg/L	0.0000049	0.000147	0.100	0.0975	0.0993	0.0990	0.0850 to 0.115	97.4	70.0 to 130	1.83	20.0
BC19679	Lead, Total	mg/L	0.0000002	0.000147	0.100	0.0993	0.0992	0.0984	0.0850 to 0.115	99.3	70.0 to 130	0.101	20.0
BC19683	Lithium, Dissolved	mg/L	0.000386	0.0154	0.200	0.201	0.204	0.198	0.170 to 0.230	100	70.0 to 130	1.48	20.0
BC19679	Lithium, Total	mg/L	5.090E-05	0.0154	0.200	0.251	0.247	0.203	0.170 to 0.230	114	70.0 to 130	1.61	20.0
BC19683	Magnesium, Dissolved	mg/L	-0.0191	0.0462	5.00	33.1	32.9	5.11	4.25 to 5.75	102	70.0 to 130	0.606	20.0
BC19679	Magnesium, Total	mg/L	0.00114	0.0462	5.00	10.3	10.2	5.10	4.25 to 5.75	100	70.0 to 130	0.976	20.0
BC19683	Manganese, Dissolved	mg/L	0.0000393	0.00033	0.100	2.28	2.35	0.104	0.0850 to 0.115	80.0	70.0 to 130	3.02	20.0
BC19679	Manganese, Total	mg/L	0.0000544	0.00033	0.100	0.143	0.142	0.0995	0.0850 to 0.115	99.5	70.0 to 130	0.702	20.0
BC19679	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00413	0.00416	0.00415	0.00340 to 0.00460	103	70.0 to 130	0.724	20.0
BC19683	Molybdenum, Dissolved	mg/L	0.0000454	0.0002	0.100	0.0956	0.0972	0.0972	0.0850 to 0.115	95.6	70.0 to 130	1.66	20.0
BC19679	Molybdenum, Total	mg/L	-0.0000074	0.0002	0.100	0.101	0.0984	0.0970	0.0850 to 0.115	99.6	70.0 to 130	2.61	20.0
BC19683	Potassium, Dissolved	mg/L	0.00340	0.367	10.0	10.6	10.8	10.1	8.50 to 11.5	97.2	70.0 to 130	1.87	20.0
BC19679	Potassium, Total	mg/L	-0.00235	0.367	10.0	10.8	10.6	9.81	8.50 to 11.5	100	70.0 to 130	1.87	20.0
BC19683	Selenium, Dissolved	mg/L	-0.0000279	0.00100	0.100	0.0991	0.0977	0.101	0.0850 to 0.115	99.1	70.0 to 130	1.42	20.0
BC19679	Selenium, Total	mg/L	-0.00002	0.00100	0.100	0.0994	0.0975	0.0999	0.0850 to 0.115	99.4	70.0 to 130	1.93	20.0
BC19683	Silicon, Dissolved	mg/L	-0.000298	0.0440	1.00	9.47	9.47	1.01	0.850 to 1.15	90.0	70.0 to 130	0.00	20.0
BC19679	Silicon, Total	mg/L	0.000258	0.0440	1.00	10.4	10.3	1.03	0.850 to 1.15	107	70.0 to 130	0.966	20.0
BC19683	Sodium, Dissolved	mg/L	0.00481	0.0660	5.00	20.7	21.1	5.03	4.25 to 5.75	96.0	70.0 to 130	1.91	20.0
BC19679	Sodium, Total	mg/L	0.000766	0.0660	5.00	80.3	76.1	4.89	4.25 to 5.75	66.0	70.0 to 130	5.37	20.0
BC19679	Sulfate	mg/L	0.429	2.0	20.0	21.8	22.0	20.1	18.0 to 22.0	97.2	80.0 to 120	0.913	20.0
BC19683	Thallium, Dissolved	mg/L	0.0000136	0.000147	0.100	0.0973	0.0989	0.0976	0.0850 to 0.115	97.3	70.0 to 130	1.63	20.0
BC19679	Thallium, Total	mg/L	0.0000103	0.000147	0.100	0.0997	0.0988	0.0976	0.0850 to 0.115	99.7	70.0 to 130	0.907	20.0
BC19679	Total Organic Carbon	mg/L	0.269	1.00	10.0	13.7	11.1	23.7		93.4	80.0 to 120	21.0	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Fluoride may have potential matrix interference.  
 Alkalinity could not be performed, pH below titration end point of 4.5 SU.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 08:20  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-14

**Laboratory ID Number:** BC19674

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec Limit	Prec	Prec Limit	
BC19679	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	1.95	0.055	2.04	1.80 to 2.20	97.5	90.0 to 110	0.00	15.0
BC19677	Solids, Dissolved	mg/L	1.00	25.0			329	51.0	40.0 to 60.0			0.304	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Fluoride may have potential matrix interference.  
 Alkalinity could not be performed, pH below titration end point of 4.5 SU.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-14 Dup

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 08:20  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19675

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Total	10/28/22 11:50	11/3/22 13:12		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Total	10/28/22 11:50	11/3/22 13:12		1.015	8.93	mg/L	0.070035	0.406		
* Iron, Total	10/28/22 11:50	11/3/22 13:12		1.015	0.00992	mg/L	0.008120	0.0406	J	
* Lithium, Total	10/28/22 11:50	11/3/22 13:12		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	10/28/22 11:50	11/3/22 13:12		1.015	3.08	mg/L	0.021315	0.406		
Silica, Total (calc.)	10/28/22 11:50	11/3/22 13:12		1	8.41	mg/L				
Silicon, Total	10/28/22 11:50	11/3/22 13:12		1.015	3.93	mg/L	0.02030	0.25375		
* Sodium, Total	10/28/22 11:50	11/3/22 13:12		1.015	1.80	mg/L	0.03045	0.406		
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Dissolved	10/28/22 08:43	10/31/22 15:19		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Dissolved	10/28/22 08:43	10/31/22 15:19		1.015	8.58	mg/L	0.070035	0.406		
* Iron, Dissolved	10/28/22 08:43	10/31/22 15:19		1.015	Not Detected	mg/L	0.008120	0.0406	U	
* Lithium, Dissolved	10/28/22 08:43	10/31/22 15:19		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 13:51		1.015	3.12	mg/L	0.021315	0.406		
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 15:19		1	8.41	mg/L				
Silicon, Dissolved	10/28/22 08:43	10/31/22 15:19		1.015	3.93	mg/L	0.02030	0.25375		
* Sodium, Dissolved	10/28/22 08:43	10/31/22 15:19		1.015	1.83	mg/L	0.03045	0.406		
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>					
* Antimony, Total	10/28/22 11:50	10/28/22 16:04		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Aluminum, Total	10/28/22 11:50	10/31/22 15:38		5.075	4.86	mg/L	0.030450	0.05075		
* Arsenic, Total	10/28/22 11:50	10/28/22 16:04		1.015	0.00111	mg/L	0.000081	0.000203		
* Barium, Total	10/28/22 11:50	10/28/22 16:04		1.015	0.0246	mg/L	0.000508	0.001015		
* Beryllium, Total	10/28/22 11:50	10/28/22 16:04		1.015	0.000737	mg/L	0.000406	0.001015	J	
* Cadmium, Total	10/28/22 11:50	10/28/22 16:04		1.015	0.000368	mg/L	0.000068	0.000203		
* Chromium, Total	10/28/22 11:50	10/28/22 16:04		1.015	0.000365	mg/L	0.000203	0.001015	J	
* Cobalt, Total	10/28/22 11:50	10/28/22 16:04		1.015	0.0202	mg/L	0.000068	0.000203		
* Lead, Total	10/28/22 11:50	10/28/22 16:04		1.015	0.00127	mg/L	0.000068	0.000203		
* Manganese, Total	10/28/22 11:50	10/28/22 16:04		1.015	0.288	mg/L	0.000152	0.001015		
* Molybdenum, Total	10/28/22 11:50	10/28/22 16:04		1.015	Not Detected	mg/L	0.000102	0.000203	U	
* Potassium, Total	10/28/22 11:50	10/28/22 16:04		1.015	0.323	mg/L	0.169505	0.5075	J	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Fluoride may have potential matrix interference.  
 Alkalinity could not be performed, pH below titration end point of 4.5 SU.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-14 Dup

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 08:20  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19675

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 16:04		1.015	0.00145	mg/L	0.000508	0.001015	
* Thallium, Total	10/28/22 11:50	10/28/22 16:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 12:56		1.015	0.000616	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/31/22 15:20		5.075	4.76	mg/L	0.030450	0.05075	
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 12:56		1.015	0.00112	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 12:56		1.015	0.0224	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 12:56		1.015	0.000777	mg/L	0.000406	0.001015	J
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 12:56		1.015	0.000386	mg/L	0.000068	0.000203	
* Chromium, Dissolved	10/28/22 08:43	10/28/22 12:56		1.015	0.000351	mg/L	0.000203	0.001015	J
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 12:56		1.015	0.0202	mg/L	0.000068	0.000203	
* Lead, Dissolved	10/28/22 08:43	10/28/22 12:56		1.015	0.00123	mg/L	0.000068	0.000203	
* Manganese, Dissolved	10/28/22 08:43	10/28/22 12:56		1.015	0.285	mg/L	0.000152	0.001015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 12:56		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Potassium, Dissolved	10/28/22 08:43	10/28/22 12:56		1.015	0.309	mg/L	0.169505	0.5075	J
* Selenium, Dissolved	10/28/22 08:43	10/28/22 12:56		1.015	0.00120	mg/L	0.000508	0.001015	
* Thallium, Dissolved	10/28/22 08:43	10/28/22 12:56		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/4/22 00:17		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 13:56	10/28/22 13:56		1	0.378	mg/L as N	0.20	0.3	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/28/22 13:05	11/1/22 10:25		1	94.7	mg/L		25	
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/28/22 13:13	10/28/22 13:13		1	3.43	mg/L	1.00	2	
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/28/22 09:29	10/28/22 09:29		1	2.59	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 12:42	10/28/22 12:42		1	Not Detected	mg/L	0.06	0.125	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 10:15	11/1/22 10:15		3	52.6	mg/L	1.8	6	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Fluoride may have potential matrix interference.  
 Alkalinity could not be performed, pH below titration end point of 4.5 SU.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-14 Dup

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 08:20  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19675

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: Field Measurements</b>		<b>Analyst: AWG</b>							
Conductivity	10/26/22 08:18	10/26/22 08:18			178.64	uS/cm			FA
pH	10/26/22 08:18	10/26/22 08:18			4.07	SU			FA
Temperature	10/26/22 08:18	10/26/22 08:18			18.74	C			FA
Turbidity	10/26/22 08:18	10/26/22 08:18			2.21	NTU			FA
Sulfide	10/26/22 08:18	10/26/22 08:18			0	mg/L			FA

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MDL's and RL's are adjusted for sample dilution, as applicable

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**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Fluoride may have potential matrix interference.  
 Alkalinity could not be performed, pH below titration end point of 4.5 SU.



# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 08:20  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-14 Dup

**Laboratory ID Number:** BC19675

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19683	Aluminum, Dissolved	mg/L	0.000354	0.010	0.100	0.0979	0.101	0.100	0.0850 to 0.115	97.9	70.0 to 130	3.12	20.0
BC19679	Aluminum, Total	mg/L	0.000929	0.010	0.100	0.131	0.128	0.0988	0.0850 to 0.115	101	70.0 to 130	2.32	20.0
BC19683	Antimony, Dissolved	mg/L	0.0000461	0.00100	0.100	0.0879	0.0897	0.0886	0.0850 to 0.115	87.9	70.0 to 130	2.03	20.0
BC19679	Antimony, Total	mg/L	0.000512	0.00100	0.100	0.105	0.0995	0.0897	0.0850 to 0.115	105	70.0 to 130	5.38	20.0
BC19683	Arsenic, Dissolved	mg/L	0.000	0.000176	0.100	0.0967	0.0961	0.0965	0.0850 to 0.115	96.5	70.0 to 130	0.622	20.0
BC19679	Arsenic, Total	mg/L	0.000109	0.000176	0.100	0.0954	0.0965	0.0954	0.0850 to 0.115	95.0	70.0 to 130	1.15	20.0
BC19683	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.129	0.124	0.0976	0.0850 to 0.115	94.3	70.0 to 130	3.95	20.0
BC19679	Barium, Total	mg/L	-0.0000087	0.00100	0.100	0.583	0.566	0.0981	0.0850 to 0.115	109	70.0 to 130	2.96	20.0
BC19683	Beryllium, Dissolved	mg/L	0.0000167	0.000880	0.100	0.0938	0.0933	0.0933	0.0850 to 0.115	93.8	70.0 to 130	0.534	20.0
BC19679	Beryllium, Total	mg/L	0.0000169	0.000880	0.100	0.0958	0.0932	0.0929	0.0850 to 0.115	95.8	70.0 to 130	2.75	20.0
BC19683	Boron, Dissolved	mg/L	-0.00117	0.0650	1.00	1.11	1.10	0.993	0.850 to 1.15	101	70.0 to 130	0.905	20.0
BC19679	Boron, Total	mg/L	0.00261	0.0650	1.00	1.07	1.06	0.993	0.850 to 1.15	101	70.0 to 130	0.939	20.0
BC19683	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0975	0.0994	0.0990	0.0850 to 0.115	97.2	70.0 to 130	1.93	20.0
BC19679	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0994	0.0994	0.0989	0.0850 to 0.115	99.4	70.0 to 130	0.00	20.0
BC19683	Calcium, Dissolved	mg/L	-0.00440	0.152	5.00	80.5	65.7	4.88	4.25 to 5.75	388	70.0 to 130	20.2	20.0
BC19679	Calcium, Total	mg/L	-0.00674	0.152	5.00	27.9	27.9	5.33	4.25 to 5.75	98.0	70.0 to 130	0.00	20.0
BC19679	Chloride	mg/L	0.0693	1.00	10.0	16.0	16.1	10.2	9.00 to 11.0	105	80.0 to 120	0.623	20.0
BC19683	Chromium, Dissolved	mg/L	-0.0000262	0.000440	0.100	0.0939	0.0980	0.101	0.0850 to 0.115	93.7	70.0 to 130	4.27	20.0
BC19679	Chromium, Total	mg/L	0.0000059	0.000440	0.100	0.0966	0.0971	0.0970	0.0850 to 0.115	96.4	70.0 to 130	0.516	20.0
BC19683	Cobalt, Dissolved	mg/L	0.0000035	0.000147	0.100	0.102	0.105	0.103	0.0850 to 0.115	96.1	70.0 to 130	2.90	20.0
BC19679	Cobalt, Total	mg/L	-0.0000038	0.000147	0.100	0.0997	0.0995	0.0998	0.0850 to 0.115	99.7	70.0 to 130	0.201	20.0
BC19679	Fluoride	mg/L	0.0113	0.125	2.50	2.81	2.83	2.39	2.25 to 2.75	106	80.0 to 120	0.709	20.0
BC19683	Iron, Dissolved	mg/L	-0.000156	0.0176	0.2	0.293	0.291	0.201	0.170 to 0.230	101	70.0 to 130	0.685	20.0
BC19679	Iron, Total	mg/L	-0.00129	0.0176	0.2	0.587	0.579	0.208	0.170 to 0.230	104	70.0 to 130	1.37	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Fluoride may have potential matrix interference.  
 Alkalinity could not be performed, pH below titration end point of 4.5 SU.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 08:20  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-14 Dup

**Laboratory ID Number:** BC19675

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19683	Lead, Dissolved	mg/L	0.0000049	0.000147	0.100	0.0975	0.0993	0.0990	0.0850 to 0.115	97.4	70.0 to 130	1.83	20.0
BC19679	Lead, Total	mg/L	0.0000002	0.000147	0.100	0.0993	0.0992	0.0984	0.0850 to 0.115	99.3	70.0 to 130	0.101	20.0
BC19683	Lithium, Dissolved	mg/L	0.000386	0.0154	0.200	0.201	0.204	0.198	0.170 to 0.230	100	70.0 to 130	1.48	20.0
BC19679	Lithium, Total	mg/L	5.090E-05	0.0154	0.200	0.251	0.247	0.203	0.170 to 0.230	114	70.0 to 130	1.61	20.0
BC19683	Magnesium, Dissolved	mg/L	-0.0191	0.0462	5.00	33.1	32.9	5.11	4.25 to 5.75	102	70.0 to 130	0.606	20.0
BC19679	Magnesium, Total	mg/L	0.00114	0.0462	5.00	10.3	10.2	5.10	4.25 to 5.75	100	70.0 to 130	0.976	20.0
BC19683	Manganese, Dissolved	mg/L	0.0000393	0.00033	0.100	2.28	2.35	0.104	0.0850 to 0.115	80.0	70.0 to 130	3.02	20.0
BC19679	Manganese, Total	mg/L	0.0000544	0.00033	0.100	0.143	0.142	0.0995	0.0850 to 0.115	99.5	70.0 to 130	0.702	20.0
BC19679	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00413	0.00416	0.00415	0.00340 to 0.00460	103	70.0 to 130	0.724	20.0
BC19683	Molybdenum, Dissolved	mg/L	0.0000454	0.0002	0.100	0.0956	0.0972	0.0972	0.0850 to 0.115	95.6	70.0 to 130	1.66	20.0
BC19679	Molybdenum, Total	mg/L	-0.0000074	0.0002	0.100	0.101	0.0984	0.0970	0.0850 to 0.115	99.6	70.0 to 130	2.61	20.0
BC19683	Potassium, Dissolved	mg/L	0.00340	0.367	10.0	10.6	10.8	10.1	8.50 to 11.5	97.2	70.0 to 130	1.87	20.0
BC19679	Potassium, Total	mg/L	-0.00235	0.367	10.0	10.8	10.6	9.81	8.50 to 11.5	100	70.0 to 130	1.87	20.0
BC19683	Selenium, Dissolved	mg/L	-0.0000279	0.00100	0.100	0.0991	0.0977	0.101	0.0850 to 0.115	99.1	70.0 to 130	1.42	20.0
BC19679	Selenium, Total	mg/L	-0.00002	0.00100	0.100	0.0994	0.0975	0.0999	0.0850 to 0.115	99.4	70.0 to 130	1.93	20.0
BC19683	Silicon, Dissolved	mg/L	-0.000298	0.0440	1.00	9.47	9.47	1.01	0.850 to 1.15	90.0	70.0 to 130	0.00	20.0
BC19679	Silicon, Total	mg/L	0.000258	0.0440	1.00	10.4	10.3	1.03	0.850 to 1.15	107	70.0 to 130	0.966	20.0
BC19683	Sodium, Dissolved	mg/L	0.00481	0.0660	5.00	20.7	21.1	5.03	4.25 to 5.75	96.0	70.0 to 130	1.91	20.0
BC19679	Sodium, Total	mg/L	0.000766	0.0660	5.00	80.3	76.1	4.89	4.25 to 5.75	66.0	70.0 to 130	5.37	20.0
BC19679	Sulfate	mg/L	0.429	2.0	20.0	21.8	22.0	20.1	18.0 to 22.0	97.2	80.0 to 120	0.913	20.0
BC19683	Thallium, Dissolved	mg/L	0.0000136	0.000147	0.100	0.0973	0.0989	0.0976	0.0850 to 0.115	97.3	70.0 to 130	1.63	20.0
BC19679	Thallium, Total	mg/L	0.0000103	0.000147	0.100	0.0997	0.0988	0.0976	0.0850 to 0.115	99.7	70.0 to 130	0.907	20.0
BC19679	Total Organic Carbon	mg/L	0.269	1.00	10.0	13.7	11.1	23.7		93.4	80.0 to 120	21.0	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Fluoride may have potential matrix interference.  
 Alkalinity could not be performed, pH below titration end point of 4.5 SU.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 08:20  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-14 Dup

**Laboratory ID Number:** BC19675

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19679	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	1.95	0.055	2.04	1.80 to 2.20	97.5	90.0 to 110	0.00	15.0
BC19677	Solids, Dissolved	mg/L	1.00	25.0			329	51.0	40.0 to 60.0			0.304	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Fluoride may have potential matrix interference.  
 Alkalinity could not be performed, pH below titration end point of 4.5 SU.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond Field Blank-2

**Location Code:** WMWGADAPFB  
**Collected:** 10/26/22 08:45  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19676

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Total	10/28/22 11:50	11/3/22 13:16		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Total	10/28/22 11:50	11/3/22 13:16		1.015	Not Detected	mg/L	0.070035	0.406	U	
* Iron, Total	10/28/22 11:50	11/3/22 13:16		1.015	Not Detected	mg/L	0.008120	0.0406	U	
* Lithium, Total	10/28/22 11:50	11/3/22 13:16		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	10/28/22 11:50	11/3/22 13:16		1.015	Not Detected	mg/L	0.021315	0.406	U	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 13:16		1	Not Detected	mg/L				
Silicon, Total	10/28/22 11:50	11/3/22 13:16		1.015	Not Detected	mg/L	0.02030	0.25375	U	
* Sodium, Total	10/28/22 11:50	11/3/22 13:16		1.015	Not Detected	mg/L	0.03045	0.406	U	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>					
* Antimony, Total	10/28/22 11:50	10/28/22 16:07		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Aluminum, Total	10/28/22 11:50	10/28/22 16:07		1.015	Not Detected	mg/L	0.006090	0.01015	U	
* Arsenic, Total	10/28/22 11:50	10/28/22 16:07		1.015	0.0000869	mg/L	0.000081	0.000203	J	
* Barium, Total	10/28/22 11:50	10/28/22 16:07		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Beryllium, Total	10/28/22 11:50	10/28/22 16:07		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	10/28/22 11:50	10/28/22 16:07		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	10/28/22 11:50	10/28/22 16:07		1.015	Not Detected	mg/L	0.000203	0.001015	U	
* Cobalt, Total	10/28/22 11:50	10/28/22 16:07		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Lead, Total	10/28/22 11:50	10/28/22 16:07		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	10/28/22 11:50	10/28/22 16:07		1.015	Not Detected	mg/L	0.000152	0.001015	U	
* Molybdenum, Total	10/28/22 11:50	10/28/22 16:07		1.015	Not Detected	mg/L	0.000102	0.000203	U	
* Potassium, Total	10/28/22 11:50	10/28/22 16:07		1.015	Not Detected	mg/L	0.169505	0.5075	U	
* Selenium, Total	10/28/22 11:50	10/28/22 16:07		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Thallium, Total	10/28/22 11:50	10/28/22 16:07		1.015	Not Detected	mg/L	0.000068	0.000203	U	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>								
* Mercury, Total by CVAA	11/3/22 17:59	11/4/22 00:21		1	Not Detected	mg/L	0.0003	0.0005	U	
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>								
* Nitrogen, Nitrate/Nitrite	10/28/22 13:58	10/28/22 13:58		1	Not Detected	mg/L as N	0.20	0.3	U	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>								
* Solids, Dissolved	10/28/22 13:05	11/1/22 10:25		1	Not Detected	mg/L		25	U	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:**

# Certificate Of Analysis

**Description:** Gadsden Ash Pond Field Blank-2

**Location Code:** WMWGADAPFB

**Collected:** 10/26/22 08:45

**Customer ID:**

**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19676

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/28/22 13:27	10/28/22 13:27		1	Not Detected	mg/L	1.00	2	U
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/28/22 09:30	10/28/22 09:30		1	Not Detected	mg/L	0.50	1	U
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 12:43	10/28/22 12:43		1	Not Detected	mg/L	0.06	0.125	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 10:06	11/1/22 10:06		1	1.83	mg/L	0.6	2	J

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MDL's and RL's are adjusted for sample dilution, as applicable

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**Comments:**

# Batch QC Summary

**Customer Account:** WMWGADAPFB  
**Sample Date:** 10/26/22 08:45  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond Field Blank-2

**Laboratory ID Number:** BC19676

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19679	Aluminum, Total	mg/L	0.000929	0.010	0.100	0.131	0.128	0.0988	0.0850 to 0.115	101	70.0 to 130	2.32	20.0
BC19679	Antimony, Total	mg/L	0.000512	0.00100	0.100	0.105	0.0995	0.0897	0.0850 to 0.115	105	70.0 to 130	5.38	20.0
BC19679	Arsenic, Total	mg/L	0.000109	0.000176	0.100	0.0954	0.0965	0.0954	0.0850 to 0.115	95.0	70.0 to 130	1.15	20.0
BC19679	Barium, Total	mg/L	-0.0000087	0.00100	0.100	0.583	0.566	0.0981	0.0850 to 0.115	109	70.0 to 130	2.96	20.0
BC19679	Beryllium, Total	mg/L	0.0000169	0.000880	0.100	0.0958	0.0932	0.0929	0.0850 to 0.115	95.8	70.0 to 130	2.75	20.0
BC19679	Boron, Total	mg/L	0.00261	0.0650	1.00	1.07	1.06	0.993	0.850 to 1.15	101	70.0 to 130	0.939	20.0
BC19679	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0994	0.0994	0.0989	0.0850 to 0.115	99.4	70.0 to 130	0.00	20.0
BC19679	Calcium, Total	mg/L	-0.00674	0.152	5.00	27.9	27.9	5.33	4.25 to 5.75	98.0	70.0 to 130	0.00	20.0
BC19679	Chloride	mg/L	0.0693	1.00	10.0	16.0	16.1	10.2	9.00 to 11.0	105	80.0 to 120	0.623	20.0
BC19679	Chromium, Total	mg/L	0.0000059	0.000440	0.100	0.0966	0.0971	0.0970	0.0850 to 0.115	96.4	70.0 to 130	0.516	20.0
BC19679	Cobalt, Total	mg/L	-0.0000038	0.000147	0.100	0.0997	0.0995	0.0998	0.0850 to 0.115	99.7	70.0 to 130	0.201	20.0
BC19679	Fluoride	mg/L	0.0113	0.125	2.50	2.81	2.83	2.39	2.25 to 2.75	106	80.0 to 120	0.709	20.0
BC19679	Iron, Total	mg/L	-0.00129	0.0176	0.2	0.587	0.579	0.208	0.170 to 0.230	104	70.0 to 130	1.37	20.0
BC19679	Lead, Total	mg/L	0.000002	0.000147	0.100	0.0993	0.0992	0.0984	0.0850 to 0.115	99.3	70.0 to 130	0.101	20.0
BC19679	Lithium, Total	mg/L	5.090E-05	0.0154	0.200	0.251	0.247	0.203	0.170 to 0.230	114	70.0 to 130	1.61	20.0
BC19679	Magnesium, Total	mg/L	0.00114	0.0462	5.00	10.3	10.2	5.10	4.25 to 5.75	100	70.0 to 130	0.976	20.0
BC19679	Manganese, Total	mg/L	0.0000544	0.00033	0.100	0.143	0.142	0.0995	0.0850 to 0.115	99.5	70.0 to 130	0.702	20.0
BC19679	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00413	0.00416	0.00415	0.00340 to 0.00460	103	70.0 to 130	0.724	20.0
BC19679	Molybdenum, Total	mg/L	-0.0000074	0.0002	0.100	0.101	0.0984	0.0970	0.0850 to 0.115	99.6	70.0 to 130	2.61	20.0
BC19679	Potassium, Total	mg/L	-0.00235	0.367	10.0	10.8	10.6	9.81	8.50 to 11.5	100	70.0 to 130	1.87	20.0
BC19679	Selenium, Total	mg/L	-0.00002	0.00100	0.100	0.0994	0.0975	0.0999	0.0850 to 0.115	99.4	70.0 to 130	1.93	20.0
BC19679	Silicon, Total	mg/L	0.000258	0.0440	1.00	10.4	10.3	1.03	0.850 to 1.15	107	70.0 to 130	0.966	20.0
BC19679	Sodium, Total	mg/L	0.000766	0.0660	5.00	80.3	76.1	4.89	4.25 to 5.75	66.0	70.0 to 130	5.37	20.0
BC19679	Sulfate	mg/L	0.429	2.0	20.0	21.8	22.0	20.1	18.0 to 22.0	97.2	80.0 to 120	0.913	20.0

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGADAPFB

**Sample Date:** 10/26/22 08:45

**Customer ID:**

**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond Field Blank-2

**Laboratory ID Number:** BC19676

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	Limit
BC19679	Thallium, Total	mg/L	0.0000103	0.000147	0.100	0.0997	0.0988	0.0976	0.0850 to 0.115	99.7	70.0 to 130	0.907	20.0
BC19679	Total Organic Carbon	mg/L	0.269	1.00	10.0	13.7	11.1	23.7		93.4	80.0 to 120	21.0	20.0

**Comments:**

## Batch QC Summary

**Customer Account:** WMWGADAPFB

**Sample Date:** 10/26/22 08:45

**Customer ID:**

**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond Field Blank-2

**Laboratory ID Number:** BC19676

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19679	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	1.95	0.055	2.04	1.80 to 2.20	97.5	90.0 to 110	0.00	15.0
BC19677	Solids, Dissolved	mg/L	1.00	25.0			329	51.0	40.0 to 60.0			0.304	10.0

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**Comments:**



# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-3

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 09:45  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19677

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 13:19		1.015	0.850	mg/L	0.030000	0.1015	
* Calcium, Total	10/28/22 11:50	11/4/22 17:50		10.15	55.3	mg/L	0.70035	4.06	
* Iron, Total	10/28/22 11:50	11/3/22 13:19		1.015	0.233	mg/L	0.008120	0.0406	
* Lithium, Total	10/28/22 11:50	11/3/22 13:19		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/28/22 11:50	11/3/22 13:19		1.015	15.4	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 13:19		1	10.2	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 13:19		1.015	4.78	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/3/22 13:19		1.015	10.2	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 15:22		1.015	0.857	mg/L	0.030000	0.1015	
* Calcium, Dissolved	10/28/22 08:43	11/3/22 11:20		10.15	62.4	mg/L	0.70035	4.06	
* Iron, Dissolved	10/28/22 08:43	10/31/22 15:22		1.015	0.211	mg/L	0.008120	0.0406	
* Lithium, Dissolved	10/28/22 08:43	10/31/22 15:22		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 13:55		1.015	15.8	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 15:22		1	9.87	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 15:22		1.015	4.61	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	10/31/22 15:22		1.015	9.79	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 16:11		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Total	10/28/22 11:50	10/28/22 16:11		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Total	10/28/22 11:50	10/28/22 16:11		1.015	0.000311	mg/L	0.000081	0.000203	
* Barium, Total	10/28/22 11:50	10/28/22 16:11		1.015	0.0306	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 16:11		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 16:11		1.015	0.000147	mg/L	0.000068	0.000203	J
* Chromium, Total	10/28/22 11:50	10/28/22 16:11		1.015	0.000276	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/28/22 11:50	10/28/22 16:11		1.015	0.0132	mg/L	0.000068	0.000203	
* Lead, Total	10/28/22 11:50	10/28/22 16:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 20:47		92.365	18.6	mg/L	0.013855	0.092365	
* Molybdenum, Total	10/28/22 11:50	10/28/22 16:11		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Potassium, Total	10/28/22 11:50	10/28/22 16:11		1.015	2.98	mg/L	0.169505	0.5075	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-3

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 09:45  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19677

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 16:11		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 16:11		1.015	0.000110	mg/L	0.000068	0.000203	J
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 13:00		1.015	0.000545	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 13:00		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 13:00		1.015	0.000278	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 13:00		1.015	0.0301	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 13:00		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 13:00		1.015	0.000106	mg/L	0.000068	0.000203	J
* Chromium, Dissolved	10/28/22 08:43	10/28/22 13:00		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 13:00		1.015	0.0127	mg/L	0.000068	0.000203	
* Lead, Dissolved	10/28/22 08:43	10/28/22 13:00		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 19:56		92.365	19.4	mg/L	0.013855	0.092365	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 13:00		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Potassium, Dissolved	10/28/22 08:43	10/28/22 13:00		1.015	3.01	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 13:00		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 13:00		1.015	0.000103	mg/L	0.000068	0.000203	J
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/4/22 00:25		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 14:00	10/28/22 14:00		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/9/22 07:58	11/9/22 08:08		1	76.5	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/28/22 13:05	11/1/22 10:25		1	328	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/9/22 07:58	11/9/22 08:08		1	76.5	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/9/22 07:58	11/9/22 08:08		1	Not Detected	mg CaCO3/L		0.5	
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/28/22 13:43	10/28/22 13:43		1	4.70	mg/L	1.00	2	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-3

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 09:45  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19677

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/28/22 09:31	10/28/22 09:31		1	4.38	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 12:44	10/28/22 12:44		1	Not Detected	mg/L	0.06	0.125	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 10:16	11/1/22 10:16		10	206	mg/L	6.0	20	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: AWG</b>							
Conductivity	10/26/22 09:43	10/26/22 09:43			514.86	uS/cm			FA
pH	10/26/22 09:43	10/26/22 09:43			5.97	SU			FA
Temperature	10/26/22 09:43	10/26/22 09:43			20.51	C			FA
Turbidity	10/26/22 09:43	10/26/22 09:43			1.58	NTU			FA
Sulfide	10/26/22 09:43	10/26/22 09:43			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 09:45  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-3

**Laboratory ID Number:** BC19677

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19683	Aluminum, Dissolved	mg/L	0.000354	0.010	0.100	0.0979	0.101	0.100	0.0850 to 0.115	97.9	70.0 to 130	3.12	20.0
BC19679	Aluminum, Total	mg/L	0.000929	0.010	0.100	0.131	0.128	0.0988	0.0850 to 0.115	101	70.0 to 130	2.32	20.0
BC19683	Antimony, Dissolved	mg/L	0.0000461	0.00100	0.100	0.0879	0.0897	0.0886	0.0850 to 0.115	87.9	70.0 to 130	2.03	20.0
BC19679	Antimony, Total	mg/L	0.000512	0.00100	0.100	0.105	0.0995	0.0897	0.0850 to 0.115	105	70.0 to 130	5.38	20.0
BC19683	Arsenic, Dissolved	mg/L	0.000	0.000176	0.100	0.0967	0.0961	0.0965	0.0850 to 0.115	96.5	70.0 to 130	0.622	20.0
BC19679	Arsenic, Total	mg/L	0.000109	0.000176	0.100	0.0954	0.0965	0.0954	0.0850 to 0.115	95.0	70.0 to 130	1.15	20.0
BC19683	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.129	0.124	0.0976	0.0850 to 0.115	94.3	70.0 to 130	3.95	20.0
BC19679	Barium, Total	mg/L	-0.0000087	0.00100	0.100	0.583	0.566	0.0981	0.0850 to 0.115	109	70.0 to 130	2.96	20.0
BC19683	Beryllium, Dissolved	mg/L	0.0000167	0.000880	0.100	0.0938	0.0933	0.0933	0.0850 to 0.115	93.8	70.0 to 130	0.534	20.0
BC19679	Beryllium, Total	mg/L	0.0000169	0.000880	0.100	0.0958	0.0932	0.0929	0.0850 to 0.115	95.8	70.0 to 130	2.75	20.0
BC19683	Boron, Dissolved	mg/L	-0.00117	0.0650	1.00	1.11	1.10	0.993	0.850 to 1.15	101	70.0 to 130	0.905	20.0
BC19679	Boron, Total	mg/L	0.00261	0.0650	1.00	1.07	1.06	0.993	0.850 to 1.15	101	70.0 to 130	0.939	20.0
BC19683	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0975	0.0994	0.0990	0.0850 to 0.115	97.2	70.0 to 130	1.93	20.0
BC19679	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0994	0.0994	0.0989	0.0850 to 0.115	99.4	70.0 to 130	0.00	20.0
BC19683	Calcium, Dissolved	mg/L	-0.00440	0.152	5.00	80.5	65.7	4.88	4.25 to 5.75	388	70.0 to 130	20.2	20.0
BC19679	Calcium, Total	mg/L	-0.00674	0.152	5.00	27.9	27.9	5.33	4.25 to 5.75	98.0	70.0 to 130	0.00	20.0
BC19679	Chloride	mg/L	0.0693	1.00	10.0	16.0	16.1	10.2	9.00 to 11.0	105	80.0 to 120	0.623	20.0
BC19683	Chromium, Dissolved	mg/L	-0.0000262	0.000440	0.100	0.0939	0.0980	0.101	0.0850 to 0.115	93.7	70.0 to 130	4.27	20.0
BC19679	Chromium, Total	mg/L	0.0000059	0.000440	0.100	0.0966	0.0971	0.0970	0.0850 to 0.115	96.4	70.0 to 130	0.516	20.0
BC19683	Cobalt, Dissolved	mg/L	0.0000035	0.000147	0.100	0.102	0.105	0.103	0.0850 to 0.115	96.1	70.0 to 130	2.90	20.0
BC19679	Cobalt, Total	mg/L	-0.0000038	0.000147	0.100	0.0997	0.0995	0.0998	0.0850 to 0.115	99.7	70.0 to 130	0.201	20.0
BC19679	Fluoride	mg/L	0.0113	0.125	2.50	2.81	2.83	2.39	2.25 to 2.75	106	80.0 to 120	0.709	20.0
BC19683	Iron, Dissolved	mg/L	-0.000156	0.0176	0.2	0.293	0.291	0.201	0.170 to 0.230	101	70.0 to 130	0.685	20.0
BC19679	Iron, Total	mg/L	-0.00129	0.0176	0.2	0.587	0.579	0.208	0.170 to 0.230	104	70.0 to 130	1.37	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 09:45  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-3

**Laboratory ID Number:** BC19677

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BC19683	Lead, Dissolved	mg/L	0.0000049	0.000147	0.100	0.0975	0.0993	0.0990	0.0850 to 0.115	97.4	70.0 to 130	1.83	20.0
BC19679	Lead, Total	mg/L	0.000002	0.000147	0.100	0.0993	0.0992	0.0984	0.0850 to 0.115	99.3	70.0 to 130	0.101	20.0
BC19683	Lithium, Dissolved	mg/L	0.000386	0.0154	0.200	0.201	0.204	0.198	0.170 to 0.230	100	70.0 to 130	1.48	20.0
BC19679	Lithium, Total	mg/L	5.090E-05	0.0154	0.200	0.251	0.247	0.203	0.170 to 0.230	114	70.0 to 130	1.61	20.0
BC19683	Magnesium, Dissolved	mg/L	-0.0191	0.0462	5.00	33.1	32.9	5.11	4.25 to 5.75	102	70.0 to 130	0.606	20.0
BC19679	Magnesium, Total	mg/L	0.00114	0.0462	5.00	10.3	10.2	5.10	4.25 to 5.75	100	70.0 to 130	0.976	20.0
BC19683	Manganese, Dissolved	mg/L	0.0000393	0.00033	0.100	2.28	2.35	0.104	0.0850 to 0.115	80.0	70.0 to 130	3.02	20.0
BC19679	Manganese, Total	mg/L	0.0000544	0.00033	0.100	0.143	0.142	0.0995	0.0850 to 0.115	99.5	70.0 to 130	0.702	20.0
BC19679	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00413	0.00416	0.00415	0.00340 to 0.00460	103	70.0 to 130	0.724	20.0
BC19683	Molybdenum, Dissolved	mg/L	0.0000454	0.0002	0.100	0.0956	0.0972	0.0972	0.0850 to 0.115	95.6	70.0 to 130	1.66	20.0
BC19679	Molybdenum, Total	mg/L	-0.0000074	0.0002	0.100	0.101	0.0984	0.0970	0.0850 to 0.115	99.6	70.0 to 130	2.61	20.0
BC19683	Potassium, Dissolved	mg/L	0.00340	0.367	10.0	10.6	10.8	10.1	8.50 to 11.5	97.2	70.0 to 130	1.87	20.0
BC19679	Potassium, Total	mg/L	-0.00235	0.367	10.0	10.8	10.6	9.81	8.50 to 11.5	100	70.0 to 130	1.87	20.0
BC19683	Selenium, Dissolved	mg/L	-0.0000279	0.00100	0.100	0.0991	0.0977	0.101	0.0850 to 0.115	99.1	70.0 to 130	1.42	20.0
BC19679	Selenium, Total	mg/L	-0.00002	0.00100	0.100	0.0994	0.0975	0.0999	0.0850 to 0.115	99.4	70.0 to 130	1.93	20.0
BC19683	Silicon, Dissolved	mg/L	-0.000298	0.0440	1.00	9.47	9.47	1.01	0.850 to 1.15	90.0	70.0 to 130	0.00	20.0
BC19679	Silicon, Total	mg/L	0.000258	0.0440	1.00	10.4	10.3	1.03	0.850 to 1.15	107	70.0 to 130	0.966	20.0
BC19683	Sodium, Dissolved	mg/L	0.00481	0.0660	5.00	20.7	21.1	5.03	4.25 to 5.75	96.0	70.0 to 130	1.91	20.0
BC19679	Sodium, Total	mg/L	0.000766	0.0660	5.00	80.3	76.1	4.89	4.25 to 5.75	66.0	70.0 to 130	5.37	20.0
BC19679	Sulfate	mg/L	0.429	2.0	20.0	21.8	22.0	20.1	18.0 to 22.0	97.2	80.0 to 120	0.913	20.0
BC19683	Thallium, Dissolved	mg/L	0.0000136	0.000147	0.100	0.0973	0.0989	0.0976	0.0850 to 0.115	97.3	70.0 to 130	1.63	20.0
BC19679	Thallium, Total	mg/L	0.0000103	0.000147	0.100	0.0997	0.0988	0.0976	0.0850 to 0.115	99.7	70.0 to 130	0.907	20.0
BC19679	Total Organic Carbon	mg/L	0.269	1.00	10.0	13.7	11.1	23.7		93.4	80.0 to 120	21.0	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 09:45  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-3

**Laboratory ID Number:** BC19677

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19683	Alkalinity to pH 4.5	mg CaCO3/L					37.1	50.8	45.0 to 55.0			1.60	10.0
BC19679	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	1.95	0.055	2.04	1.80 to 2.20	97.5	90.0 to 110	0.00	15.0
BC19677	Solids, Dissolved	mg/L	1.00	25.0			329	51.0	40.0 to 60.0			0.304	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond Field Blank-3

**Location Code:** WMWGADAPFB  
**Collected:** 10/26/22 10:00  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19678

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Total	10/28/22 11:50	11/3/22 13:23		1.015	Not Detected	mg/L	0.030000	0.1015	U	
* Calcium, Total	10/28/22 11:50	11/3/22 13:23		1.015	Not Detected	mg/L	0.070035	0.406	U	
* Iron, Total	10/28/22 11:50	11/3/22 13:23		1.015	Not Detected	mg/L	0.008120	0.0406	U	
* Lithium, Total	10/28/22 11:50	11/3/22 13:23		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	10/28/22 11:50	11/3/22 13:23		1.015	Not Detected	mg/L	0.021315	0.406	U	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 13:23		1	Not Detected	mg/L				
Silicon, Total	10/28/22 11:50	11/3/22 13:23		1.015	Not Detected	mg/L	0.02030	0.25375	U	
* Sodium, Total	10/28/22 11:50	11/3/22 13:23		1.015	Not Detected	mg/L	0.03045	0.406	U	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>					
* Antimony, Total	10/28/22 11:50	10/28/22 16:15		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Aluminum, Total	10/28/22 11:50	10/28/22 16:15		1.015	Not Detected	mg/L	0.006090	0.01015	U	
* Arsenic, Total	10/28/22 11:50	10/28/22 16:15		1.015	Not Detected	mg/L	0.000081	0.000203	U	
* Barium, Total	10/28/22 11:50	10/28/22 16:15		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Beryllium, Total	10/28/22 11:50	10/28/22 16:15		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	10/28/22 11:50	10/28/22 16:15		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	10/28/22 11:50	10/28/22 16:15		1.015	Not Detected	mg/L	0.000203	0.001015	U	
* Cobalt, Total	10/28/22 11:50	10/28/22 16:15		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Lead, Total	10/28/22 11:50	10/28/22 16:15		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	10/28/22 11:50	10/28/22 16:15		1.015	0.000420	mg/L	0.000152	0.001015	J	
* Molybdenum, Total	10/28/22 11:50	10/28/22 16:15		1.015	Not Detected	mg/L	0.000102	0.000203	U	
* Potassium, Total	10/28/22 11:50	10/28/22 16:15		1.015	Not Detected	mg/L	0.169505	0.5075	U	
* Selenium, Total	10/28/22 11:50	10/28/22 16:15		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Thallium, Total	10/28/22 11:50	10/28/22 16:15		1.015	Not Detected	mg/L	0.000068	0.000203	U	
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>								
* Mercury, Total by CVAA	11/3/22 17:59	11/4/22 00:29		1	Not Detected	mg/L	0.0003	0.0005	U	
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>								
* Nitrogen, Nitrate/Nitrite	10/28/22 14:02	10/28/22 14:02		1	Not Detected	mg/L as N	0.20	0.3	U	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>								
* Solids, Dissolved	10/28/22 13:05	11/1/22 10:25		1	Not Detected	mg/L		25	U	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:**

# Certificate Of Analysis

**Description:** Gadsden Ash Pond Field Blank-3

**Location Code:** WMWGADAPFB  
**Collected:** 10/26/22 10:00  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19678

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/28/22 13:59	10/28/22 13:59		1	Not Detected	mg/L	1.00	2	U
<b>Analytical Method: SM4500CI E</b>		<b>Analyst: JCC</b>							
* Chloride	10/28/22 09:33	10/28/22 09:33		1	Not Detected	mg/L	0.50	1	U
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 12:46	10/28/22 12:46		1	Not Detected	mg/L	0.06	0.125	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 10:09	11/1/22 10:09		1	Not Detected	mg/L	0.6	2	U

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MDL's and RL's are adjusted for sample dilution, as applicable

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**Comments:**



# Batch QC Summary

**Customer Account:** WMWGADAPFB  
**Sample Date:** 10/26/22 10:00  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond Field Blank-3

**Laboratory ID Number:** BC19678

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19679	Aluminum, Total	mg/L	0.000929	0.010	0.100	0.131	0.128	0.0988	0.0850 to 0.115	101	70.0 to 130	2.32	20.0
BC19679	Antimony, Total	mg/L	0.000512	0.00100	0.100	0.105	0.0995	0.0897	0.0850 to 0.115	105	70.0 to 130	5.38	20.0
BC19679	Arsenic, Total	mg/L	0.000109	0.000176	0.100	0.0954	0.0965	0.0954	0.0850 to 0.115	95.0	70.0 to 130	1.15	20.0
BC19679	Barium, Total	mg/L	-0.0000087	0.00100	0.100	0.583	0.566	0.0981	0.0850 to 0.115	109	70.0 to 130	2.96	20.0
BC19679	Beryllium, Total	mg/L	0.0000169	0.000880	0.100	0.0958	0.0932	0.0929	0.0850 to 0.115	95.8	70.0 to 130	2.75	20.0
BC19679	Boron, Total	mg/L	0.00261	0.0650	1.00	1.07	1.06	0.993	0.850 to 1.15	101	70.0 to 130	0.939	20.0
BC19679	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0994	0.0994	0.0989	0.0850 to 0.115	99.4	70.0 to 130	0.00	20.0
BC19679	Calcium, Total	mg/L	-0.00674	0.152	5.00	27.9	27.9	5.33	4.25 to 5.75	98.0	70.0 to 130	0.00	20.0
BC19679	Chloride	mg/L	0.0693	1.00	10.0	16.0	16.1	10.2	9.00 to 11.0	105	80.0 to 120	0.623	20.0
BC19679	Chromium, Total	mg/L	0.0000059	0.000440	0.100	0.0966	0.0971	0.0970	0.0850 to 0.115	96.4	70.0 to 130	0.516	20.0
BC19679	Cobalt, Total	mg/L	-0.0000038	0.000147	0.100	0.0997	0.0995	0.0998	0.0850 to 0.115	99.7	70.0 to 130	0.201	20.0
BC19679	Fluoride	mg/L	0.0113	0.125	2.50	2.81	2.83	2.39	2.25 to 2.75	106	80.0 to 120	0.709	20.0
BC19679	Iron, Total	mg/L	-0.00129	0.0176	0.2	0.587	0.579	0.208	0.170 to 0.230	104	70.0 to 130	1.37	20.0
BC19679	Lead, Total	mg/L	0.000002	0.000147	0.100	0.0993	0.0992	0.0984	0.0850 to 0.115	99.3	70.0 to 130	0.101	20.0
BC19679	Lithium, Total	mg/L	5.090E-05	0.0154	0.200	0.251	0.247	0.203	0.170 to 0.230	114	70.0 to 130	1.61	20.0
BC19679	Magnesium, Total	mg/L	0.00114	0.0462	5.00	10.3	10.2	5.10	4.25 to 5.75	100	70.0 to 130	0.976	20.0
BC19679	Manganese, Total	mg/L	0.0000544	0.00033	0.100	0.143	0.142	0.0995	0.0850 to 0.115	99.5	70.0 to 130	0.702	20.0
BC19679	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00413	0.00416	0.00415	0.00340 to 0.00460	103	70.0 to 130	0.724	20.0
BC19679	Molybdenum, Total	mg/L	-0.0000074	0.0002	0.100	0.101	0.0984	0.0970	0.0850 to 0.115	99.6	70.0 to 130	2.61	20.0
BC19679	Potassium, Total	mg/L	-0.00235	0.367	10.0	10.8	10.6	9.81	8.50 to 11.5	100	70.0 to 130	1.87	20.0
BC19679	Selenium, Total	mg/L	-0.00002	0.00100	0.100	0.0994	0.0975	0.0999	0.0850 to 0.115	99.4	70.0 to 130	1.93	20.0
BC19679	Silicon, Total	mg/L	0.000258	0.0440	1.00	10.4	10.3	1.03	0.850 to 1.15	107	70.0 to 130	0.966	20.0
BC19679	Sodium, Total	mg/L	0.000766	0.0660	5.00	80.3	76.1	4.89	4.25 to 5.75	66.0	70.0 to 130	5.37	20.0
BC19679	Sulfate	mg/L	0.429	2.0	20.0	21.8	22.0	20.1	18.0 to 22.0	97.2	80.0 to 120	0.913	20.0

**Comments:**

# Batch QC Summary

**Customer Account:** WMWGADAPFB  
**Sample Date:** 10/26/22 10:00  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond Field Blank-3

**Laboratory ID Number:** BC19678

Sample	Analysis	Units	MB	MB				Standard		Rec		Prec	
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	Limit
BC19679	Thallium, Total	mg/L	0.0000103	0.000147	0.100	0.0997	0.0988	0.0976	0.0850 to 0.115	99.7	70.0 to 130	0.907	20.0
BC19679	Total Organic Carbon	mg/L	0.269	1.00	10.0	13.7	11.1	23.7		93.4	80.0 to 120	21.0	20.0

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**Comments:**

## Batch QC Summary

**Customer Account:** WMWGADAPFB

**Sample Date:** 10/26/22 10:00

**Customer ID:**

**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond Field Blank-3

**Laboratory ID Number:** BC19678

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19679	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	1.95	0.055	2.04	1.80 to 2.20	97.5	90.0 to 110	0.00	15.0
BC19683	Solids, Dissolved	mg/L	1.00	25.0			404	51.0	40.0 to 60.0			0.496	10.0

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**Comments:**

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-4V

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 11:00  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19679

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Total	10/28/22 11:50	11/3/22 13:26		1.015	0.0618	mg/L	0.030000	0.1015	J	
* Calcium, Total	10/28/22 11:50	11/3/22 13:26		1.015	23.0	mg/L	0.070035	0.406		
* Iron, Total	10/28/22 11:50	11/3/22 13:26		1.015	0.378	mg/L	0.008120	0.0406		
* Lithium, Total	10/28/22 11:50	11/3/22 13:26		1.015	0.0226	mg/L	0.007105	0.01999956		
* Magnesium, Total	10/28/22 11:50	11/3/22 13:26		1.015	5.29	mg/L	0.021315	0.406		
Silica, Total (calc.)	10/28/22 11:50	11/3/22 13:26		1	20.0	mg/L				
Silicon, Total	10/28/22 11:50	11/3/22 13:26		1.015	9.33	mg/L	0.02030	0.25375		
* Sodium, Total	10/28/22 11:50	11/9/22 11:00		10.15	77.0	mg/L	0.3045	4.06	RA	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Dissolved	10/28/22 08:43	10/31/22 15:25		1.015	0.0598	mg/L	0.030000	0.1015	J	
* Calcium, Dissolved	10/28/22 08:43	10/31/22 15:25		1.015	22.1	mg/L	0.070035	0.406		
* Iron, Dissolved	10/28/22 08:43	10/31/22 15:25		1.015	0.328	mg/L	0.008120	0.0406		
* Lithium, Dissolved	10/28/22 08:43	10/31/22 15:25		1.015	0.0185	mg/L	0.007105	0.01999956	J	
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 13:58		1.015	5.27	mg/L	0.021315	0.406		
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 15:25		1	19.3	mg/L				
Silicon, Dissolved	10/28/22 08:43	10/31/22 15:25		1.015	9.04	mg/L	0.02030	0.25375		
* Sodium, Dissolved	10/28/22 08:43	11/3/22 11:23		10.15	73.4	mg/L	0.3045	4.06		
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>					
* Antimony, Total	10/28/22 11:50	10/28/22 16:18		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Aluminum, Total	10/28/22 11:50	10/28/22 16:18		1.015	0.0302	mg/L	0.006090	0.01015		
* Arsenic, Total	10/28/22 11:50	10/28/22 16:18		1.015	0.000446	mg/L	0.000081	0.000203		
* Barium, Total	10/28/22 11:50	10/28/22 16:18		1.015	0.474	mg/L	0.000508	0.001015		
* Beryllium, Total	10/28/22 11:50	10/28/22 16:18		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	10/28/22 11:50	10/28/22 16:18		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Chromium, Total	10/28/22 11:50	10/28/22 16:18		1.015	0.000214	mg/L	0.000203	0.001015	J	
* Cobalt, Total	10/28/22 11:50	10/28/22 16:18		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Lead, Total	10/28/22 11:50	10/28/22 16:18		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	10/28/22 11:50	10/28/22 16:18		1.015	0.0435	mg/L	0.000152	0.001015		
* Molybdenum, Total	10/28/22 11:50	10/28/22 16:18		1.015	0.00135	mg/L	0.000102	0.000203		
* Potassium, Total	10/28/22 11:50	10/28/22 16:18		1.015	0.792	mg/L	0.169505	0.5075		

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Total Organic Carbon matrix spike recovery and/or matrix spike duplicate recovery is outside of specification limit.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-4V

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 11:00  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19679

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/28/22 16:18		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 16:18		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 13:04		1.015	0.000565	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 13:04		1.015	0.00609	mg/L	0.006090	0.01015	J
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 13:04		1.015	0.000453	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 13:04		1.015	0.482	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 13:04		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 13:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 13:04		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 13:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Lead, Dissolved	10/28/22 08:43	10/28/22 13:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 13:04		1.015	0.0420	mg/L	0.000152	0.001015	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 13:04		1.015	0.00114	mg/L	0.000102	0.000203	
* Potassium, Dissolved	10/28/22 08:43	10/28/22 13:04		1.015	0.756	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 13:04		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 13:04		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/4/22 00:33		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 14:04	10/28/22 14:04		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/9/22 07:58	11/9/22 10:58		1	199	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/28/22 13:05	11/1/22 10:25		1	221	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/9/22 07:58	11/9/22 10:58		1	195	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/9/22 07:58	11/9/22 10:58		1	3.83	mg CaCO3/L			
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/28/22 14:15	10/28/22 14:15		1	4.36	mg/L	1.00	2	PA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Total Organic Carbon matrix spike recovery and/or matrix spike duplicate recovery is outside of specification limit.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-4V

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 11:00  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19679

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/28/22 09:34	10/28/22 09:34		1	5.53	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 12:47	10/28/22 12:47		1	0.164	mg/L	0.06	0.125	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 10:10	11/1/22 10:10		1	2.36	mg/L	0.6	2	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: AWG</b>							
Conductivity	10/26/22 10:58	10/26/22 10:58			391.47	uS/cm			FA
pH	10/26/22 10:58	10/26/22 10:58			7.92	SU			FA
Temperature	10/26/22 10:58	10/26/22 10:58			18.65	C			FA
Turbidity	10/26/22 10:58	10/26/22 10:58			2.19	NTU			FA
Sulfide	10/26/22 10:58	10/26/22 10:58			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Total Organic Carbon matrix spike recovery and/or matrix spike duplicate recovery is outside of specification limit.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 11:00  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-4V

**Laboratory ID Number:** BC19679

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19683	Aluminum, Dissolved	mg/L	0.000354	0.010	0.100	0.0979	0.101	0.100	0.0850 to 0.115	97.9	70.0 to 130	3.12	20.0
BC19679	Aluminum, Total	mg/L	0.000929	0.010	0.100	0.131	0.128	0.0988	0.0850 to 0.115	101	70.0 to 130	2.32	20.0
BC19683	Antimony, Dissolved	mg/L	0.0000461	0.00100	0.100	0.0879	0.0897	0.0886	0.0850 to 0.115	87.9	70.0 to 130	2.03	20.0
BC19679	Antimony, Total	mg/L	0.000512	0.00100	0.100	0.105	0.0995	0.0897	0.0850 to 0.115	105	70.0 to 130	5.38	20.0
BC19683	Arsenic, Dissolved	mg/L	0.000	0.000176	0.100	0.0967	0.0961	0.0965	0.0850 to 0.115	96.5	70.0 to 130	0.622	20.0
BC19679	Arsenic, Total	mg/L	0.000109	0.000176	0.100	0.0954	0.0965	0.0954	0.0850 to 0.115	95.0	70.0 to 130	1.15	20.0
BC19683	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.129	0.124	0.0976	0.0850 to 0.115	94.3	70.0 to 130	3.95	20.0
BC19679	Barium, Total	mg/L	-0.0000087	0.00100	0.100	0.583	0.566	0.0981	0.0850 to 0.115	109	70.0 to 130	2.96	20.0
BC19683	Beryllium, Dissolved	mg/L	0.0000167	0.000880	0.100	0.0938	0.0933	0.0933	0.0850 to 0.115	93.8	70.0 to 130	0.534	20.0
BC19679	Beryllium, Total	mg/L	0.0000169	0.000880	0.100	0.0958	0.0932	0.0929	0.0850 to 0.115	95.8	70.0 to 130	2.75	20.0
BC19683	Boron, Dissolved	mg/L	-0.00117	0.0650	1.00	1.11	1.10	0.993	0.850 to 1.15	101	70.0 to 130	0.905	20.0
BC19679	Boron, Total	mg/L	0.00261	0.0650	1.00	1.07	1.06	0.993	0.850 to 1.15	101	70.0 to 130	0.939	20.0
BC19683	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0975	0.0994	0.0990	0.0850 to 0.115	97.2	70.0 to 130	1.93	20.0
BC19679	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0994	0.0994	0.0989	0.0850 to 0.115	99.4	70.0 to 130	0.00	20.0
BC19683	Calcium, Dissolved	mg/L	-0.00440	0.152	5.00	80.5	65.7	4.88	4.25 to 5.75	388	70.0 to 130	20.2	20.0
BC19679	Calcium, Total	mg/L	-0.00674	0.152	5.00	27.9	27.9	5.33	4.25 to 5.75	98.0	70.0 to 130	0.00	20.0
BC19679	Chloride	mg/L	0.0693	1.00	10.0	16.0	16.1	10.2	9.00 to 11.0	105	80.0 to 120	0.623	20.0
BC19683	Chromium, Dissolved	mg/L	-0.0000262	0.000440	0.100	0.0939	0.0980	0.101	0.0850 to 0.115	93.7	70.0 to 130	4.27	20.0
BC19679	Chromium, Total	mg/L	0.0000059	0.000440	0.100	0.0966	0.0971	0.0970	0.0850 to 0.115	96.4	70.0 to 130	0.516	20.0
BC19683	Cobalt, Dissolved	mg/L	0.0000035	0.000147	0.100	0.102	0.105	0.103	0.0850 to 0.115	96.1	70.0 to 130	2.90	20.0
BC19679	Cobalt, Total	mg/L	-0.0000038	0.000147	0.100	0.0997	0.0995	0.0998	0.0850 to 0.115	99.7	70.0 to 130	0.201	20.0
BC19679	Fluoride	mg/L	0.0113	0.125	2.50	2.81	2.83	2.39	2.25 to 2.75	106	80.0 to 120	0.709	20.0
BC19683	Iron, Dissolved	mg/L	-0.000156	0.0176	0.2	0.293	0.291	0.201	0.170 to 0.230	101	70.0 to 130	0.685	20.0
BC19679	Iron, Total	mg/L	-0.00129	0.0176	0.2	0.587	0.579	0.208	0.170 to 0.230	104	70.0 to 130	1.37	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Total Organic Carbon matrix spike recovery and/or matrix spike duplicate recovery is outside of specification limit.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 11:00  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-4V

**Laboratory ID Number:** BC19679

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BC19683	Lead, Dissolved	mg/L	0.0000049	0.000147	0.100	0.0975	0.0993	0.0990	0.0850 to 0.115	97.4	70.0 to 130	1.83	20.0
BC19679	Lead, Total	mg/L	0.000002	0.000147	0.100	0.0993	0.0992	0.0984	0.0850 to 0.115	99.3	70.0 to 130	0.101	20.0
BC19683	Lithium, Dissolved	mg/L	0.000386	0.0154	0.200	0.201	0.204	0.198	0.170 to 0.230	100	70.0 to 130	1.48	20.0
BC19679	Lithium, Total	mg/L	5.090E-05	0.0154	0.200	0.251	0.247	0.203	0.170 to 0.230	114	70.0 to 130	1.61	20.0
BC19683	Magnesium, Dissolved	mg/L	-0.0191	0.0462	5.00	33.1	32.9	5.11	4.25 to 5.75	102	70.0 to 130	0.606	20.0
BC19679	Magnesium, Total	mg/L	0.00114	0.0462	5.00	10.3	10.2	5.10	4.25 to 5.75	100	70.0 to 130	0.976	20.0
BC19683	Manganese, Dissolved	mg/L	0.0000393	0.00033	0.100	2.28	2.35	0.104	0.0850 to 0.115	80.0	70.0 to 130	3.02	20.0
BC19679	Manganese, Total	mg/L	0.0000544	0.00033	0.100	0.143	0.142	0.0995	0.0850 to 0.115	99.5	70.0 to 130	0.702	20.0
BC19679	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.00413	0.00416	0.00415	0.00340 to 0.00460	103	70.0 to 130	0.724	20.0
BC19683	Molybdenum, Dissolved	mg/L	0.0000454	0.0002	0.100	0.0956	0.0972	0.0972	0.0850 to 0.115	95.6	70.0 to 130	1.66	20.0
BC19679	Molybdenum, Total	mg/L	-0.0000074	0.0002	0.100	0.101	0.0984	0.0970	0.0850 to 0.115	99.6	70.0 to 130	2.61	20.0
BC19683	Potassium, Dissolved	mg/L	0.00340	0.367	10.0	10.6	10.8	10.1	8.50 to 11.5	97.2	70.0 to 130	1.87	20.0
BC19679	Potassium, Total	mg/L	-0.00235	0.367	10.0	10.8	10.6	9.81	8.50 to 11.5	100	70.0 to 130	1.87	20.0
BC19683	Selenium, Dissolved	mg/L	-0.0000279	0.00100	0.100	0.0991	0.0977	0.101	0.0850 to 0.115	99.1	70.0 to 130	1.42	20.0
BC19679	Selenium, Total	mg/L	-0.00002	0.00100	0.100	0.0994	0.0975	0.0999	0.0850 to 0.115	99.4	70.0 to 130	1.93	20.0
BC19683	Silicon, Dissolved	mg/L	-0.000298	0.0440	1.00	9.47	9.47	1.01	0.850 to 1.15	90.0	70.0 to 130	0.00	20.0
BC19679	Silicon, Total	mg/L	0.000258	0.0440	1.00	10.4	10.3	1.03	0.850 to 1.15	107	70.0 to 130	0.966	20.0
BC19683	Sodium, Dissolved	mg/L	0.00481	0.0660	5.00	20.7	21.1	5.03	4.25 to 5.75	96.0	70.0 to 130	1.91	20.0
BC19679	Sodium, Total	mg/L	0.000766	0.0660	5.00	80.3	76.1	4.89	4.25 to 5.75	66.0	70.0 to 130	5.37	20.0
BC19679	Sulfate	mg/L	0.429	2.0	20.0	21.8	22.0	20.1	18.0 to 22.0	97.2	80.0 to 120	0.913	20.0
BC19683	Thallium, Dissolved	mg/L	0.0000136	0.000147	0.100	0.0973	0.0989	0.0976	0.0850 to 0.115	97.3	70.0 to 130	1.63	20.0
BC19679	Thallium, Total	mg/L	0.0000103	0.000147	0.100	0.0997	0.0988	0.0976	0.0850 to 0.115	99.7	70.0 to 130	0.907	20.0
BC19679	Total Organic Carbon	mg/L	0.269	1.00	10.0	13.7	11.1	23.7		93.4	80.0 to 120	21.0	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Total Organic Carbon matrix spike recovery and/or matrix spike duplicate recovery is outside of specification limit.



## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 11:00  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-4V

**Laboratory ID Number:** BC19679

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19683	Alkalinity to pH 4.5	mg CaCO3/L					37.1	50.8	45.0 to 55.0			1.60	10.0
BC19679	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	1.95	0.055	2.04	1.80 to 2.20	97.5	90.0 to 110	0.00	15.0
BC19683	Solids, Dissolved	mg/L	1.00	25.0			404	51.0	40.0 to 60.0			0.496	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.  
 Total Organic Carbon matrix spike recovery and/or matrix spike duplicate recovery is outside of specification limit.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-4

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 12:17  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19680

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 13:43		1.015	0.371	mg/L	0.030000	0.1015	
* Calcium, Total	10/28/22 11:50	11/3/22 13:43		1.015	33.6	mg/L	0.070035	0.406	
* Iron, Total	10/28/22 11:50	11/4/22 18:02		101.5	51.9	mg/L	0.8120	4.06	
* Lithium, Total	10/28/22 11:50	11/3/22 13:43		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/28/22 11:50	11/3/22 13:43		1.015	10.5	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 13:43		1	10.3	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 13:43		1.015	4.80	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/3/22 13:43		1.015	14.9	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 15:28		1.015	0.363	mg/L	0.030000	0.1015	
* Calcium, Dissolved	10/28/22 08:43	10/31/22 15:28		1.015	31.6	mg/L	0.070035	0.406	
* Iron, Dissolved	10/28/22 08:43	11/3/22 11:26		101.5	51.4	mg/L	0.8120	4.06	
* Lithium, Dissolved	10/28/22 08:43	10/31/22 15:28		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 14:01		1.015	10.6	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 15:28		1	10.0	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 15:28		1.015	4.69	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	10/31/22 15:28		1.015	14.9	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 16:40		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Total	10/28/22 11:50	10/28/22 16:40		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Total	10/28/22 11:50	10/28/22 16:40		1.015	0.0145	mg/L	0.000081	0.000203	
* Barium, Total	10/28/22 11:50	10/28/22 16:40		1.015	0.239	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 16:40		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 16:40		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/28/22 11:50	10/28/22 16:40		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	10/28/22 11:50	10/28/22 16:40		1.015	0.0289	mg/L	0.000068	0.000203	
* Lead, Total	10/28/22 11:50	10/28/22 16:40		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 20:50		5.075	2.25	mg/L	0.000761	0.005075	
* Molybdenum, Total	10/28/22 11:50	10/28/22 16:40		1.015	0.00106	mg/L	0.000102	0.000203	
* Potassium, Total	10/28/22 11:50	10/28/22 16:40		1.015	2.47	mg/L	0.169505	0.5075	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-4

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 12:17  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19680

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/31/22 15:42		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 16:40		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 13:07		1.015	0.000553	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 13:07		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 13:07		1.015	0.0149	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 13:07		1.015	0.228	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 13:07		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 13:07		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 13:07		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 13:07		1.015	0.0287	mg/L	0.000068	0.000203	
* Lead, Dissolved	10/28/22 08:43	10/28/22 13:07		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 20:00		5.075	2.18	mg/L	0.000761	0.005075	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 13:07		1.015	0.00109	mg/L	0.000102	0.000203	
* Potassium, Dissolved	10/28/22 08:43	10/28/22 13:07		1.015	2.39	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 13:07		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 13:07		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/4/22 00:53		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 14:12	10/28/22 14:12		1	0.317	mg/L as N	0.20	0.3	
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/9/22 07:58	11/9/22 10:58		1	97.6	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/28/22 13:05	11/1/22 10:25		1	247	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/9/22 07:58	11/9/22 10:58		1	97.5	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/9/22 07:58	11/9/22 10:58		1	Not Detected	mg CaCO3/L		0.5	
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/28/22 15:28	10/28/22 15:28		1	6.25	mg/L	1.00	2	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-4

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 12:17  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19680

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/28/22 09:49	10/28/22 09:49		1	7.88	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 14:00	10/28/22 14:00		1	0.283	mg/L	0.06	0.125	
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 10:47	11/1/22 10:47		3	61.8	mg/L	1.8	6	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: AWG</b>							
Conductivity	10/26/22 12:15	10/26/22 12:15			439.89	uS/cm			FA
pH	10/26/22 12:15	10/26/22 12:15			6.67	SU			FA
Temperature	10/26/22 12:15	10/26/22 12:15			20.14	C			FA
Turbidity	10/26/22 12:15	10/26/22 12:15			5.32	NTU			FA
Sulfide	10/26/22 12:15	10/26/22 12:15			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 12:17  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-4

**Laboratory ID Number:** BC19680

Sample	Analysis	Units	MB	MB		MS	MSD	Standard	Standard Limit	Rec		Prec Limit	
				Limit	Spike					Rec	Limit		
BC19683	Aluminum, Dissolved	mg/L	0.000354	0.010	0.100	0.0979	0.101	0.100	0.0850 to 0.115	97.9	70.0 to 130	3.12	20.0
BC19683	Aluminum, Total	mg/L	0.000929	0.010	0.100	0.103	0.103	0.0988	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BC19683	Antimony, Dissolved	mg/L	0.0000461	0.00100	0.100	0.0879	0.0897	0.0886	0.0850 to 0.115	87.9	70.0 to 130	2.03	20.0
BC19683	Antimony, Total	mg/L	0.000512	0.00100	0.100	0.0927	0.0924	0.0897	0.0850 to 0.115	92.7	70.0 to 130	0.324	20.0
BC19683	Arsenic, Dissolved	mg/L	0.000	0.000176	0.100	0.0967	0.0961	0.0965	0.0850 to 0.115	96.5	70.0 to 130	0.622	20.0
BC19683	Arsenic, Total	mg/L	0.000109	0.000176	0.100	0.0971	0.0962	0.0954	0.0850 to 0.115	97.0	70.0 to 130	0.931	20.0
BC19683	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.129	0.124	0.0976	0.0850 to 0.115	94.3	70.0 to 130	3.95	20.0
BC19683	Barium, Total	mg/L	-0.0000087	0.00100	0.100	0.131	0.130	0.0981	0.0850 to 0.115	93.4	70.0 to 130	0.766	20.0
BC19683	Beryllium, Dissolved	mg/L	0.0000167	0.000880	0.100	0.0938	0.0933	0.0933	0.0850 to 0.115	93.8	70.0 to 130	0.534	20.0
BC19683	Beryllium, Total	mg/L	0.0000169	0.000880	0.100	0.0936	0.0935	0.0929	0.0850 to 0.115	93.6	70.0 to 130	0.107	20.0
BC19683	Boron, Dissolved	mg/L	-0.00117	0.0650	1.00	1.11	1.10	0.993	0.850 to 1.15	101	70.0 to 130	0.905	20.0
BC19683	Boron, Total	mg/L	0.00261	0.0650	1.00	1.12	1.11	0.993	0.850 to 1.15	102	70.0 to 130	0.897	20.0
BC19683	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0975	0.0994	0.0990	0.0850 to 0.115	97.2	70.0 to 130	1.93	20.0
BC19683	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0998	0.0981	0.0989	0.0850 to 0.115	99.5	70.0 to 130	1.72	20.0
BC19683	Calcium, Dissolved	mg/L	-0.00440	0.152	5.00	80.5	65.7	4.88	4.25 to 5.75	388	70.0 to 130	20.2	20.0
BC19683	Calcium, Total	mg/L	-0.00674	0.152	5.00	63.1	68.0	5.33	4.25 to 5.75	58.0	70.0 to 130	7.48	20.0
BC19683	Chloride	mg/L	0.0352	1.00	10.0	16.3	16.3	10.1	9.00 to 11.0	105	80.0 to 120	0.00	20.0
BC19683	Chromium, Dissolved	mg/L	-0.0000262	0.000440	0.100	0.0939	0.0980	0.101	0.0850 to 0.115	93.7	70.0 to 130	4.27	20.0
BC19683	Chromium, Total	mg/L	0.0000059	0.000440	0.100	0.0959	0.0980	0.0970	0.0850 to 0.115	95.6	70.0 to 130	2.17	20.0
BC19683	Cobalt, Dissolved	mg/L	0.0000035	0.000147	0.100	0.102	0.105	0.103	0.0850 to 0.115	96.1	70.0 to 130	2.90	20.0
BC19683	Cobalt, Total	mg/L	-0.0000038	0.000147	0.100	0.103	0.106	0.0998	0.0850 to 0.115	97.0	70.0 to 130	2.87	20.0
BC19683	Fluoride	mg/L	0.0418	0.125	2.50	2.39	2.52	2.43	2.25 to 2.75	95.6	80.0 to 120	5.30	20.0
BC19683	Iron, Dissolved	mg/L	-0.000156	0.0176	0.2	0.293	0.291	0.201	0.170 to 0.230	101	70.0 to 130	0.685	20.0
BC19683	Iron, Total	mg/L	-0.00129	0.0176	0.2	0.305	0.307	0.208	0.170 to 0.230	101	70.0 to 130	0.654	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 12:17  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-4

**Laboratory ID Number:** BC19680

Sample	Analysis	Units	MB					Standard		Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19683	Lead, Dissolved	mg/L	0.0000049	0.000147	0.100	0.0975	0.0993	0.0990	0.0850 to 0.115	97.4	70.0 to 130	1.83	20.0
BC19683	Lead, Total	mg/L	0.000002	0.000147	0.100	0.0984	0.0991	0.0984	0.0850 to 0.115	98.4	70.0 to 130	0.709	20.0
BC19683	Lithium, Dissolved	mg/L	0.000386	0.0154	0.200	0.201	0.204	0.198	0.170 to 0.230	100	70.0 to 130	1.48	20.0
BC19683	Lithium, Total	mg/L	5.090E-05	0.0154	0.200	0.232	0.228	0.203	0.170 to 0.230	116	70.0 to 130	1.74	20.0
BC19683	Magnesium, Dissolved	mg/L	-0.0191	0.0462	5.00	33.1	32.9	5.11	4.25 to 5.75	102	70.0 to 130	0.606	20.0
BC19683	Magnesium, Total	mg/L	0.00114	0.0462	5.00	33.8	33.6	5.10	4.25 to 5.75	104	70.0 to 130	0.593	20.0
BC19683	Manganese, Dissolved	mg/L	0.0000393	0.00033	0.100	2.28	2.35	0.104	0.0850 to 0.115	80.0	70.0 to 130	3.02	20.0
BC19683	Manganese, Total	mg/L	0.0000544	0.00033	0.100	2.30	2.73	0.0995	0.0850 to 0.115	80.0	70.0 to 130	17.1	20.0
BC19683	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.0042	0.00418	0.00415	0.00340 to 0.00460	105	70.0 to 130	0.477	20.0
BC19683	Molybdenum, Dissolved	mg/L	0.0000454	0.0002	0.100	0.0956	0.0972	0.0972	0.0850 to 0.115	95.6	70.0 to 130	1.66	20.0
BC19683	Molybdenum, Total	mg/L	-0.0000074	0.0002	0.100	0.0968	0.0963	0.0970	0.0850 to 0.115	96.8	70.0 to 130	0.518	20.0
BC19683	Potassium, Dissolved	mg/L	0.00340	0.367	10.0	10.6	10.8	10.1	8.50 to 11.5	97.2	70.0 to 130	1.87	20.0
BC19683	Potassium, Total	mg/L	-0.00235	0.367	10.0	10.6	11.0	9.81	8.50 to 11.5	97.1	70.0 to 130	3.70	20.0
BC19683	Selenium, Dissolved	mg/L	-0.0000279	0.00100	0.100	0.0991	0.0977	0.101	0.0850 to 0.115	99.1	70.0 to 130	1.42	20.0
BC19683	Selenium, Total	mg/L	-0.00002	0.00100	0.100	0.0952	0.102	0.0999	0.0850 to 0.115	95.2	70.0 to 130	6.90	20.0
BC19683	Silicon, Dissolved	mg/L	-0.000298	0.0440	1.00	9.47	9.47	1.01	0.850 to 1.15	90.0	70.0 to 130	0.00	20.0
BC19683	Silicon, Total	mg/L	0.000258	0.0440	1.00	9.82	9.78	1.03	0.850 to 1.15	100	70.0 to 130	0.408	20.0
BC19683	Sodium, Dissolved	mg/L	0.00481	0.0660	5.00	20.7	21.1	5.03	4.25 to 5.75	96.0	70.0 to 130	1.91	20.0
BC19683	Sodium, Total	mg/L	0.000766	0.0660	5.00	22.2	22.1	4.89	4.25 to 5.75	112	70.0 to 130	0.451	20.0
BC19683	Sulfate	mg/L	0.576	2.0	400	663	669	19.7	18.0 to 22.0	108	80.0 to 120	0.901	20.0
BC19683	Thallium, Dissolved	mg/L	0.0000136	0.000147	0.100	0.0973	0.0989	0.0976	0.0850 to 0.115	97.3	70.0 to 130	1.63	20.0
BC19683	Thallium, Total	mg/L	0.0000103	0.000147	0.100	0.0982	0.0992	0.0976	0.0850 to 0.115	98.2	70.0 to 130	1.01	20.0
BC19683	Total Organic Carbon	mg/L	0.281	1.00	10.0	15.0	14.2	24.0		95.1	80.0 to 120	5.48	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 12:17  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-4

**Laboratory ID Number:** BC19680

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19683	Alkalinity to pH 4.5	mg CaCO3/L					37.1	50.8	45.0 to 55.0			1.60	10.0
BC19683	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	2.02	0.105	2.04	1.80 to 2.20	101	90.0 to 110	0.00	15.0
BC19683	Solids, Dissolved	mg/L	1.00	25.0			404	51.0	40.0 to 60.0			0.496	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-20H

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 13:08  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19681

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Total	10/28/22 11:50	11/3/22 13:46		1.015	0.584	mg/L	0.030000	0.1015	
* Calcium, Total	10/28/22 11:50	11/4/22 18:06		10.15	76.3	mg/L	0.70035	4.06	
* Iron, Total	10/28/22 11:50	11/3/22 13:46		1.015	2.03	mg/L	0.008120	0.0406	
* Lithium, Total	10/28/22 11:50	11/3/22 13:46		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/28/22 11:50	11/3/22 13:46		1.015	18.0	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 13:46		1	8.35	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 13:46		1.015	3.90	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/3/22 13:46		1.015	15.4	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>		<b>Preparation Method: EPA 1638</b>				
* Boron, Dissolved	10/28/22 08:43	10/31/22 15:31		1.015	0.595	mg/L	0.030000	0.1015	
* Calcium, Dissolved	10/28/22 08:43	11/3/22 11:29		10.15	61.7	mg/L	0.70035	4.06	
* Iron, Dissolved	10/28/22 08:43	10/31/22 15:31		1.015	1.81	mg/L	0.008120	0.0406	
* Lithium, Dissolved	10/28/22 08:43	10/31/22 15:31		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 14:04		1.015	18.6	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 15:31		1	8.20	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 15:31		1.015	3.83	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	10/31/22 15:31		1.015	15.1	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>		<b>Preparation Method: EPA 1638</b>				
* Antimony, Total	10/28/22 11:50	10/28/22 16:44		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Total	10/28/22 11:50	10/28/22 16:44		1.015	0.0149	mg/L	0.006090	0.01015	
* Arsenic, Total	10/28/22 11:50	10/28/22 16:44		1.015	0.00151	mg/L	0.000081	0.000203	
* Barium, Total	10/28/22 11:50	10/28/22 16:44		1.015	0.0993	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 16:44		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 16:44		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/28/22 11:50	10/28/22 16:44		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Total	10/28/22 11:50	10/28/22 16:44		1.015	0.00924	mg/L	0.000068	0.000203	
* Lead, Total	10/28/22 11:50	10/28/22 16:44		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 20:54		92.365	30.1	mg/L	0.013855	0.092365	
* Molybdenum, Total	10/28/22 11:50	10/28/22 16:44		1.015	0.000330	mg/L	0.000102	0.000203	
* Potassium, Total	10/28/22 11:50	10/28/22 16:44		1.015	2.67	mg/L	0.169505	0.5075	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.



# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-20H

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 13:08  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19681

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/31/22 15:46		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 16:44		1.015	0.000149	mg/L	0.000068	0.000203	J
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 13:11		1.015	0.000514	mg/L	0.000508	0.001015	J
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 13:11		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 13:11		1.015	0.00128	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 13:11		1.015	0.0967	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 13:11		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 13:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 13:11		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 13:11		1.015	0.00929	mg/L	0.000068	0.000203	
* Lead, Dissolved	10/28/22 08:43	10/28/22 13:11		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 20:03		92.365	30.8	mg/L	0.013855	0.092365	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 13:11		1.015	0.000350	mg/L	0.000102	0.000203	
* Potassium, Dissolved	10/28/22 08:43	10/28/22 13:11		1.015	2.68	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 13:11		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 13:11		1.015	0.000135	mg/L	0.000068	0.000203	J
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/4/22 00:57		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 14:13	10/28/22 14:13		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/9/22 07:58	11/9/22 10:58		1	135	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/28/22 13:05	11/1/22 10:25		1	364	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/9/22 07:58	11/9/22 10:58		1	135	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/9/22 07:58	11/9/22 10:58		1	Not Detected	mg CaCO3/L		0.5	
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/28/22 15:46	10/28/22 15:46		1	5.86	mg/L	1.00	2	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-20H

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 13:08  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19681

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/28/22 09:50	10/28/22 09:50		1	5.91	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 14:01	10/28/22 14:01		1	0.121	mg/L	0.06	0.125	J
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 10:48	11/1/22 10:48		10	158	mg/L	6.0	20	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: AWG</b>							
Conductivity	10/26/22 13:06	10/26/22 13:06			600.06	uS/cm			FA
pH	10/26/22 13:06	10/26/22 13:06			6.36	SU			FA
Temperature	10/26/22 13:06	10/26/22 13:06			18.90	C			FA
Turbidity	10/26/22 13:06	10/26/22 13:06			4.82	NTU			FA
Sulfide	10/26/22 13:06	10/26/22 13:06			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 13:08  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-20H

**Laboratory ID Number:** BC19681

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19683	Aluminum, Dissolved	mg/L	0.000354	0.010	0.100	0.0979	0.101	0.100	0.0850 to 0.115	97.9	70.0 to 130	3.12	20.0
BC19683	Aluminum, Total	mg/L	0.000929	0.010	0.100	0.103	0.103	0.0988	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BC19683	Antimony, Dissolved	mg/L	0.0000461	0.00100	0.100	0.0879	0.0897	0.0886	0.0850 to 0.115	87.9	70.0 to 130	2.03	20.0
BC19683	Antimony, Total	mg/L	0.000512	0.00100	0.100	0.0927	0.0924	0.0897	0.0850 to 0.115	92.7	70.0 to 130	0.324	20.0
BC19683	Arsenic, Dissolved	mg/L	0.000	0.000176	0.100	0.0967	0.0961	0.0965	0.0850 to 0.115	96.5	70.0 to 130	0.622	20.0
BC19683	Arsenic, Total	mg/L	0.000109	0.000176	0.100	0.0971	0.0962	0.0954	0.0850 to 0.115	97.0	70.0 to 130	0.931	20.0
BC19683	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.129	0.124	0.0976	0.0850 to 0.115	94.3	70.0 to 130	3.95	20.0
BC19683	Barium, Total	mg/L	-0.0000087	0.00100	0.100	0.131	0.130	0.0981	0.0850 to 0.115	93.4	70.0 to 130	0.766	20.0
BC19683	Beryllium, Dissolved	mg/L	0.0000167	0.000880	0.100	0.0938	0.0933	0.0933	0.0850 to 0.115	93.8	70.0 to 130	0.534	20.0
BC19683	Beryllium, Total	mg/L	0.0000169	0.000880	0.100	0.0936	0.0935	0.0929	0.0850 to 0.115	93.6	70.0 to 130	0.107	20.0
BC19683	Boron, Dissolved	mg/L	-0.00117	0.0650	1.00	1.11	1.10	0.993	0.850 to 1.15	101	70.0 to 130	0.905	20.0
BC19683	Boron, Total	mg/L	0.00261	0.0650	1.00	1.12	1.11	0.993	0.850 to 1.15	102	70.0 to 130	0.897	20.0
BC19683	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0975	0.0994	0.0990	0.0850 to 0.115	97.2	70.0 to 130	1.93	20.0
BC19683	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0998	0.0981	0.0989	0.0850 to 0.115	99.5	70.0 to 130	1.72	20.0
BC19683	Calcium, Dissolved	mg/L	-0.00440	0.152	5.00	80.5	65.7	4.88	4.25 to 5.75	388	70.0 to 130	20.2	20.0
BC19683	Calcium, Total	mg/L	-0.00674	0.152	5.00	63.1	68.0	5.33	4.25 to 5.75	58.0	70.0 to 130	7.48	20.0
BC19683	Chloride	mg/L	0.0352	1.00	10.0	16.3	16.3	10.1	9.00 to 11.0	105	80.0 to 120	0.00	20.0
BC19683	Chromium, Dissolved	mg/L	-0.0000262	0.000440	0.100	0.0939	0.0980	0.101	0.0850 to 0.115	93.7	70.0 to 130	4.27	20.0
BC19683	Chromium, Total	mg/L	0.0000059	0.000440	0.100	0.0959	0.0980	0.0970	0.0850 to 0.115	95.6	70.0 to 130	2.17	20.0
BC19683	Cobalt, Dissolved	mg/L	0.0000035	0.000147	0.100	0.102	0.105	0.103	0.0850 to 0.115	96.1	70.0 to 130	2.90	20.0
BC19683	Cobalt, Total	mg/L	-0.0000038	0.000147	0.100	0.103	0.106	0.0998	0.0850 to 0.115	97.0	70.0 to 130	2.87	20.0
BC19683	Fluoride	mg/L	0.0418	0.125	2.50	2.39	2.52	2.43	2.25 to 2.75	95.6	80.0 to 120	5.30	20.0
BC19683	Iron, Dissolved	mg/L	-0.000156	0.0176	0.2	0.293	0.291	0.201	0.170 to 0.230	101	70.0 to 130	0.685	20.0
BC19683	Iron, Total	mg/L	-0.00129	0.0176	0.2	0.305	0.307	0.208	0.170 to 0.230	101	70.0 to 130	0.654	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 13:08  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-20H

**Laboratory ID Number:** BC19681

Sample	Analysis	Units	MB				Standard			Rec		Prec	Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit		
BC19683	Lead, Dissolved	mg/L	0.0000049	0.000147	0.100	0.0975	0.0993	0.0990	0.0850 to 0.115	97.4	70.0 to 130	1.83	20.0
BC19683	Lead, Total	mg/L	0.0000002	0.000147	0.100	0.0984	0.0991	0.0984	0.0850 to 0.115	98.4	70.0 to 130	0.709	20.0
BC19683	Lithium, Dissolved	mg/L	0.000386	0.0154	0.200	0.201	0.204	0.198	0.170 to 0.230	100	70.0 to 130	1.48	20.0
BC19683	Lithium, Total	mg/L	5.090E-05	0.0154	0.200	0.232	0.228	0.203	0.170 to 0.230	116	70.0 to 130	1.74	20.0
BC19683	Magnesium, Dissolved	mg/L	-0.0191	0.0462	5.00	33.1	32.9	5.11	4.25 to 5.75	102	70.0 to 130	0.606	20.0
BC19683	Magnesium, Total	mg/L	0.00114	0.0462	5.00	33.8	33.6	5.10	4.25 to 5.75	104	70.0 to 130	0.593	20.0
BC19683	Manganese, Dissolved	mg/L	0.0000393	0.00033	0.100	2.28	2.35	0.104	0.0850 to 0.115	80.0	70.0 to 130	3.02	20.0
BC19683	Manganese, Total	mg/L	0.0000544	0.00033	0.100	2.30	2.73	0.0995	0.0850 to 0.115	80.0	70.0 to 130	17.1	20.0
BC19683	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.0042	0.00418	0.00415	0.00340 to 0.00460	105	70.0 to 130	0.477	20.0
BC19683	Molybdenum, Dissolved	mg/L	0.0000454	0.0002	0.100	0.0956	0.0972	0.0972	0.0850 to 0.115	95.6	70.0 to 130	1.66	20.0
BC19683	Molybdenum, Total	mg/L	-0.0000074	0.0002	0.100	0.0968	0.0963	0.0970	0.0850 to 0.115	96.8	70.0 to 130	0.518	20.0
BC19683	Potassium, Dissolved	mg/L	0.00340	0.367	10.0	10.6	10.8	10.1	8.50 to 11.5	97.2	70.0 to 130	1.87	20.0
BC19683	Potassium, Total	mg/L	-0.00235	0.367	10.0	10.6	11.0	9.81	8.50 to 11.5	97.1	70.0 to 130	3.70	20.0
BC19683	Selenium, Dissolved	mg/L	-0.0000279	0.00100	0.100	0.0991	0.0977	0.101	0.0850 to 0.115	99.1	70.0 to 130	1.42	20.0
BC19683	Selenium, Total	mg/L	-0.00002	0.00100	0.100	0.0952	0.102	0.0999	0.0850 to 0.115	95.2	70.0 to 130	6.90	20.0
BC19683	Silicon, Dissolved	mg/L	-0.000298	0.0440	1.00	9.47	9.47	1.01	0.850 to 1.15	90.0	70.0 to 130	0.00	20.0
BC19683	Silicon, Total	mg/L	0.000258	0.0440	1.00	9.82	9.78	1.03	0.850 to 1.15	100	70.0 to 130	0.408	20.0
BC19683	Sodium, Dissolved	mg/L	0.00481	0.0660	5.00	20.7	21.1	5.03	4.25 to 5.75	96.0	70.0 to 130	1.91	20.0
BC19683	Sodium, Total	mg/L	0.000766	0.0660	5.00	22.2	22.1	4.89	4.25 to 5.75	112	70.0 to 130	0.451	20.0
BC19683	Sulfate	mg/L	0.576	2.0	400	663	669	19.7	18.0 to 22.0	108	80.0 to 120	0.901	20.0
BC19683	Thallium, Dissolved	mg/L	0.0000136	0.000147	0.100	0.0973	0.0989	0.0976	0.0850 to 0.115	97.3	70.0 to 130	1.63	20.0
BC19683	Thallium, Total	mg/L	0.0000103	0.000147	0.100	0.0982	0.0992	0.0976	0.0850 to 0.115	98.2	70.0 to 130	1.01	20.0
BC19683	Total Organic Carbon	mg/L	0.281	1.00	10.0	15.0	14.2	24.0		95.1	80.0 to 120	5.48	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 13:08  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-20H

**Laboratory ID Number:** BC19681

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19683	Alkalinity to pH 4.5	mg CaCO3/L					37.1	50.8	45.0 to 55.0			1.60	10.0
BC19683	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	2.02	0.105	2.04	1.80 to 2.20	101	90.0 to 110	0.00	15.0
BC19683	Solids, Dissolved	mg/L	1.00	25.0			404	51.0	40.0 to 60.0			0.496	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-11

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 14:04  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19682

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>			
* Boron, Total	10/28/22 11:50	11/3/22 13:50		1.015	0.306	mg/L	0.030000	0.1015	
* Calcium, Total	10/28/22 11:50	11/4/22 18:09		10.15	129	mg/L	0.70035	4.06	
* Iron, Total	10/28/22 11:50	11/4/22 18:09		10.15	7.50	mg/L	0.08120	0.406	
* Lithium, Total	10/28/22 11:50	11/3/22 13:50		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Total	10/28/22 11:50	11/3/22 13:50		1.015	20.0	mg/L	0.021315	0.406	
Silica, Total (calc.)	10/28/22 11:50	11/3/22 13:50		1	19.3	mg/L			
Silicon, Total	10/28/22 11:50	11/3/22 13:50		1.015	9.01	mg/L	0.02030	0.25375	
* Sodium, Total	10/28/22 11:50	11/3/22 13:50		1.015	16.4	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.7</b>			<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>			
* Boron, Dissolved	10/28/22 08:43	10/31/22 15:35		1.015	0.306	mg/L	0.030000	0.1015	
* Calcium, Dissolved	10/28/22 08:43	11/3/22 11:33		10.15	120	mg/L	0.70035	4.06	
* Iron, Dissolved	10/28/22 08:43	11/3/22 11:33		10.15	6.63	mg/L	0.08120	0.406	
* Lithium, Dissolved	10/28/22 08:43	10/31/22 15:35		1.015	Not Detected	mg/L	0.007105	0.01999956	U
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 14:07		1.015	19.9	mg/L	0.021315	0.406	
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 15:35		1	18.5	mg/L			
Silicon, Dissolved	10/28/22 08:43	10/31/22 15:35		1.015	8.63	mg/L	0.02030	0.25375	
* Sodium, Dissolved	10/28/22 08:43	10/31/22 15:35		1.015	15.1	mg/L	0.03045	0.406	
<b>Analytical Method: EPA 200.8</b>			<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>			
* Antimony, Total	10/28/22 11:50	10/28/22 16:47		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Total	10/28/22 11:50	10/28/22 16:47		1.015	0.0617	mg/L	0.006090	0.01015	
* Arsenic, Total	10/28/22 11:50	10/28/22 16:47		1.015	0.00215	mg/L	0.000081	0.000203	
* Barium, Total	10/28/22 11:50	10/28/22 16:47		1.015	0.117	mg/L	0.000508	0.001015	
* Beryllium, Total	10/28/22 11:50	10/28/22 16:47		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Total	10/28/22 11:50	10/28/22 16:47		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Total	10/28/22 11:50	10/28/22 16:47		1.015	0.000318	mg/L	0.000203	0.001015	J
* Cobalt, Total	10/28/22 11:50	10/28/22 16:47		1.015	0.00900	mg/L	0.000068	0.000203	
* Lead, Total	10/28/22 11:50	10/28/22 16:47		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Total	10/28/22 11:50	10/28/22 20:58		92.365	11.4	mg/L	0.013855	0.092365	
* Molybdenum, Total	10/28/22 11:50	10/28/22 16:47		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Potassium, Total	10/28/22 11:50	10/28/22 16:47		1.015	2.55	mg/L	0.169505	0.5075	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-11

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 14:04  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19682

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/31/22 15:49		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 16:47		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 13:15		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 13:15		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 13:15		1.015	0.00218	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 13:15		1.015	0.114	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 13:15		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 13:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Chromium, Dissolved	10/28/22 08:43	10/28/22 13:15		1.015	Not Detected	mg/L	0.000203	0.001015	U
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 13:15		1.015	0.00914	mg/L	0.000068	0.000203	
* Lead, Dissolved	10/28/22 08:43	10/28/22 13:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
* Manganese, Dissolved	10/28/22 08:43	10/28/22 20:07		92.365	11.6	mg/L	0.013855	0.092365	
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 13:15		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Potassium, Dissolved	10/28/22 08:43	10/28/22 13:15		1.015	2.49	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 13:15		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 13:15		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/4/22 01:01		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 14:14	10/28/22 14:14		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/9/22 07:58	11/9/22 10:58		1	107	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/28/22 13:05	11/1/22 10:25		1	545	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/9/22 07:58	11/9/22 10:58		1	107	mg CaCO3/L		1	A
Carbonate Alkalinity, (calc.)	11/9/22 07:58	11/9/22 10:58		1	Not Detected	mg CaCO3/L		0.5	A
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/28/22 16:02	10/28/22 16:02		1	5.84	mg/L	1.00	2	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-11

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 14:04  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19682

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/28/22 09:51	10/28/22 09:51		1	4.98	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 14:02	10/28/22 14:02		1	0.069	mg/L	0.06	0.125	J
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 10:49	11/1/22 10:49		20	278	mg/L	12.0	40	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: AWG</b>							
Conductivity	10/26/22 13:59	10/26/22 13:59			793.94	uS/cm			FA
pH	10/26/22 13:59	10/26/22 13:59			6.20	SU			FA
Temperature	10/26/22 13:59	10/26/22 13:59			20.10	C			FA
Turbidity	10/26/22 13:59	10/26/22 13:59			5.04	NTU			FA
Sulfide	10/26/22 13:59	10/26/22 13:59			0	mg/L			FA

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.



# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 14:04  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-11

**Laboratory ID Number:** BC19682

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19683	Aluminum, Dissolved	mg/L	0.000354	0.010	0.100	0.0979	0.101	0.100	0.0850 to 0.115	97.9	70.0 to 130	3.12	20.0
BC19683	Aluminum, Total	mg/L	0.000929	0.010	0.100	0.103	0.103	0.0988	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BC19683	Antimony, Dissolved	mg/L	0.0000461	0.00100	0.100	0.0879	0.0897	0.0886	0.0850 to 0.115	87.9	70.0 to 130	2.03	20.0
BC19683	Antimony, Total	mg/L	0.000512	0.00100	0.100	0.0927	0.0924	0.0897	0.0850 to 0.115	92.7	70.0 to 130	0.324	20.0
BC19683	Arsenic, Dissolved	mg/L	0.000	0.000176	0.100	0.0967	0.0961	0.0965	0.0850 to 0.115	96.5	70.0 to 130	0.622	20.0
BC19683	Arsenic, Total	mg/L	0.000109	0.000176	0.100	0.0971	0.0962	0.0954	0.0850 to 0.115	97.0	70.0 to 130	0.931	20.0
BC19683	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.129	0.124	0.0976	0.0850 to 0.115	94.3	70.0 to 130	3.95	20.0
BC19683	Barium, Total	mg/L	-0.0000087	0.00100	0.100	0.131	0.130	0.0981	0.0850 to 0.115	93.4	70.0 to 130	0.766	20.0
BC19683	Beryllium, Dissolved	mg/L	0.0000167	0.000880	0.100	0.0938	0.0933	0.0933	0.0850 to 0.115	93.8	70.0 to 130	0.534	20.0
BC19683	Beryllium, Total	mg/L	0.0000169	0.000880	0.100	0.0936	0.0935	0.0929	0.0850 to 0.115	93.6	70.0 to 130	0.107	20.0
BC19683	Boron, Dissolved	mg/L	-0.00117	0.0650	1.00	1.11	1.10	0.993	0.850 to 1.15	101	70.0 to 130	0.905	20.0
BC19683	Boron, Total	mg/L	0.00261	0.0650	1.00	1.12	1.11	0.993	0.850 to 1.15	102	70.0 to 130	0.897	20.0
BC19683	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0975	0.0994	0.0990	0.0850 to 0.115	97.2	70.0 to 130	1.93	20.0
BC19683	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0998	0.0981	0.0989	0.0850 to 0.115	99.5	70.0 to 130	1.72	20.0
BC19683	Calcium, Dissolved	mg/L	-0.00440	0.152	5.00	80.5	65.7	4.88	4.25 to 5.75	388	70.0 to 130	20.2	20.0
BC19683	Calcium, Total	mg/L	-0.00674	0.152	5.00	63.1	68.0	5.33	4.25 to 5.75	58.0	70.0 to 130	7.48	20.0
BC19683	Chloride	mg/L	0.0352	1.00	10.0	16.3	16.3	10.1	9.00 to 11.0	105	80.0 to 120	0.00	20.0
BC19683	Chromium, Dissolved	mg/L	-0.0000262	0.000440	0.100	0.0939	0.0980	0.101	0.0850 to 0.115	93.7	70.0 to 130	4.27	20.0
BC19683	Chromium, Total	mg/L	0.0000059	0.000440	0.100	0.0959	0.0980	0.0970	0.0850 to 0.115	95.6	70.0 to 130	2.17	20.0
BC19683	Cobalt, Dissolved	mg/L	0.0000035	0.000147	0.100	0.102	0.105	0.103	0.0850 to 0.115	96.1	70.0 to 130	2.90	20.0
BC19683	Cobalt, Total	mg/L	-0.0000038	0.000147	0.100	0.103	0.106	0.0998	0.0850 to 0.115	97.0	70.0 to 130	2.87	20.0
BC19683	Fluoride	mg/L	0.0418	0.125	2.50	2.39	2.52	2.43	2.25 to 2.75	95.6	80.0 to 120	5.30	20.0
BC19683	Iron, Dissolved	mg/L	-0.000156	0.0176	0.2	0.293	0.291	0.201	0.170 to 0.230	101	70.0 to 130	0.685	20.0
BC19683	Iron, Total	mg/L	-0.00129	0.0176	0.2	0.305	0.307	0.208	0.170 to 0.230	101	70.0 to 130	0.654	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 14:04  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-11

**Laboratory ID Number:** BC19682

Sample	Analysis	Units	MB					Standard		Rec			Prec Limit
			MB	Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19683	Lead, Dissolved	mg/L	0.0000049	0.000147	0.100	0.0975	0.0993	0.0990	0.0850 to 0.115	97.4	70.0 to 130	1.83	20.0
BC19683	Lead, Total	mg/L	0.0000002	0.000147	0.100	0.0984	0.0991	0.0984	0.0850 to 0.115	98.4	70.0 to 130	0.709	20.0
BC19683	Lithium, Dissolved	mg/L	0.000386	0.0154	0.200	0.201	0.204	0.198	0.170 to 0.230	100	70.0 to 130	1.48	20.0
BC19683	Lithium, Total	mg/L	5.090E-05	0.0154	0.200	0.232	0.228	0.203	0.170 to 0.230	116	70.0 to 130	1.74	20.0
BC19683	Magnesium, Dissolved	mg/L	-0.0191	0.0462	5.00	33.1	32.9	5.11	4.25 to 5.75	102	70.0 to 130	0.606	20.0
BC19683	Magnesium, Total	mg/L	0.00114	0.0462	5.00	33.8	33.6	5.10	4.25 to 5.75	104	70.0 to 130	0.593	20.0
BC19683	Manganese, Dissolved	mg/L	0.0000393	0.00033	0.100	2.28	2.35	0.104	0.0850 to 0.115	80.0	70.0 to 130	3.02	20.0
BC19683	Manganese, Total	mg/L	0.0000544	0.00033	0.100	2.30	2.73	0.0995	0.0850 to 0.115	80.0	70.0 to 130	17.1	20.0
BC19683	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.0042	0.00418	0.00415	0.00340 to 0.00460	105	70.0 to 130	0.477	20.0
BC19683	Molybdenum, Dissolved	mg/L	0.0000454	0.0002	0.100	0.0956	0.0972	0.0972	0.0850 to 0.115	95.6	70.0 to 130	1.66	20.0
BC19683	Molybdenum, Total	mg/L	-0.0000074	0.0002	0.100	0.0968	0.0963	0.0970	0.0850 to 0.115	96.8	70.0 to 130	0.518	20.0
BC19683	Potassium, Dissolved	mg/L	0.00340	0.367	10.0	10.6	10.8	10.1	8.50 to 11.5	97.2	70.0 to 130	1.87	20.0
BC19683	Potassium, Total	mg/L	-0.00235	0.367	10.0	10.6	11.0	9.81	8.50 to 11.5	97.1	70.0 to 130	3.70	20.0
BC19683	Selenium, Dissolved	mg/L	-0.0000279	0.00100	0.100	0.0991	0.0977	0.101	0.0850 to 0.115	99.1	70.0 to 130	1.42	20.0
BC19683	Selenium, Total	mg/L	-0.00002	0.00100	0.100	0.0952	0.102	0.0999	0.0850 to 0.115	95.2	70.0 to 130	6.90	20.0
BC19683	Silicon, Dissolved	mg/L	-0.000298	0.0440	1.00	9.47	9.47	1.01	0.850 to 1.15	90.0	70.0 to 130	0.00	20.0
BC19683	Silicon, Total	mg/L	0.000258	0.0440	1.00	9.82	9.78	1.03	0.850 to 1.15	100	70.0 to 130	0.408	20.0
BC19683	Sodium, Dissolved	mg/L	0.00481	0.0660	5.00	20.7	21.1	5.03	4.25 to 5.75	96.0	70.0 to 130	1.91	20.0
BC19683	Sodium, Total	mg/L	0.000766	0.0660	5.00	22.2	22.1	4.89	4.25 to 5.75	112	70.0 to 130	0.451	20.0
BC19683	Sulfate	mg/L	0.576	2.0	400	663	669	19.7	18.0 to 22.0	108	80.0 to 120	0.901	20.0
BC19683	Thallium, Dissolved	mg/L	0.0000136	0.000147	0.100	0.0973	0.0989	0.0976	0.0850 to 0.115	97.3	70.0 to 130	1.63	20.0
BC19683	Thallium, Total	mg/L	0.0000103	0.000147	0.100	0.0982	0.0992	0.0976	0.0850 to 0.115	98.2	70.0 to 130	1.01	20.0
BC19683	Total Organic Carbon	mg/L	0.281	1.00	10.0	15.0	14.2	24.0		95.1	80.0 to 120	5.48	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 14:04  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-11

**Laboratory ID Number:** BC19682

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19683	Alkalinity to pH 4.5	mg CaCO3/L					37.1	50.8	45.0 to 55.0			1.60	10.0
BC19683	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	2.02	0.105	2.04	1.80 to 2.20	101	90.0 to 110	0.00	15.0
BC19683	Solids, Dissolved	mg/L	1.00	25.0			404	51.0	40.0 to 60.0			0.496	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-12

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 14:55  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19683

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q	
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Total	10/28/22 11:50	11/3/22 13:53		1.015	0.0995	mg/L	0.030000	0.1015	J	
* Calcium, Total	10/28/22 11:50	11/4/22 18:12		10.15	60.2	mg/L	0.70035	4.06	RA	
* Iron, Total	10/28/22 11:50	11/3/22 13:53		1.015	0.103	mg/L	0.008120	0.0406		
* Lithium, Total	10/28/22 11:50	11/3/22 13:53		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Total	10/28/22 11:50	11/3/22 13:53		1.015	28.6	mg/L	0.021315	0.406		
Silica, Total (calc.)	10/28/22 11:50	11/3/22 13:53		1	18.9	mg/L				
Silicon, Total	10/28/22 11:50	11/3/22 13:53		1.015	8.82	mg/L	0.02030	0.25375		
* Sodium, Total	10/28/22 11:50	11/3/22 13:53		1.015	16.6	mg/L	0.03045	0.406		
<b>Analytical Method: EPA 200.7</b>		<b>Analyst: ABB</b>			<b>Preparation Method: EPA 1638</b>					
* Boron, Dissolved	10/28/22 08:43	10/31/22 15:38		1.015	0.0983	mg/L	0.030000	0.1015	J	
* Calcium, Dissolved	10/28/22 08:43	11/3/22 11:36		10.15	61.1	mg/L	0.70035	4.06	RA	
* Iron, Dissolved	10/28/22 08:43	10/31/22 15:38		1.015	0.0912	mg/L	0.008120	0.0406		
* Lithium, Dissolved	10/28/22 08:43	10/31/22 15:38		1.015	Not Detected	mg/L	0.007105	0.01999956	U	
* Magnesium, Dissolved	10/28/22 08:43	11/3/22 14:10		1.015	28.0	mg/L	0.021315	0.406		
Silica, Dissolved (calc.)	10/28/22 08:43	10/31/22 15:38		1	18.3	mg/L				
Silicon, Dissolved	10/28/22 08:43	10/31/22 15:38		1.015	8.57	mg/L	0.02030	0.25375		
* Sodium, Dissolved	10/28/22 08:43	10/31/22 15:38		1.015	15.9	mg/L	0.03045	0.406		
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>			<b>Preparation Method: EPA 1638</b>					
* Antimony, Total	10/28/22 11:50	10/28/22 16:51		1.015	Not Detected	mg/L	0.000508	0.001015	U	
* Aluminum, Total	10/28/22 11:50	10/28/22 16:51		1.015	Not Detected	mg/L	0.006090	0.01015	U	
* Arsenic, Total	10/28/22 11:50	10/28/22 16:51		1.015	0.000102	mg/L	0.000081	0.000203	J	
* Barium, Total	10/28/22 11:50	10/28/22 16:51		1.015	0.0376	mg/L	0.000508	0.001015		
* Beryllium, Total	10/28/22 11:50	10/28/22 16:51		1.015	Not Detected	mg/L	0.000406	0.001015	U	
* Cadmium, Total	10/28/22 11:50	10/28/22 16:51		1.015	0.000299	mg/L	0.000068	0.000203		
* Chromium, Total	10/28/22 11:50	10/28/22 16:51		1.015	0.000276	mg/L	0.000203	0.001015	J	
* Cobalt, Total	10/28/22 11:50	10/28/22 16:51		1.015	0.00603	mg/L	0.000068	0.000203		
* Lead, Total	10/28/22 11:50	10/28/22 16:51		1.015	Not Detected	mg/L	0.000068	0.000203	U	
* Manganese, Total	10/28/22 11:50	10/28/22 21:01		5.075	2.22	mg/L	0.000761	0.005075	RA	
* Molybdenum, Total	10/28/22 11:50	10/28/22 16:51		1.015	Not Detected	mg/L	0.000102	0.000203	U	
* Potassium, Total	10/28/22 11:50	10/28/22 16:51		1.015	0.892	mg/L	0.169505	0.5075		

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-12

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 14:55  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19683

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
* Selenium, Total	10/28/22 11:50	10/31/22 15:53		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Total	10/28/22 11:50	10/28/22 16:51		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 200.8</b>		<b>Analyst: DLJ</b>							
* Antimony, Dissolved	10/28/22 08:43	10/28/22 13:18		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Aluminum, Dissolved	10/28/22 08:43	10/28/22 13:18		1.015	Not Detected	mg/L	0.006090	0.01015	U
* Arsenic, Dissolved	10/28/22 08:43	10/28/22 13:18		1.015	0.000233	mg/L	0.000081	0.000203	
* Barium, Dissolved	10/28/22 08:43	10/28/22 13:18		1.015	0.0347	mg/L	0.000508	0.001015	
* Beryllium, Dissolved	10/28/22 08:43	10/28/22 13:18		1.015	Not Detected	mg/L	0.000406	0.001015	U
* Cadmium, Dissolved	10/28/22 08:43	10/28/22 13:18		1.015	0.0003	mg/L	0.000068	0.000203	
* Chromium, Dissolved	10/28/22 08:43	10/28/22 13:18		1.015	0.000238	mg/L	0.000203	0.001015	J
* Cobalt, Dissolved	10/28/22 08:43	10/28/22 13:18		1.015	0.00590	mg/L	0.000068	0.000203	
* Lead, Dissolved	10/28/22 08:43	10/28/22 13:18		1.015	0.0000867	mg/L	0.000068	0.000203	J
* Manganese, Dissolved	10/28/22 08:43	10/28/22 20:10		5.075	2.20	mg/L	0.000761	0.005075	RA
* Molybdenum, Dissolved	10/28/22 08:43	10/28/22 13:18		1.015	Not Detected	mg/L	0.000102	0.000203	U
* Potassium, Dissolved	10/28/22 08:43	10/28/22 13:18		1.015	0.879	mg/L	0.169505	0.5075	
* Selenium, Dissolved	10/28/22 08:43	10/28/22 13:18		1.015	Not Detected	mg/L	0.000508	0.001015	U
* Thallium, Dissolved	10/28/22 08:43	10/28/22 13:18		1.015	Not Detected	mg/L	0.000068	0.000203	U
<b>Analytical Method: EPA 245.1</b>		<b>Analyst: CRB</b>							
* Mercury, Total by CVAA	11/3/22 17:59	11/4/22 01:04		1	Not Detected	mg/L	0.0003	0.0005	U
<b>Analytical Method: EPA 353.2</b>		<b>Analyst: SC</b>							
* Nitrogen, Nitrate/Nitrite	10/28/22 14:15	10/28/22 14:15		1	Not Detected	mg/L as N	0.20	0.3	U
<b>Analytical Method: SM 2320 B</b>		<b>Analyst: ALH</b>							
Alkalinity to pH 4.5	11/9/22 07:58	11/9/22 10:58		1	37.7	mg CaCO3/L		0.1	
<b>Analytical Method: SM 2540C</b>		<b>Analyst: CNJ</b>							
* Solids, Dissolved	10/28/22 13:05	11/1/22 10:25		1	402	mg/L		25	
<b>Analytical Method: SM 4500CO2 D</b>		<b>Analyst: ALH</b>							
Bicarbonate Alkalinity, (calc.)	11/9/22 07:58	11/9/22 10:58		1	37.7	mg CaCO3/L			
Carbonate Alkalinity, (calc.)	11/9/22 07:58	11/9/22 10:58		1	Not Detected	mg CaCO3/L		0.5	
<b>Analytical Method: SM 5310 B</b>		<b>Analyst: SC</b>							
* Total Organic Carbon	10/28/22 16:18	10/28/22 16:18		1	5.49	mg/L	1.00	2	

MDL's and RL's are adjusted for sample dilution, as applicable

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Certificate Of Analysis

**Description:** Gadsden Ash Pond - MW-12

**Location Code:** WMWGADAP  
**Collected:** 10/26/22 14:55  
**Customer ID:**  
**Submittal Date:** 10/27/22 09:32

**Laboratory ID Number:** BC19683

Name	Prepared	Analyzed	Vio Spec	DF	Results	Units	MDL	RL	Q
<b>Analytical Method: SM4500Cl E</b>		<b>Analyst: JCC</b>							
* Chloride	10/28/22 09:53	10/28/22 09:53		1	5.76	mg/L	0.50	1	
<b>Analytical Method: SM4500F G 2017</b>		<b>Analyst: JCC</b>							
* Fluoride	10/28/22 14:03	10/28/22 14:03		1	Not Detected	mg/L	0.06	0.125	U
<b>Analytical Method: SM4500SO4 E 2011</b>		<b>Analyst: JCC</b>							
* Sulfate	11/1/22 10:50	11/1/22 10:50		20	230	mg/L	12.0	40	
<b>Analytical Method: Field Measurements</b>		<b>Analyst: AWG</b>							
Conductivity	10/26/22 14:50	10/26/22 14:50			586.40	uS/cm			FA
pH	10/26/22 14:50	10/26/22 14:50			5.52	SU			FA
Temperature	10/26/22 14:50	10/26/22 14:50			19.08	C			FA
Turbidity	10/26/22 14:50	10/26/22 14:50			2.52	NTU			FA
Sulfide	10/26/22 14:50	10/26/22 14:50			0	mg/L			FA

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MDL's and RL's are adjusted for sample dilution, as applicable

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**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 14:55  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-12

**Laboratory ID Number:** BC19683

Sample	Analysis	Units	MB	MB				Standard		Rec			Prec Limit
				Limit	Spike	MS	MSD	Standard	Limit	Rec	Limit	Prec	
BC19683	Aluminum, Dissolved	mg/L	0.000354	0.010	0.100	0.0979	0.101	0.100	0.0850 to 0.115	97.9	70.0 to 130	3.12	20.0
BC19683	Aluminum, Total	mg/L	0.000929	0.010	0.100	0.103	0.103	0.0988	0.0850 to 0.115	103	70.0 to 130	0.00	20.0
BC19683	Antimony, Dissolved	mg/L	0.0000461	0.00100	0.100	0.0879	0.0897	0.0886	0.0850 to 0.115	87.9	70.0 to 130	2.03	20.0
BC19683	Antimony, Total	mg/L	0.000512	0.00100	0.100	0.0927	0.0924	0.0897	0.0850 to 0.115	92.7	70.0 to 130	0.324	20.0
BC19683	Arsenic, Dissolved	mg/L	0.000	0.000176	0.100	0.0967	0.0961	0.0965	0.0850 to 0.115	96.5	70.0 to 130	0.622	20.0
BC19683	Arsenic, Total	mg/L	0.000109	0.000176	0.100	0.0971	0.0962	0.0954	0.0850 to 0.115	97.0	70.0 to 130	0.931	20.0
BC19683	Barium, Dissolved	mg/L	-0.0000196	0.00100	0.100	0.129	0.124	0.0976	0.0850 to 0.115	94.3	70.0 to 130	3.95	20.0
BC19683	Barium, Total	mg/L	-0.0000087	0.00100	0.100	0.131	0.130	0.0981	0.0850 to 0.115	93.4	70.0 to 130	0.766	20.0
BC19683	Beryllium, Dissolved	mg/L	0.0000167	0.000880	0.100	0.0938	0.0933	0.0933	0.0850 to 0.115	93.8	70.0 to 130	0.534	20.0
BC19683	Beryllium, Total	mg/L	0.0000169	0.000880	0.100	0.0936	0.0935	0.0929	0.0850 to 0.115	93.6	70.0 to 130	0.107	20.0
BC19683	Boron, Dissolved	mg/L	-0.00117	0.0650	1.00	1.11	1.10	0.993	0.850 to 1.15	101	70.0 to 130	0.905	20.0
BC19683	Boron, Total	mg/L	0.00261	0.0650	1.00	1.12	1.11	0.993	0.850 to 1.15	102	70.0 to 130	0.897	20.0
BC19683	Cadmium, Dissolved	mg/L	0.000	0.000147	0.100	0.0975	0.0994	0.0990	0.0850 to 0.115	97.2	70.0 to 130	1.93	20.0
BC19683	Cadmium, Total	mg/L	0.000	0.000147	0.100	0.0998	0.0981	0.0989	0.0850 to 0.115	99.5	70.0 to 130	1.72	20.0
BC19683	Calcium, Dissolved	mg/L	-0.00440	0.152	5.00	80.5	65.7	4.88	4.25 to 5.75	388	70.0 to 130	20.2	20.0
BC19683	Calcium, Total	mg/L	-0.00674	0.152	5.00	63.1	68.0	5.33	4.25 to 5.75	58.0	70.0 to 130	7.48	20.0
BC19683	Chloride	mg/L	0.0352	1.00	10.0	16.3	16.3	10.1	9.00 to 11.0	105	80.0 to 120	0.00	20.0
BC19683	Chromium, Dissolved	mg/L	-0.0000262	0.000440	0.100	0.0939	0.0980	0.101	0.0850 to 0.115	93.7	70.0 to 130	4.27	20.0
BC19683	Chromium, Total	mg/L	0.0000059	0.000440	0.100	0.0959	0.0980	0.0970	0.0850 to 0.115	95.6	70.0 to 130	2.17	20.0
BC19683	Cobalt, Dissolved	mg/L	0.0000035	0.000147	0.100	0.102	0.105	0.103	0.0850 to 0.115	96.1	70.0 to 130	2.90	20.0
BC19683	Cobalt, Total	mg/L	-0.0000038	0.000147	0.100	0.103	0.106	0.0998	0.0850 to 0.115	97.0	70.0 to 130	2.87	20.0
BC19683	Fluoride	mg/L	0.0418	0.125	2.50	2.39	2.52	2.43	2.25 to 2.75	95.6	80.0 to 120	5.30	20.0
BC19683	Iron, Dissolved	mg/L	-0.000156	0.0176	0.2	0.293	0.291	0.201	0.170 to 0.230	101	70.0 to 130	0.685	20.0
BC19683	Iron, Total	mg/L	-0.00129	0.0176	0.2	0.305	0.307	0.208	0.170 to 0.230	101	70.0 to 130	0.654	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 14:55  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-12

**Laboratory ID Number:** BC19683

Sample	Analysis	Units	MB		Spike	MS	MSD	Standard		Rec		Prec	Limit
			MB	Limit				Standard	Limit	Rec	Limit		
BC19683	Lead, Dissolved	mg/L	0.0000049	0.000147	0.100	0.0975	0.0993	0.0990	0.0850 to 0.115	97.4	70.0 to 130	1.83	20.0
BC19683	Lead, Total	mg/L	0.000002	0.000147	0.100	0.0984	0.0991	0.0984	0.0850 to 0.115	98.4	70.0 to 130	0.709	20.0
BC19683	Lithium, Dissolved	mg/L	0.000386	0.0154	0.200	0.201	0.204	0.198	0.170 to 0.230	100	70.0 to 130	1.48	20.0
BC19683	Lithium, Total	mg/L	5.090E-05	0.0154	0.200	0.232	0.228	0.203	0.170 to 0.230	116	70.0 to 130	1.74	20.0
BC19683	Magnesium, Dissolved	mg/L	-0.0191	0.0462	5.00	33.1	32.9	5.11	4.25 to 5.75	102	70.0 to 130	0.606	20.0
BC19683	Magnesium, Total	mg/L	0.00114	0.0462	5.00	33.8	33.6	5.10	4.25 to 5.75	104	70.0 to 130	0.593	20.0
BC19683	Manganese, Dissolved	mg/L	0.0000393	0.00033	0.100	2.28	2.35	0.104	0.0850 to 0.115	80.0	70.0 to 130	3.02	20.0
BC19683	Manganese, Total	mg/L	0.0000544	0.00033	0.100	2.30	2.73	0.0995	0.0850 to 0.115	80.0	70.0 to 130	17.1	20.0
BC19683	Mercury, Total by CVAA	mg/L	0.000	0.000500	0.004	0.0042	0.00418	0.00415	0.00340 to 0.00460	105	70.0 to 130	0.477	20.0
BC19683	Molybdenum, Dissolved	mg/L	0.0000454	0.0002	0.100	0.0956	0.0972	0.0972	0.0850 to 0.115	95.6	70.0 to 130	1.66	20.0
BC19683	Molybdenum, Total	mg/L	-0.0000074	0.0002	0.100	0.0968	0.0963	0.0970	0.0850 to 0.115	96.8	70.0 to 130	0.518	20.0
BC19683	Potassium, Dissolved	mg/L	0.00340	0.367	10.0	10.6	10.8	10.1	8.50 to 11.5	97.2	70.0 to 130	1.87	20.0
BC19683	Potassium, Total	mg/L	-0.00235	0.367	10.0	10.6	11.0	9.81	8.50 to 11.5	97.1	70.0 to 130	3.70	20.0
BC19683	Selenium, Dissolved	mg/L	-0.0000279	0.00100	0.100	0.0991	0.0977	0.101	0.0850 to 0.115	99.1	70.0 to 130	1.42	20.0
BC19683	Selenium, Total	mg/L	-0.00002	0.00100	0.100	0.0952	0.102	0.0999	0.0850 to 0.115	95.2	70.0 to 130	6.90	20.0
BC19683	Silicon, Dissolved	mg/L	-0.000298	0.0440	1.00	9.47	9.47	1.01	0.850 to 1.15	90.0	70.0 to 130	0.00	20.0
BC19683	Silicon, Total	mg/L	0.000258	0.0440	1.00	9.82	9.78	1.03	0.850 to 1.15	100	70.0 to 130	0.408	20.0
BC19683	Sodium, Dissolved	mg/L	0.00481	0.0660	5.00	20.7	21.1	5.03	4.25 to 5.75	96.0	70.0 to 130	1.91	20.0
BC19683	Sodium, Total	mg/L	0.000766	0.0660	5.00	22.2	22.1	4.89	4.25 to 5.75	112	70.0 to 130	0.451	20.0
BC19683	Sulfate	mg/L	0.576	2.0	400	663	669	19.7	18.0 to 22.0	108	80.0 to 120	0.901	20.0
BC19683	Thallium, Dissolved	mg/L	0.0000136	0.000147	0.100	0.0973	0.0989	0.0976	0.0850 to 0.115	97.3	70.0 to 130	1.63	20.0
BC19683	Thallium, Total	mg/L	0.0000103	0.000147	0.100	0.0982	0.0992	0.0976	0.0850 to 0.115	98.2	70.0 to 130	1.01	20.0
BC19683	Total Organic Carbon	mg/L	0.281	1.00	10.0	15.0	14.2	24.0		95.1	80.0 to 120	5.48	20.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.



## Batch QC Summary

**Customer Account:** WMWGADAP  
**Sample Date:** 10/26/22 14:55  
**Customer ID:**  
**Delivery Date:** 10/27/22 09:32

**Description:** Gadsden Ash Pond - MW-12

**Laboratory ID Number:** BC19683

Sample	Analysis	Units	MB	MB Limit	Spike	MS	Sample Duplicate	Standard	Standard Limit	Rec	Rec Limit	Prec	Prec Limit
BC19683	Alkalinity to pH 4.5	mg CaCO3/L					37.1	50.8	45.0 to 55.0			1.60	10.0
BC19683	Nitrogen, Nitrate/Nitrite	mg/L as N	0.05	0.200	2.00	2.02	0.105	2.04	1.80 to 2.20	101	90.0 to 110	0.00	15.0
BC19683	Solids, Dissolved	mg/L	1.00	25.0			404	51.0	40.0 to 60.0			0.496	10.0

**Comments:** Filtered LCS and MB were not submitted or analyzed with Dissolved Metals.

# Definitions

**Project Number:** WMWGADAP\_1389

Abbreviation	Description
DF	Dilution Factor
LCS	Lab Control Sample
LFM	Lab Fortified Matrix
MB	Method Blank
MDL	Method Detection Limit; minimum concentration of an analyte that can be determined with 99% confidence that the concentration is greater than zero.
MS	Matrix Spike
MSD	Matrix Spike Duplicate
Prec	Precision (% RPD)
Q	Qualifier; comment used to note deviations or additional information associated with analytical results.
QC	Quality Control
Rec	Recovery of Matrix Spike
RL	Reporting Limit; lowest concentration at which an analyte can be quantitatively measured.
Vio Spec	Violation Specification; regulatory limit which has been exceeded by the sample analyzed.

Qualifier	Description
A	Bicarbonate alkalinity, carbonate alkalinity, hydroxide alkalinity, free carbon dioxide, and/or total carbon dioxide calculations are estimates due to pH>10SU and/or TDS>500mg/L.
FA	Field results were reviewed by the Water Field Group. Refer to APC Field Case Narrative.
J	Reported value is an estimate because concentration is less than reporting limit.
PA	Precision is invalid due to sample concentration.
RA	Matrix spike is invalid due to sample concentration.
U	Compound was analyzed, but not detected.



# Chain of Custody

## Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer		
	Collector		Anthony Goggins	Requested By	Greg Dyer
					Location

Bottles	1	Metals	500 mL	3	Hg	250 mL	5	TDS/Alkalinity	500 mL	7	N/A	N/A
	2	Dissolved Metals	500 mL	4	Nitrite/Nitrate;TOC	250 mL	6	Anions	250 mL	8	N/A	N/A

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-14	10/26/2022	08:20	6	Groundwater		BC19674
MW-14Dup	10/26/2022	08:20	6	Sample Duplicate		BC19675
FB-2	10/26/2022	08:45	5	Field Blank		BC19676
MW-3	10/26/2022	09:45	6	Groundwater		BC19677
FB-3	10/26/2022	10:00	5	Field Blank		BC19678
MW-4V	10/26/2022	11:00	6	Groundwater		BC19679
MW-4	10/26/2022	12:17	6	Groundwater		BC19680
MW-20H	10/26/2022	13:08	6	Groundwater		BC19681
MW-11	10/26/2022	14:04	6	Groundwater		BC19682
MW-12	10/26/2022	14:55	6	Groundwater		BC19683

Relinquished By	Received By	Date/Time
<i>Anthony Goggins</i>	<i>Bruce Carter</i>	10/27/2022 08:48

SmarTroll ID	7586-41442-5-1	All pH requirements have been met <input checked="" type="checkbox"/>	
Turbidity ID	9830-57039-1-1		
Sample Event	1389		
		Cooler Temp	1.5 °C
		Thermometer ID	7044-38281-2-1
		pH Strip ID	10429-60252-10-8

Bottles/Pre-Preserved Bottles are provided by the GTL.  
 Total Metals and Alkalinity are not performed on Dissolved Sets  
 Dissolved Metals and Alkalinity are not performed on blanks i.e. Field Blanks or Equipment Blanks



# Chain of Custody

## Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
	Collector: Dallas Gentry		Requested By: Greg Dyer
		Location	Gadsden Ash Pond

Bottles	1	Metals	500 mL	3	Hg	250 mL	5	TDS/Alkalinity	500 mL	7	N/A	N/A
	2	Dissolved Metals	500 mL	4	Nitrate/Nitrite; TOC	250 mL	6	Anions	250 mL	8	N/A	N/A

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-2	10/25/2022	09:15	6	Groundwater		BC19650
FB-1	10/25/2022	09:40	5	Field Blank		BC19651
MW-2VA	10/25/2022	10:28	6	Groundwater		BC19652
MW-2VB	10/25/2022	12:04	6	Groundwater		BC19653
MW-21VC	10/26/2022	08:40	6	Groundwater		BC19654
MW-22VB	10/26/2022	09:36	6	Groundwater		BC19655
MW-19H	10/26/2022	10:25	6	Groundwater		BC19656
MW-19H dup	10/26/2022	10:25	6	Sample Duplicate		BC19657
PZ-6	10/26/2022	11:24	6	Groundwater		BC19658
PZ-5	10/26/2022	12:23	6	Groundwater		BC19659
MW-18H	10/26/2022	13:30	6	Groundwater		BC19660
MW-1	10/26/2022	14:11	6	Groundwater		BC19661
EB-1	10/26/2022	14:40	5	Equipment Blank		BC19662

Relinquished By	Received By	Date/Time
<i>Melinda Gentry</i>	<i>Bonnie Carter</i>	10/27/2022 08:57

SmarTroll ID	7586-41444-5-3	All pH requirements have been met <input checked="" type="checkbox"/>
Turbidity ID	9901-57263-1-1	
Sample Event	1389	
Cooler Temp	1.9 °C	
Thermometer ID	7044-38281-2-1	
pH Strip ID	10429-60246-10-2	

Bottles/Pre-Preserved Bottles are provided by the GTL.  
 Total Metals and Alkalinity are not performed on Dissolved Sets  
 Dissolved Metals and Alkalinity are not performed on blanks i.e. Field Blanks or Equipment Blanks



# Chain of Custody

## Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
	Collector: TJ Daugherty		Requested By: Greg Dyer
		Location	Gadsden Ash Pond

Bottles	1	Metals	500 mL	3	Hg	250 mL	5	TDS/Alkalinity	500 mL	7	N/A	N/A
	2	Dissolved Metals	500 mL	4	Nitrate/Nitrite, TOC	250 mL	6	Anions	250 mL	8	N/A	N/A

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-17	10/25/2022	10:12	6	Groundwater		BC19663
MW-16	10/25/2022	11:55	6	Groundwater		BC19664
PZ-1	10/26/2022	09:00	6	Groundwater		BC19665
MW-5	10/26/2022	09:50	6	Groundwater		BC19666
MW-5 Dup	10/26/2022	09:50	6	Sample Duplicate		BC19667
PZ-2	10/26/2022	10:58	6	Groundwater		BC19668
MW-6	10/26/2022	11:55	6	Groundwater		BC19669
MW-7	10/26/2022	12:50	6	Groundwater		BC19670
MW-8	10/26/2022	13:49	6	Groundwater		BC19671
MW-9	10/26/2022	14:40	6	Groundwater		BC19672
MW-10	10/26/2022	15:23	6	Groundwater		BC19673

Relinquished By	Received By	Date/Time
<i>HAB</i>	<i>Rufz</i>	10/27/2022 09:04

SmarTroll ID	7586-41446-5-5	All pH requirements have been met <input checked="" type="checkbox"/>
Turbidity ID	4677-23343-4-2	
Sample Event	1389	
Cooler Temp	1.4 °C	
Thermometer ID	7044-38281-2-1	
pH Strip ID	10429-60246-10-2	

Bottles/Pre-Preserved Bottles are provided by the GTL.  
 Total Metals and Alkalinity are not performed on Dissolved Sets  
 Dissolved Metals and Alkalinity are not performed on blanks i.e. Field Blanks or Equipment Blanks



# Chain of Custody

## Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
	Collector: Anthony Goggins		Requested By: Greg Dyer
		Location	Gadsden Ash Pond

Bottles	1 Radium	1 L	3 N/A	N/A	5 N/A	N/A	7 N/A	N/A
	2 N/A	N/A	4 N/A	N/A	6 N/A	N/A	8 N/A	N/A

Comments: MS/MSD collected @ MW-3

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-14	10/26/2022	08:20	1	Groundwater		BC19708
MW-14Dup	10/26/2022	08:20	1	Sample Duplicate		BC19709
FB-2	10/26/2022	08:45	1	Field Blank		BC19710
MW-3	10/26/2022	09:45	3	Groundwater		BC19711
FB-3	10/26/2022	10:00	1	Field Blank		BC19712
MW-4V	10/26/2022	11:00	1	Groundwater		BC19713
MW-4	10/26/2022	12:17	1	Groundwater		BC19714
MW-20H	10/26/2022	13:08	1	Groundwater		BC19715
MW-11	10/26/2022	14:04	1	Groundwater		BC19716
MW-12	10/26/2022	14:55	1	Groundwater		BC19717

Relinquished By	Received By	Date/Time
<i>Anthony Goggins</i>	<i>Bushy Cotton</i>	10/27/2022 08:48

SmarTroll ID	7586-41442-5-1	All pH requirements have been met <input checked="" type="checkbox"/>	
Turbidity ID	9830-57039-1-1		
Sample Event	1389		
		Cooler Temp	N/A
		Thermometer ID	N/A
		pH Strip ID	10429-60252-10-8

Bottles/Pre-Preserved Bottles are provided by the GTL  
 Total Metals and Alkalinity are not performed on Dissolved Sets  
 Dissolved Metals and Alkalinity are not performed on blanks i.e. Field Blanks or Equipment Blanks



# Chain of Custody

## Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA

Requested Complete Date	Routine	Results To	Dustin Brooks, Greg Dyer
	Collector: Dallas Gentry		Requested By: Greg Dyer
		Location	Gadsden Ash Pond

Bottles	1 Radium	1 L	3 N/A	N/A	5 N/A	N/A	7 N/A	N/A
	2 N/A	N/A	4 N/A	N/A	6 N/A	N/A	8 N/A	N/A

Comments: Radium MS/MSD collected at MW-2

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-2	10/25/2022	09:15	3	Groundwater		BC19684
FB-1	10/25/2022	09:40	1	Field Blank		BC19685
MW-2VA	10/25/2022	10:28	1	Groundwater		BC19686
MW-2VB	10/25/2022	12:04	1	Groundwater		BC19687
MW-21VC	10/26/2022	08:40	1	Groundwater		BC19688
MW-22VB	10/26/2022	09:36	1	Groundwater		BC19689
MW-19H	10/26/2022	10:25	1	Groundwater		BC19690
MW-19H dup	10/26/2022	10:25	1	Sample Duplicate		BC19691
PZ-6	10/26/2022	11:24	1	Groundwater		BC19692
PZ-5	10/26/2022	12:23	1	Groundwater		BC19693
MW-18H	10/26/2022	13:30	1	Groundwater		BC19694
MW-1	10/26/2022	14:11	1	Groundwater		BC19695
EB-1	10/26/2022	14:40	1	Equipment Blank		BC19696

Relinquished By	Received By	Date/Time
<i>M. Gentry</i>	<i>B. Dyer</i>	10/27/2022 08:57

SmarTroll ID	7586-41444-5-3	All pH requirements have been met <input checked="" type="checkbox"/>	
Turbidity ID	9901-57263-1-1		
Sample Event	1389		
		Cooler Temp	N/A
		Thermometer ID	N/A
		pH Strip ID	10429-60246-10-2

Bottles/Pre-Preserved Bottles are provided by the GTL.  
 Total Metals and Alkalinity are not performed on Dissolved Sets  
 Dissolved Metals and Alkalinity are not performed on blanks i.e. Field Blanks or Equipment Blanks



# Chain of Custody

## Groundwater

APC General Testing Laboratory

Field Complete  
 Lab Complete

Outside Lab

Lab ETA

Requested Complete Date	Routine		Results To	Dustin Brooks, Greg Dyer		
	Collector: TJ Daugherty			Requested By	Greg Dyer	
					Location	Gadsden Ash Pond

Bottles	1	Radium	1 L	3	N/A	N/A	5	N/A	N/A	7	N/A	N/A
	2	N/A	N/A	4	N/A	N/A	6	N/A	N/A	8	N/A	N/A

Comments

Sample #	Date	Time	Bottle Count	Description	Lab Filter	Lab Id
MW-17	10/25/2022	10:12	1	Groundwater		BC19697
MW-16	10/25/2022	11:55	1	Groundwater		BC19698
PZ-1	10/26/2022	09:00	1	Groundwater		BC19699
MW-5	10/26/2022	09:50	1	Groundwater		BC19700
MW-5 Dup	10/26/2022	09:50	1	Sample Duplicate		BC19701
PZ-2	10/26/2022	10:58	1	Groundwater		BC19702
MW-6	10/26/2022	11:55	1	Groundwater		BC19703
MW-7	10/26/2022	12:50	1	Groundwater		BC19704
MW-8	10/26/2022	13:49	1	Groundwater		BC19705
MW-9	10/26/2022	14:40	1	Groundwater		BC19706
MW-10	10/26/2022	15:23	1	Groundwater		BC19707

Relinquished By	Received By	Date/Time
<i>HAB</i>	<i>Refr</i>	10/27/2022 09:04

SmarTroll ID	7586-41446-5-5	All pH requirements have been met <input checked="" type="checkbox"/>
Turbidity ID	4677-23343-4-2	
Sample Event	1389	
Cooler Temp	N/A	
Thermometer ID	N/A	
pH Strip ID	10429-60246-10-2	

Bottles/Pre-Preserved Bottles are provided by the GTL.  
 Total Metals and Alkalinity are not performed on Dissolved Sets  
 Dissolved Metals and Alkalinity are not performed on blanks i.e. Field Blanks or Equipment Blanks



December 06, 2022

Brooke Caton  
Alabama Power  
744 Highway 87  
Calera, AL 35040

RE: Project: WMWGADAP\_1389  
Pace Project No.: 30534545

Dear Brooke Caton:

Enclosed are the analytical results for sample(s) received by the laboratory on October 31, 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,



Skyler C. Richmond  
skyler.richmond@pacelabs.com  
(724)850-5600  
Project Manager

Enclosures

cc: Blaine Denton, Alabama Power  
Renee Jernigan, Alabama Power



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: WMWGADAP\_1389  
Pace Project No.: 30534545

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### **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

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

Lab ID	Sample ID	Matrix	Date Collected	Date Received
30534545001	BC19684 MW-2	Water	10/25/22 09:15	10/31/22 10:40
30534545002	BC19684 MW-2 MS	Water	10/25/22 09:15	10/31/22 10:40
30534545003	BC19684 MW-2 MSD	Water	10/25/22 09:15	10/31/22 10:40
30534545004	BC19685 FB-1	Water	10/25/22 09:40	10/31/22 10:40
30534545005	BC19686 MW-2VA	Water	10/25/22 10:28	10/31/22 10:40
30534545006	BC19687 MW-2VB	Water	10/25/22 12:04	10/31/22 10:40
30534545007	BC19688 MW-21VC	Water	10/26/22 08:40	10/31/22 10:40
30534545008	BC19689 MW-22VB	Water	10/26/22 09:36	10/31/22 10:40
30534545009	BC19690 MW-19H	Water	10/26/22 10:25	10/31/22 10:40
30534545010	BC19691 MW-19H Dup	Water	10/26/22 10:25	10/31/22 10:40
30534545011	BC19692 PZ-6	Water	10/26/22 11:24	10/31/22 10:40
30534545012	BC19693 PZ-5	Water	10/26/22 12:23	10/31/22 10:40
30534545013	BC19694 MW-18H	Water	10/26/22 13:30	10/31/22 10:40
30534545014	BC19695 MW-1	Water	10/26/22 14:11	10/31/22 10:40
30534545015	BC19696 EB-1	Water	10/26/22 14:40	10/31/22 10:40
30534545016	BC19697 MW-17	Water	10/25/22 10:12	10/31/22 10:40
30534545017	BC19698 MW-16	Water	10/25/22 11:55	10/31/22 10:40
30534545018	BC19699 PZ-1	Water	10/26/22 09:00	10/31/22 10:40
30534545019	BC19700 MW-5	Water	10/26/22 09:50	10/31/22 10:40
30534545020	BC19701 MW-5 Dup	Water	10/26/22 09:50	10/31/22 10:40
30534545021	BC19702 PZ-2	Water	10/26/22 10:58	10/31/22 10:40
30534545022	BC19703 MW-6	Water	10/26/22 11:55	10/31/22 10:40
30534545023	BC19704 MW-7	Water	10/26/22 12:50	10/31/22 10:40
30534545024	BC19705 MW-8	Water	10/26/22 13:49	10/31/22 10:40
30534545025	BC19706 MW-9	Water	10/26/22 14:40	10/31/22 10:40
30534545026	BC19707 MW-10	Water	10/26/22 15:23	10/31/22 10:40
30534545027	BC19708 MW-14	Water	10/26/22 08:20	10/31/22 10:40
30534545028	BC19709 MW-14 Dup	Water	10/26/22 08:20	10/31/22 10:40
30534545029	BC19710 FB-2	Water	10/26/22 08:45	10/31/22 10:40
30534545030	BC19711 MW-3	Water	10/26/22 09:45	10/31/22 10:40
30534545031	BC19711 MW-3 MS	Water	10/26/22 09:45	10/31/22 10:40
30534545032	BC19711 MW-3 MSD	Water	10/26/22 09:45	10/31/22 10:40
30534545033	BC19712 FB-3	Water	10/26/22 10:00	10/31/22 10:40
30534545034	BC19713 MW-4V	Water	10/26/22 11:00	10/31/22 10:40
30534545035	BC19714 MW-4	Water	10/26/22 12:17	10/31/22 10:40
30534545036	BC19715 MW-20H	Water	10/26/22 13:08	10/31/22 10:40
30534545037	BC19716 MW-11	Water	10/26/22 14:04	10/31/22 10:40

## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
30534545038	BC19717 MW-12	Water	10/26/22 14:55	10/31/22 10:40

## REPORT OF LABORATORY ANALYSIS

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### SAMPLE ANALYTE COUNT

Project: WMWGADAP\_1389  
Pace Project No.: 30534545

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30534545001	BC19684 MW-2	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545002	BC19684 MW-2 MS	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
30534545003	BC19684 MW-2 MSD	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
30534545004	BC19685 FB-1	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545005	BC19686 MW-2VA	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545006	BC19687 MW-2VB	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545007	BC19688 MW-21VC	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545008	BC19689 MW-22VB	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545009	BC19690 MW-19H	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545010	BC19691 MW-19H Dup	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545011	BC19692 PZ-6	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545012	BC19693 PZ-5	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545013	BC19694 MW-18H	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA

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### SAMPLE ANALYTE COUNT

Project: WMWGADAP\_1389  
Pace Project No.: 30534545

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30534545014	BC19695 MW-1	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545015	BC19696 EB-1	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545016	BC19697 MW-17	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545017	BC19698 MW-16	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545018	BC19699 PZ-1	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545019	BC19700 MW-5	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545020	BC19701 MW-5 Dup	EPA 9315	RMS	1	PASI-PA
		EPA 9320	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545021	BC19702 PZ-2	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545022	BC19703 MW-6	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545023	BC19704 MW-7	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545024	BC19705 MW-8	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545025	BC19706 MW-9	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545026	BC19707 MW-10	EPA 9315	RMS	1	PASI-PA

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### SAMPLE ANALYTE COUNT

Project: WMWGADAP\_1389  
Pace Project No.: 30534545

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30534545027	BC19708 MW-14	EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
30534545028	BC19709 MW-14 Dup	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545029	BC19710 FB-2	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	RMS	1	PASI-PA
30534545030	BC19711 MW-3	EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
30534545031	BC19711 MW-3 MS	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		EPA 9315	RMS	1	PASI-PA
30534545032	BC19711 MW-3 MSD	EPA 9320	JJS1	1	PASI-PA
		EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		EPA 9315	RMS	1	PASI-PA
30534545033	BC19712 FB-3	EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
30534545034	BC19713 MW-4V	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545035	BC19714 MW-4	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	RMS	1	PASI-PA
30534545036	BC19715 MW-20H	EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
30534545037	BC19716 MW-11	Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
30534545038	BC19717 MW-12	EPA 9315	RMS	1	PASI-PA
		EPA 9320	JJS1	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		EPA 9315	RMS	1	PASI-PA

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### SAMPLE ANALYTE COUNT

Project: WMWGADAP\_1389

Pace Project No.: 30534545

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Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
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PASI-PA = Pace Analytical Services - Greensburg

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## PROJECT NARRATIVE

Project: WMWGADAP\_1389

Pace Project No.: 30534545

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**Method:** EPA 9315

**Description:** 9315 Total Radium

**Client:** Alabama Power

**Date:** December 06, 2022

**General Information:**

38 samples were analyzed for EPA 9315 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: WMWGADAP\_1389

Pace Project No.: 30534545

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**Method:** EPA 9320

**Description:** 9320 Radium 228

**Client:** Alabama Power

**Date:** December 06, 2022

**General Information:**

38 samples were analyzed for EPA 9320 by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

## REPORT OF LABORATORY ANALYSIS

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## PROJECT NARRATIVE

Project: WMWGADAP\_1389  
Pace Project No.: 30534545

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**Method:** Total Radium Calculation  
**Description:** Total Radium 228+226  
**Client:** Alabama Power  
**Date:** December 06, 2022

**General Information:**

34 samples were analyzed for Total Radium Calculation by Pace Analytical Services Greensburg. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

**Hold Time:**

The samples were analyzed within the method required hold times with any exceptions noted below.

**Method Blank:**

All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

**Laboratory Control Spike:**

All laboratory control spike compounds were within QC limits with any exceptions noted below.

**Matrix Spikes:**

All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

**Additional Comments:**

This data package has been reviewed for quality and completeness and is approved for release.

## REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19684 MW-2**      **Lab ID: 30534545001**      Collected: 10/25/22 09:15      Received: 10/31/22 10:40      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	<b>0.194U ± 0.146 (0.242)</b> <b>C:98% T:NA</b>	pCi/L	11/29/22 09:05	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.489U ± 0.327 (0.617)</b> <b>C:78% T:89%</b>	pCi/L	11/23/22 11:27	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.683U ± 0.473 (0.859)</b>	pCi/L	11/30/22 15:32	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19684 MW-2 MS**      **Lab ID: 30534545002**      Collected: 10/25/22 09:15      Received: 10/31/22 10:40      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	<b>96.03 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	11/29/22 09:05	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>82.83 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	11/23/22 11:27	15262-20-1	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19684 MW-2 MSD**      **Lab ID: 30534545003**      Collected: 10/25/22 09:15      Received: 10/31/22 10:40      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	<b>99.28 %REC 3.33RPD ± NA</b> <b>(NA)</b> <b>C:NA T:NA</b>	pCi/L	11/29/22 09:05	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>93.81 %REC 12.43RPD ±</b> <b>NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	11/23/22 11:27	15262-20-1	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19685 FB-1**      **Lab ID: 30534545004**      Collected: 10/25/22 09:40      Received: 10/31/22 10:40      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	<b>0.0237U ± 0.109 (0.282)</b> <b>C:101% T:NA</b>	pCi/L	11/29/22 09:05	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.445U ± 0.316 (0.607)</b> <b>C:86% T:87%</b>	pCi/L	11/23/22 11:27	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.469U ± 0.425 (0.889)</b>	pCi/L	11/30/22 15:32	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19686 MW-2VA**      **Lab ID: 30534545005**      Collected: 10/25/22 10:28      Received: 10/31/22 10:40      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	<b>0.0186U ± 0.108 (0.282)</b> <b>C:98% T:NA</b>	pCi/L	11/29/22 09:05	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.830 ± 0.354 (0.530)</b> <b>C:76% T:89%</b>	pCi/L	11/23/22 11:27	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.849 ± 0.462 (0.812)</b>	pCi/L	11/30/22 15:32	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19687 MW-2VB**      **Lab ID: 30534545006**      Collected: 10/25/22 12:04      Received: 10/31/22 10:40      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	<b>0.0564U ± 0.141 (0.337)</b> <b>C:100% T:NA</b>	pCi/L	11/29/22 09:05	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.473U ± 0.338 (0.653)</b> <b>C:83% T:86%</b>	pCi/L	11/23/22 11:27	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.529U ± 0.479 (0.990)</b>	pCi/L	11/30/22 15:32	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19688 MW-21VC**      **Lab ID: 30534545007**      Collected: 10/26/22 08:40      Received: 10/31/22 10:40      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	<b>0.240U ± 0.175 (0.295)</b> <b>C:99% T:NA</b>	pCi/L	11/29/22 09:05	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.515U ± 0.317 (0.584)</b> <b>C:84% T:86%</b>	pCi/L	11/23/22 11:28	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.755U ± 0.492 (0.879)</b>	pCi/L	11/30/22 15:32	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19689 MW-22VB**      **Lab ID: 30534545008**      Collected: 10/26/22 09:36      Received: 10/31/22 10:40      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	<b>0.122U ± 0.148 (0.308)</b> <b>C:101% T:NA</b>	pCi/L	11/29/22 09:05	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.304U ± 0.289 (0.589)</b> <b>C:80% T:91%</b>	pCi/L	11/23/22 11:28	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.426U ± 0.437 (0.897)</b>	pCi/L	11/30/22 15:32	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19690 MW-19H**      **Lab ID: 30534545009**      Collected: 10/26/22 10:25      Received: 10/31/22 10:40      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	<b>0.188U ± 0.188 (0.376)</b> <b>C:98% T:NA</b>	pCi/L	11/29/22 08:55	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.213U ± 0.284 (0.603)</b> <b>C:83% T:87%</b>	pCi/L	11/23/22 11:28	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.401U ± 0.472 (0.979)</b>	pCi/L	11/30/22 15:32	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19691 MW-19H Dup**      **Lab ID: 30534545010**      Collected: 10/26/22 10:25      Received: 10/31/22 10:40      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	<b>0.301 ± 0.186 (0.272)</b> <b>C:99% T:NA</b>	pCi/L	11/29/22 10:41	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.429U ± 0.297 (0.563)</b> <b>C:84% T:88%</b>	pCi/L	11/23/22 11:29	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.730U ± 0.483 (0.835)</b>	pCi/L	11/30/22 15:32	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19692 PZ-6**      **Lab ID: 30534545011**      Collected: 10/26/22 11:24      Received: 10/31/22 10:40      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	<b>0.112U ± 0.123 (0.240)</b> <b>C:102% T:NA</b>	pCi/L	11/29/22 10:41	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.171U ± 0.257 (0.553)</b> <b>C:85% T:91%</b>	pCi/L	11/23/22 11:29	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.283U ± 0.380 (0.793)</b>	pCi/L	11/30/22 15:32	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19693 PZ-5**      **Lab ID: 30534545012**      Collected: 10/26/22 12:23      Received: 10/31/22 10:40      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	<b>0.460 ± 0.211 (0.245)</b> <b>C:103% T:NA</b>	pCi/L	11/29/22 10:41	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.618U ± 0.344 (0.618)</b> <b>C:83% T:90%</b>	pCi/L	11/23/22 11:29	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>1.08 ± 0.555 (0.863)</b>	pCi/L	11/30/22 15:32	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389  
Pace Project No.: 30534545

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>-0.0676U ± 0.0860 (0.310)</b> <b>C:99% T:NA</b>	pCi/L	11/29/22 10:41	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.165U ± 0.243 (0.523)</b> <b>C:83% T:97%</b>	pCi/L	11/23/22 11:30	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.165U ± 0.329 (0.833)</b>	pCi/L	11/30/22 15:32	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19695 MW-1**      **Lab ID: 30534545014**      Collected: 10/26/22 14:11      Received: 10/31/22 10:40      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	<b>0.0694U ± 0.0819 (0.166)</b> <b>C:101% T:NA</b>	pCi/L	11/29/22 10:41	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.311U ± 0.296 (0.599)</b> <b>C:79% T:84%</b>	pCi/L	11/23/22 11:30	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.380U ± 0.378 (0.765)</b>	pCi/L	11/30/22 15:32	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BC19696 EB-1</b> <b>Lab ID: 30534545015</b> Collected: 10/26/22 14:40      Received: 10/31/22 10:40      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0517U ± 0.114 (0.270)</b> <b>C:103% T:NA</b>	pCi/L	11/29/22 10:41	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.0864U ± 0.229 (0.515)</b> <b>C:88% T:93%</b>	pCi/L	11/23/22 11:30	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.138U ± 0.343 (0.785)</b>	pCi/L	11/30/22 15:32	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19697 MW-17**      **Lab ID: 30534545016**      Collected: 10/25/22 10:12      Received: 10/31/22 10:40      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	<b>0.383 ± 0.215 (0.330)</b> <b>C:104% T:NA</b>	pCi/L	11/29/22 10:41	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.393U ± 0.303 (0.592)</b> <b>C:85% T:88%</b>	pCi/L	11/23/22 11:30	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.776U ± 0.518 (0.922)</b>	pCi/L	11/30/22 15:32	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19698 MW-16**      **Lab ID: 30534545017**      Collected: 10/25/22 11:55      Received: 10/31/22 10:40      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	<b>0.0409U ± 0.115 (0.282)</b> <b>C:102% T:NA</b>	pCi/L	11/29/22 10:41	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.365U ± 0.296 (0.586)</b> <b>C:86% T:91%</b>	pCi/L	11/23/22 11:30	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.406U ± 0.411 (0.868)</b>	pCi/L	11/30/22 15:32	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BC19699 PZ-1</b> <b>Lab ID: 30534545018</b> Collected: 10/26/22 09:00      Received: 10/31/22 10:40      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.0698U ± 0.134 (0.309)</b> <b>C:98% T:NA</b>	pCi/L	11/29/22 10:41	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.491U ± 0.335 (0.638)</b> <b>C:80% T:89%</b>	pCi/L	11/23/22 11:30	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.561U ± 0.469 (0.947)</b>	pCi/L	11/30/22 15:32	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19700 MW-5**      **Lab ID: 30534545019**      Collected: 10/26/22 09:50      Received: 10/31/22 10:40      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	<b>0.0642U ± 0.110 (0.247)</b> <b>C:101% T:NA</b>	pCi/L	11/29/22 10:39	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.579 ± 0.288 (0.479)</b> <b>C:85% T:97%</b>	pCi/L	11/23/22 11:30	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.643U ± 0.398 (0.726)</b>	pCi/L	11/30/22 15:32	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19701 MW-5 Dup**      **Lab ID: 30534545020**      Collected: 10/26/22 09:50      Received: 10/31/22 10:40      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	<b>0.404 ± 0.205 (0.254)</b> <b>C:99% T:NA</b>	pCi/L	11/29/22 08:35	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.181U ± 0.272 (0.586)</b> <b>C:82% T:90%</b>	pCi/L	11/23/22 11:30	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.585U ± 0.477 (0.840)</b>	pCi/L	11/30/22 15:32	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
<b>Sample: BC19702 PZ-2</b> <b>Lab ID: 30534545021</b> Collected: 10/26/22 10:58      Received: 10/31/22 10:40      Matrix: Water PWS:      Site ID:      Sample Type:						
Pace Analytical Services - Greensburg						
Radium-226	EPA 9315	<b>0.100U ± 0.123 (0.251)</b> <b>C:99% T:NA</b>	pCi/L	11/30/22 09:01	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.291U ± 0.304 (0.627)</b> <b>C:80% T:92%</b>	pCi/L	11/23/22 14:36	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.391U ± 0.427 (0.878)</b>	pCi/L	11/30/22 15:31	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19703 MW-6**      **Lab ID: 30534545022**      Collected: 10/26/22 11:55      Received: 10/31/22 10:40      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	<b>0.204U ± 0.158 (0.262)</b> <b>C:98% T:NA</b>	pCi/L	11/30/22 09:01	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.228U ± 0.272 (0.570)</b> <b>C:85% T:82%</b>	pCi/L	12/01/22 11:48	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.432U ± 0.430 (0.832)</b>	pCi/L	12/02/22 15:30	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19704 MW-7**      **Lab ID: 30534545023**      Collected: 10/26/22 12:50      Received: 10/31/22 10:40      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	<b>0.209U ± 0.179 (0.325)</b> <b>C:100% T:NA</b>	pCi/L	11/30/22 09:01	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.350U ± 0.330 (0.667)</b> <b>C:77% T:89%</b>	pCi/L	11/23/22 14:36	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.559U ± 0.509 (0.992)</b>	pCi/L	11/30/22 15:31	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19705 MW-8**      **Lab ID: 30534545024**      Collected: 10/26/22 13:49      Received: 10/31/22 10:40      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	<b>0.252U ± 0.179 (0.290)</b> <b>C:97% T:NA</b>	pCi/L	11/30/22 09:01	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.276U ± 0.315 (0.660)</b> <b>C:83% T:91%</b>	pCi/L	11/23/22 14:36	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.528U ± 0.494 (0.950)</b>	pCi/L	11/30/22 15:31	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19706 MW-9**      **Lab ID: 30534545025**      Collected: 10/26/22 14:40      Received: 10/31/22 10:40      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	<b>0.0434U ± 0.134 (0.330)</b> <b>C:100% T:NA</b>	pCi/L	11/30/22 09:01	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.529U ± 0.342 (0.644)</b> <b>C:82% T:94%</b>	pCi/L	11/23/22 14:36	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.572U ± 0.476 (0.974)</b>	pCi/L	11/30/22 15:31	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19707 MW-10**      **Lab ID: 30534545026**      Collected: 10/26/22 15:23      Received: 10/31/22 10:40      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	<b>0.228U ± 0.192 (0.357)</b> <b>C:97% T:NA</b>	pCi/L	11/30/22 09:01	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.192U ± 0.305 (0.662)</b> <b>C:79% T:94%</b>	pCi/L	11/23/22 14:36	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.420U ± 0.497 (1.02)</b>	pCi/L	11/30/22 15:31	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19708 MW-14**      **Lab ID: 30534545027**      Collected: 10/26/22 08:20      Received: 10/31/22 10:40      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	<b>0.218U ± 0.190 (0.346)</b> <b>C:100% T:NA</b>	pCi/L	11/30/22 09:01	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.239U ± 0.321 (0.685)</b> <b>C:79% T:91%</b>	pCi/L	11/23/22 14:36	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.457U ± 0.511 (1.03)</b>	pCi/L	11/30/22 15:31	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19709 MW-14 Dup**      **Lab ID: 30534545028**      Collected: 10/26/22 08:20      Received: 10/31/22 10:40      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	<b>0.130U ± 0.143 (0.287)</b> <b>C:97% T:NA</b>	pCi/L	11/30/22 09:01	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.325U ± 0.314 (0.642)</b> <b>C:83% T:89%</b>	pCi/L	11/23/22 14:36	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.455U ± 0.457 (0.929)</b>	pCi/L	11/30/22 15:31	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19710 FB-2**      **Lab ID: 30534545029**      Collected: 10/26/22 08:45      Received: 10/31/22 10:40      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	<b>0.178U ± 0.177 (0.334)</b> <b>C:91% T:NA</b>	pCi/L	11/30/22 09:01	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.153U ± 0.306 (0.675)</b> <b>C:83% T:90%</b>	pCi/L	11/23/22 14:36	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.331U ± 0.483 (1.01)</b>	pCi/L	11/30/22 15:31	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19711 MW-3**      **Lab ID: 30534545030**      Collected: 10/26/22 09:45      Received: 10/31/22 10:40      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	<b>0.235U ± 0.180 (0.300)</b> <b>C:96% T:NA</b>	pCi/L	11/30/22 08:22	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.316U ± 0.316 (0.647)</b> <b>C:77% T:89%</b>	pCi/L	11/23/22 14:36	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.551U ± 0.496 (0.947)</b>	pCi/L	11/30/22 15:31	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19711 MW-3 MS**      **Lab ID: 30534545031**      Collected: 10/26/22 09:45      Received: 10/31/22 10:40      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	<b>104.99 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	11/30/22 08:22	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>68.91 %REC ± NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	11/23/22 14:36	15262-20-1	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19711 MW-3 MSD**      **Lab ID: 30534545032**      Collected: 10/26/22 09:45      Received: 10/31/22 10:40      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	<b>115.16 %REC 9.24RPD ±</b> <b>NA (NA)</b> <b>C:NA T:NA</b>	pCi/L	11/30/22 08:22	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>68.30 %REC 0.89RPD ± NA</b> <b>(NA)</b> <b>C:NA T:NA</b>	pCi/L	11/23/22 14:37	15262-20-1	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19712 FB-3**      **Lab ID: 30534545033**      Collected: 10/26/22 10:00      Received: 10/31/22 10:40      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	<b>0.0210U ± 0.143 (0.372)</b> <b>C:100% T:NA</b>	pCi/L	11/30/22 08:22	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.161U ± 0.282 (0.617)</b> <b>C:77% T:88%</b>	pCi/L	11/23/22 14:37	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.182U ± 0.425 (0.989)</b>	pCi/L	11/30/22 15:31	7440-14-4	

### REPORT OF LABORATORY ANALYSIS

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19713 MW-4V**      **Lab ID: 30534545034**      Collected: 10/26/22 11:00      Received: 10/31/22 10:40      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	<b>0.216U ± 0.175 (0.312)</b> <b>C:98% T:NA</b>	pCi/L	11/30/22 08:22	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.509U ± 0.341 (0.642)</b> <b>C:80% T:86%</b>	pCi/L	11/23/22 14:37	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.725U ± 0.516 (0.954)</b>	pCi/L	11/30/22 15:31	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19714 MW-4**      **Lab ID: 30534545035**      Collected: 10/26/22 12:17      Received: 10/31/22 10:40      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	<b>0.209U ± 0.209 (0.419)</b> <b>C:94% T:NA</b>	pCi/L	11/30/22 08:23	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.400U ± 0.329 (0.653)</b> <b>C:81% T:88%</b>	pCi/L	11/23/22 14:37	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.609U ± 0.538 (1.07)</b>	pCi/L	11/30/22 15:31	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19715 MW-20H**      **Lab ID: 30534545036**      Collected: 10/26/22 13:08      Received: 10/31/22 10:40      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	<b>0.396 ± 0.228 (0.304)</b> <b>C:95% T:NA</b>	pCi/L	11/30/22 08:23	13982-63-3	
	Pace Analytical Services - Greensburg					
Radium-228	EPA 9320	<b>0.562U ± 0.391 (0.749)</b> <b>C:79% T:83%</b>	pCi/L	11/23/22 14:37	15262-20-1	
	Pace Analytical Services - Greensburg					
Total Radium	Total Radium Calculation	<b>0.958U ± 0.619 (1.05)</b>	pCi/L	11/30/22 15:31	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19716 MW-11**      **Lab ID: 30534545037**      Collected: 10/26/22 14:04      Received: 10/31/22 10:40      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	<b>0.348 ± 0.209 (0.301)</b> <b>C:96% T:NA</b>	pCi/L	11/30/22 08:24	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.157U ± 0.335 (0.742)</b> <b>C:80% T:80%</b>	pCi/L	11/23/22 14:37	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.505U ± 0.544 (1.04)</b>	pCi/L	11/30/22 15:31	7440-14-4	

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### ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

**Sample: BC19717 MW-12**      **Lab ID: 30534545038**      Collected: 10/26/22 14:55      Received: 10/31/22 10:40      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	<b>0.196U ± 0.172 (0.308)</b> <b>C:98% T:NA</b>	pCi/L	11/30/22 08:24	13982-63-3	
Pace Analytical Services - Greensburg						
Radium-228	EPA 9320	<b>0.250U ± 0.324 (0.687)</b> <b>C:78% T:85%</b>	pCi/L	11/23/22 14:37	15262-20-1	
Pace Analytical Services - Greensburg						
Total Radium	Total Radium Calculation	<b>0.446U ± 0.496 (0.995)</b>	pCi/L	11/30/22 15:31	7440-14-4	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: WMWGADAP\_1389  
Pace Project No.: 30534545

QC Batch: 544820	Analysis Method: EPA 9320
QC Batch Method: EPA 9320	Analysis Description: 9320 Radium 228
	Laboratory: Pace Analytical Services - Greensburg
Associated Lab Samples: 30534545001, 30534545002, 30534545003, 30534545004, 30534545005, 30534545006, 30534545007, 30534545008, 30534545009, 30534545010, 30534545011, 30534545012, 30534545013, 30534545014, 30534545015, 30534545016, 30534545017, 30534545018, 30534545019, 30534545020	

METHOD BLANK: 2644740	Matrix: Water
Associated Lab Samples: 30534545001, 30534545002, 30534545003, 30534545004, 30534545005, 30534545006, 30534545007, 30534545008, 30534545009, 30534545010, 30534545011, 30534545012, 30534545013, 30534545014, 30534545015, 30534545016, 30534545017, 30534545018, 30534545019, 30534545020	

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.349 ± 0.275 (0.539) C:84% T:90%	pCi/L	11/23/22 11:27	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

QC Batch: 544822

Analysis Method: EPA 9320

QC Batch Method: EPA 9320

Analysis Description: 9320 Radium 228

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30534545021, 30534545022, 30534545023, 30534545024, 30534545025, 30534545026, 30534545027, 30534545028, 30534545029, 30534545030, 30534545031, 30534545032, 30534545033, 30534545034, 30534545035, 30534545036, 30534545037, 30534545038

METHOD BLANK: 2644742

Matrix: Water

Associated Lab Samples: 30534545021, 30534545022, 30534545023, 30534545024, 30534545025, 30534545026, 30534545027, 30534545028, 30534545029, 30534545030, 30534545031, 30534545032, 30534545033, 30534545034, 30534545035, 30534545036, 30534545037, 30534545038

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.735 ± 0.356 (0.599) C:83% T:89%	pCi/L	11/23/22 14:35	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: WMWGADAP\_1389  
Pace Project No.: 30534545

QC Batch:	544821	Analysis Method:	EPA 9315
QC Batch Method:	EPA 9315	Analysis Description:	9315 Total Radium
		Laboratory:	Pace Analytical Services - Greensburg

Associated Lab Samples: 30534545021, 30534545022, 30534545023, 30534545024, 30534545025, 30534545026, 30534545027, 30534545028, 30534545029, 30534545030, 30534545031, 30534545032, 30534545033, 30534545034, 30534545035, 30534545036, 30534545037, 30534545038

METHOD BLANK: 2644741 Matrix: Water

Associated Lab Samples: 30534545021, 30534545022, 30534545023, 30534545024, 30534545025, 30534545026, 30534545027, 30534545028, 30534545029, 30534545030, 30534545031, 30534545032, 30534545033, 30534545034, 30534545035, 30534545036, 30534545037, 30534545038

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0217 ± 0.0616 (0.152) C:97% T:NA	pCi/L	11/30/22 09:01	

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### QUALITY CONTROL - RADIOCHEMISTRY

Project: WMWGADAP\_1389

Pace Project No.: 30534545

QC Batch: 544819

Analysis Method: EPA 9315

QC Batch Method: EPA 9315

Analysis Description: 9315 Total Radium

Laboratory: Pace Analytical Services - Greensburg

Associated Lab Samples: 30534545001, 30534545002, 30534545003, 30534545004, 30534545005, 30534545006, 30534545007, 30534545008, 30534545009, 30534545010, 30534545011, 30534545012, 30534545013, 30534545014, 30534545015, 30534545016, 30534545017, 30534545018, 30534545019, 30534545020

METHOD BLANK: 2644739

Matrix: Water

Associated Lab Samples: 30534545001, 30534545002, 30534545003, 30534545004, 30534545005, 30534545006, 30534545007, 30534545008, 30534545009, 30534545010, 30534545011, 30534545012, 30534545013, 30534545014, 30534545015, 30534545016, 30534545017, 30534545018, 30534545019, 30534545020

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0552 ± 0.0734 (0.153) C:100% T:NA	pCi/L	11/29/22 09:05	

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## QUALIFIERS

Project: WMWGADAP\_1389  
Pace Project No.: 30534545

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### 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.

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: For Safe Drinking Water Act (SDWA) analyses, the reported Unc. is the calculated Count Uncertainty (95% confidence interval) using a coverage factor of 1.96. For all other matrices (non-SDWA), the reported Unc. is the calculated Expanded Uncertainty (aka Combined Standard Uncertainty, CSU), reported at the 95% confidence interval using a coverage factor of 1.96.

Gamma Spec: The Unc. reported for all gamma-spectroscopy analyses (EPA 901.1), is the calculated Expanded Uncertainty (CSU) at the 95.4% confidence interval, using a coverage factor of 2.0.

(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.

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## QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WMWGADAP\_1389

Pace Project No.: 30534545

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30534545001	BC19684 MW-2	EPA 9315	544819		
30534545002	BC19684 MW-2 MS	EPA 9315	544819		
30534545003	BC19684 MW-2 MSD	EPA 9315	544819		
30534545004	BC19685 FB-1	EPA 9315	544819		
30534545005	BC19686 MW-2VA	EPA 9315	544819		
30534545006	BC19687 MW-2VB	EPA 9315	544819		
30534545007	BC19688 MW-21VC	EPA 9315	544819		
30534545008	BC19689 MW-22VB	EPA 9315	544819		
30534545009	BC19690 MW-19H	EPA 9315	544819		
30534545010	BC19691 MW-19H Dup	EPA 9315	544819		
30534545011	BC19692 PZ-6	EPA 9315	544819		
30534545012	BC19693 PZ-5	EPA 9315	544819		
30534545013	BC19694 MW-18H	EPA 9315	544819		
30534545014	BC19695 MW-1	EPA 9315	544819		
30534545015	BC19696 EB-1	EPA 9315	544819		
30534545016	BC19697 MW-17	EPA 9315	544819		
30534545017	BC19698 MW-16	EPA 9315	544819		
30534545018	BC19699 PZ-1	EPA 9315	544819		
30534545019	BC19700 MW-5	EPA 9315	544819		
30534545020	BC19701 MW-5 Dup	EPA 9315	544819		
30534545021	BC19702 PZ-2	EPA 9315	544821		
30534545022	BC19703 MW-6	EPA 9315	544821		
30534545023	BC19704 MW-7	EPA 9315	544821		
30534545024	BC19705 MW-8	EPA 9315	544821		
30534545025	BC19706 MW-9	EPA 9315	544821		
30534545026	BC19707 MW-10	EPA 9315	544821		
30534545027	BC19708 MW-14	EPA 9315	544821		
30534545028	BC19709 MW-14 Dup	EPA 9315	544821		
30534545029	BC19710 FB-2	EPA 9315	544821		
30534545030	BC19711 MW-3	EPA 9315	544821		
30534545031	BC19711 MW-3 MS	EPA 9315	544821		
30534545032	BC19711 MW-3 MSD	EPA 9315	544821		
30534545033	BC19712 FB-3	EPA 9315	544821		
30534545034	BC19713 MW-4V	EPA 9315	544821		
30534545035	BC19714 MW-4	EPA 9315	544821		
30534545036	BC19715 MW-20H	EPA 9315	544821		
30534545037	BC19716 MW-11	EPA 9315	544821		
30534545038	BC19717 MW-12	EPA 9315	544821		
30534545001	BC19684 MW-2	EPA 9320	544820		
30534545002	BC19684 MW-2 MS	EPA 9320	544820		
30534545003	BC19684 MW-2 MSD	EPA 9320	544820		
30534545004	BC19685 FB-1	EPA 9320	544820		
30534545005	BC19686 MW-2VA	EPA 9320	544820		
30534545006	BC19687 MW-2VB	EPA 9320	544820		
30534545007	BC19688 MW-21VC	EPA 9320	544820		
30534545008	BC19689 MW-22VB	EPA 9320	544820		
30534545009	BC19690 MW-19H	EPA 9320	544820		
30534545010	BC19691 MW-19H Dup	EPA 9320	544820		

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WMWGADAP\_1389

Pace Project No.: 30534545

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30534545011	BC19692 PZ-6	EPA 9320	544820		
30534545012	BC19693 PZ-5	EPA 9320	544820		
30534545013	BC19694 MW-18H	EPA 9320	544820		
30534545014	BC19695 MW-1	EPA 9320	544820		
30534545015	BC19696 EB-1	EPA 9320	544820		
30534545016	BC19697 MW-17	EPA 9320	544820		
30534545017	BC19698 MW-16	EPA 9320	544820		
30534545018	BC19699 PZ-1	EPA 9320	544820		
30534545019	BC19700 MW-5	EPA 9320	544820		
30534545020	BC19701 MW-5 Dup	EPA 9320	544820		
30534545021	BC19702 PZ-2	EPA 9320	544822		
30534545022	BC19703 MW-6	EPA 9320	544822		
30534545023	BC19704 MW-7	EPA 9320	544822		
30534545024	BC19705 MW-8	EPA 9320	544822		
30534545025	BC19706 MW-9	EPA 9320	544822		
30534545026	BC19707 MW-10	EPA 9320	544822		
30534545027	BC19708 MW-14	EPA 9320	544822		
30534545028	BC19709 MW-14 Dup	EPA 9320	544822		
30534545029	BC19710 FB-2	EPA 9320	544822		
30534545030	BC19711 MW-3	EPA 9320	544822		
30534545031	BC19711 MW-3 MS	EPA 9320	544822		
30534545032	BC19711 MW-3 MSD	EPA 9320	544822		
30534545033	BC19712 FB-3	EPA 9320	544822		
30534545034	BC19713 MW-4V	EPA 9320	544822		
30534545035	BC19714 MW-4	EPA 9320	544822		
30534545036	BC19715 MW-20H	EPA 9320	544822		
30534545037	BC19716 MW-11	EPA 9320	544822		
30534545038	BC19717 MW-12	EPA 9320	544822		
30534545001	BC19684 MW-2	Total Radium Calculation	550491		
30534545004	BC19685 FB-1	Total Radium Calculation	550491		
30534545005	BC19686 MW-2VA	Total Radium Calculation	550491		
30534545006	BC19687 MW-2VB	Total Radium Calculation	550491		
30534545007	BC19688 MW-21VC	Total Radium Calculation	550491		
30534545008	BC19689 MW-22VB	Total Radium Calculation	550491		
30534545009	BC19690 MW-19H	Total Radium Calculation	550491		
30534545010	BC19691 MW-19H Dup	Total Radium Calculation	550491		
30534545011	BC19692 PZ-6	Total Radium Calculation	550491		
30534545012	BC19693 PZ-5	Total Radium Calculation	550491		
30534545013	BC19694 MW-18H	Total Radium Calculation	550491		
30534545014	BC19695 MW-1	Total Radium Calculation	550491		
30534545015	BC19696 EB-1	Total Radium Calculation	550491		
30534545016	BC19697 MW-17	Total Radium Calculation	550491		
30534545017	BC19698 MW-16	Total Radium Calculation	550491		
30534545018	BC19699 PZ-1	Total Radium Calculation	550491		
30534545019	BC19700 MW-5	Total Radium Calculation	550491		
30534545020	BC19701 MW-5 Dup	Total Radium Calculation	550491		
30534545021	BC19702 PZ-2	Total Radium Calculation	550489		

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WMWGADAP\_1389  
Pace Project No.: 30534545

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30534545022	BC19703 MW-6	Total Radium Calculation	551113		
30534545023	BC19704 MW-7	Total Radium Calculation	550489		
30534545024	BC19705 MW-8	Total Radium Calculation	550489		
30534545025	BC19706 MW-9	Total Radium Calculation	550489		
30534545026	BC19707 MW-10	Total Radium Calculation	550489		
30534545027	BC19708 MW-14	Total Radium Calculation	550489		
30534545028	BC19709 MW-14 Dup	Total Radium Calculation	550489		
30534545029	BC19710 FB-2	Total Radium Calculation	550489		
30534545030	BC19711 MW-3	Total Radium Calculation	550489		
30534545033	BC19712 FB-3	Total Radium Calculation	550489		
30534545034	BC19713 MW-4V	Total Radium Calculation	550489		
30534545035	BC19714 MW-4	Total Radium Calculation	550489		
30534545036	BC19715 MW-20H	Total Radium Calculation	550489		
30534545037	BC19716 MW-11	Total Radium Calculation	550489		
30534545038	BC19717 MW-12	Total Radium Calculation	550489		

### 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 3

<b>Section A</b> Required Client Information:		<b>Section B</b> Required Project Information:		<b>Section C</b> Invoice Information:	
Company:	Alabama Power Company	Report To:	Brooke Caton	Attention:	Brooke Caton
Address:	744 Highway 87 GSC Bldg #8 Calera, AL 35040	Copy To:	Renee Jernigan & Blaine Denton	Company Name:	Alabama Power Co.
Email To:	tbwill@southernco.com	Purchase Order #:	APC10755638	Address:	744 Highway 87 GSC Bldg #8
Phone:	205-664-6101	Project Name:	Plant Gadsden Ash Pond	CCR	Regulatory Agency
Requested Due Date:	28 days	Project Number:	VMWGADAP_1389	Pace Project Manager:	Sylvia Richmond
			Pace Profile #:	16788	State / Location
			AL		

ITEM #	Description	Station Name Location_ID	Site Name Facility_ID	Matrix Spike/Matrix Spike Duplicate	Field Filled	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED		# OF CONTAINERS	Preservatives	Y/N	Requested Analysis Filtered (Y/N)	ANALYSES TEST																						
								START DATE	TIME					EPA 9315	EPA 9320	Total Radium Sum	Residual Chlorine (Y/N)	Custody (Y/N)	Sealed Cooler (Y/N)	Received on Ice (Y/N)	TEMP in C															
1	BC19684 MW-2	APCO-GSD-AP-MW-2	APCO_Plant_Gadsden_AshPond	x		GW	G	10/25/2022	9:15	3	HNO3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
2	BC19685 FB-1	APCO-GSD-AP-FB-01	APCO_Plant_Gadsden_AshPond			GW	G	10/25/2022	9:40	1	Unpreserved																									
3	BC19686 MW-2VA	APCO-GSD-AP-MW-2VA	APCO_Plant_Gadsden_AshPond			GW	G	10/25/2022	10:28	1		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	BC19687 MW-2VB	APCO-GSD-AP-MW-2VB	APCO_Plant_Gadsden_AshPond			GW	G	10/25/2022	12:04	1		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
5	BC19688 MW-21VC	APCO-GSD-AP-MW-21VC	APCO_Plant_Gadsden_AshPond			GW	G	10/26/2022	8:40	1		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	BC19689 MW-22VB	APCO-GSD-AP-MW-22VB	APCO_Plant_Gadsden_AshPond			GW	G	10/26/2022	9:36	1		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
7	BC19690 MW-19H	APCO-GSD-AP-MW-19H	APCO_Plant_Gadsden_AshPond			GW	G	10/26/2022	10:25	1		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
8	BC19691 MW-19H Dup	APCO-GSD-AP-MW-19H	APCO_Plant_Gadsden_AshPond	x		GW	G	10/26/2022	10:25	1		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
9	BC19692 PZ-6	APCO-GSD-AP-PZ-6	APCO_Plant_Gadsden_AshPond			GW	G	10/26/2022	11:24	1		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
10	BC19693 PZ-5	APCO-GSD-AP-PZ-5	APCO_Plant_Gadsden_AshPond			GW	G	10/26/2022	12:23	1		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
11	BC19694 MW-18H	APCO-GSD-AP-MW-18H	APCO_Plant_Gadsden_AshPond			GW	G	10/26/2022	13:30	1		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
12	BC19695 MW-1	APCO-GSD-AP-MW-1	APCO_Plant_Gadsden_AshPond			GW	G	10/26/2022	14:11	1		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
	Brooke Caton/ APC GTL	10/27/2022	13:09	[Signature]	10/31/2022	14:00

**WO#: 30534545**



30534545

**SAMPLER NAME AND SIGNATURE**  
 PRINT NAME of SAMPLER: Dallas Gentry  
 SIGNATURE of SAMPLER: [Signature]  
 DATE Signed: [Blank]

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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.

<b>Section A</b>		<b>Section B</b>		<b>Section C</b>	
<b>Required Client Information:</b>		<b>Required Project Information:</b>		<b>Invoice Information:</b>	
Company: Alabama Power Company	Report To: Brooke Caton	Company Name: Alabama Power Co.	Attention: Brooke Caton	Regulatory Agency:	
Address: 744 Highway 87 GSC Bldg #8	Copy To: Renee Jernigan & Blaine Denton	Address: 744 Highway 87 GSC Bldg #8	Address: 744 Highway 87 GSC Bldg #8	State / Location:	
Calera, AL 35040			CCR	AL	
Email To: tbwill@southernco.com	Purchase Order #: APC10755638	Project Name: Plant Gadsden Ash Pond	Face Project Manager: Skyler Richmond	Requested Analysis Filtered (Y/N):	
Phone: 205-664-6101   Fax:		Project Number: WMWGADAP_1389	Face Profile #: 16788		
Requested Due Date: 28 days					

ITEM #	Description	Station Name Location_ID	Site Name Facility_ID	Matrix Spike/Matrix Spike Duplicate	Field Filtered	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		# OF CONTAINERS	Unpreserved	H2SO4	HNO3	Preservatives	Y/N	EPA 9315	EPA 9320	Total Radium Sum	Residual Chlorine (Y/N)	SAMPLE CONDITIONS
								DATE	TIME											
1	BC19696 EB-1	APCO-GSD-AP-EB-01	APCO_Plant_Gadsden_AshPond			GM	G	10/26/2022	14:40	1			X		X	X	X			015
2	BC19697 MW-17	APCO-GSD-AP-MW-17	APCO_Plant_Gadsden_AshPond			GM	G	10/25/2022	10:12	1			X		X	X	X			016
3	BC19698 MW-16	APCO-GSD-AP-MW-16	APCO_Plant_Gadsden_AshPond			GM	G	10/25/2022	11:55	1			X		X	X	X			017
4	BC19699 PZ-1	APCO-GSD-AP-PZ-1	APCO_Plant_Gadsden_AshPond			GM	G	10/26/2022	9:00	1			X		X	X	X			018
5	BC19700 MW-5	APCO-GSD-AP-MW-5	APCO_Plant_Gadsden_AshPond			GM	G	10/26/2022	9:50	1			X		X	X	X			019
6	BC19701 MW-5 Dup	APCO-GSD-AP-MW-5	APCO_Plant_Gadsden_AshPond	x		GM	G	10/26/2022	9:50	1			X		X	X	X			020
7	BC19702 PZ-2	APCO-GSD-AP-PZ-2	APCO_Plant_Gadsden_AshPond			GM	G	10/26/2022	10:58	1			X		X	X	X			021
8	BC19703 MW-6	APCO-GSD-AP-MW-6	APCO_Plant_Gadsden_AshPond			GM	G	10/26/2022	11:55	1			X		X	X	X			022
9	BC19704 MW-7	APCO-GSD-AP-MW-7	APCO_Plant_Gadsden_AshPond			GM	G	10/26/2022	12:50	1			X		X	X	X			023
10	BC19705 MW-8	APCO-GSD-AP-MW-8	APCO_Plant_Gadsden_AshPond			GM	G	10/26/2022	13:49	1			X		X	X	X			024
11	BC19706 MW-9	APCO-GSD-AP-MW-9	APCO_Plant_Gadsden_AshPond			GM	G	10/26/2022	14:40	1			X		X	X	X			020
12	BC19707 MW-10	APCO-GSD-AP-MW-10	APCO_Plant_Gadsden_AshPond			GM	G	10/26/2022	15:23	1			X		X	X	X			020

<b>ADDITIONAL COMMENTS</b>	<b>RELINQUISHED BY / AFFILIATION</b>	<b>DATE</b>	<b>TIME</b>	<b>ACCEPTED BY / AFFILIATION</b>	<b>DATE</b>	<b>TIME</b>
	Brooke Caton/ APC GTL	10/27/2022	13:09	<i>[Signature]</i>	10-27-22	14:15

<b>SAMPLER NAME AND SIGNATURE</b>	
PRINT Name of SAMPLER:	-Beitas Gerry 201027-22
SIGNATURE of SAMPLER:	

**WO#: 30534545**

Due Date: 11/30/22

CLIENT: ALABAMA PHR

# CHAIN-OF-CUSTODY / Analytical Request Document

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

<b>Section A</b> Required Client Information: Company: Alabama Power Company Address: 744 Highway 87 GSC Bldg #8 Calera, AL 35040 Email To: tbowill@southernco.com Phone: 205-664-6101 Fax Requested Due Date: 28 days	<b>Section B</b> Required Project Information: Report To: Brooke Caton Copy To: Renee Jernigan & Blaine Denton Purchase Order #: APC10755638 Project Name: Plant Gadsden Ash Pond Project Number: WMWGADAP_1389	<b>Section C</b> Invoice Information: Attention: Brooke Caton Company Name: Alabama Power Co. Address: 744 Highway 87 GSC Bldg #8 Pace Quote: Pace Project Manager: Skyler Richmond Pace Profile #: 16788
Regulatory Agency: AL		State / Location: AL

ITEM #	Description	Station Name Location_ID	Site Name Facility_ID	Sample Duplicate	Matrix Spike/Matrix Spike Duplicate	Field Filtered	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		# OF CONTAINERS	Unpreserved	H2SO4	HNO3	Preservatives	Y/N	Analyses Test	EPA 9315	EPA 9320	Total Radium Sum	Residual Chlorine (Y/N)	Requested Analysis Filtered (Y/N)
									START DATE	TIME												
1	BC19708	MW-14	APCO_GSD-AP-MW-14	APCO_Plant_Gadsden_AshPond			GW	G	10/26/2022	8:20	1					X	X	X	X			
2	BC19709	MW-14 Dup	APCO_GSD-AP-MW-14	APCO_Plant_Gadsden_AshPond	x		GW	G	10/26/2022	8:20	1					X	X	X	X			
3	BC19710	FB-2	APCO_GSD-AP-FB-02	APCO_Plant_Gadsden_AshPond			GW	G	10/26/2022	8:45	1					X	X	X	X			
4	BC19711	MW-3	APCO_GSD-AP-MW-3	APCO_Plant_Gadsden_AshPond			GW	G	10/26/2022	9:45	3					X	X	X	X			
5	BC19712	FB-3	APCO_GSD-AP-FB-03	APCO_Plant_Gadsden_AshPond			GW	G	10/26/2022	10:00	1					X	X	X	X			
6	BC19713	MW-4V	APCO_GSD-AP-MW-4V	APCO_Plant_Gadsden_AshPond			GW	G	10/26/2022	11:00	1					X	X	X	X			
7	BC19714	MW-4	APCO_GSD-AP-MW-4	APCO_Plant_Gadsden_AshPond			GW	G	10/26/2022	12:17	1					X	X	X	X			
8	BC19715	MW-20H	APCO_GSD-AP-MW-20H	APCO_Plant_Gadsden_AshPond			GW	G	10/26/2022	13:08	1					X	X	X	X			
9	BC19716	MW-11	APCO_GSD-AP-MW-11	APCO_Plant_Gadsden_AshPond			GW	G	10/26/2022	14:04	1					X	X	X	X			
10	BC19717	MW-12	APCO_GSD-AP-MW-12	APCO_Plant_Gadsden_AshPond			GW	G	10/26/2022	14:55	1					X	X	X	X			
11																						
12																						


ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	TEMP In C	Received on	Ice (Y/N)	Custody	Sealed	Cooler	(Y/N)	Samples	Inlet	(Y/N)
	Brooke Caton/ APC GTL	10/27/2022	13:09													

WO#: 30534545

PM: SCR Due Date: 11/30/22

CLIENT: ALABAMA PWR

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**DC#\_Title: ENV-FRM-GBUR-0088 v02\_Sample Condition Upon Receipt-  
Pittsburgh**  
 Effective Date: 10/03/2022

Client Name: **Alabama Power**

Project #:

Courier:  Fed Ex  UPS  USPS  Client  Commercial  Pace  Other

Tracking Number: **5870 1898 1679**

Examined By	<b>PS</b>
Labeled By	<b>PS</b>
Temped By	<b>—</b>

Custody Seal on Cooler/Box Present:  Yes  No      Seals Intact:  Yes  No

Thermometer Used: **—**      Type of Ice: Wet Blue **(None)**

Cooler Temperature: Observed Temp **—** °C      Correction Factor: **—** °C      Final Temp: **—** °C  
 Temp should be above freezing to 6°C

Comments:	Yes	No	NA	pH paper Lot#	D.P.D. Residual Chlorine Lot #
				<b>1000421</b>	<b>—</b>
Chain of Custody Present	/			1.	
Chain of Custody Filled Out: -Were client corrections present on COC	/			2.	
Chain of Custody Relinquished	/			3.	
Sampler Name & Signature on COC:	/			4.	
Sample Labels match COC: -Includes date/time/ID Matrix: <b>WT</b>	/			5.	
Samples Arrived within Hold Time:	/			6.	
Short Hold Time Analysis (<72hr remaining):		/		7.	
Rush Turn Around Time Requested:		/		8.	
Sufficient Volume:	/			9.	
Correct Containers Used: -Pace Containers Used	/			10.	
Containers Intact:	/			11.	
Orthophosphate field filtered:			/	12.	
Hex Cr Aqueous samples field filtered:			/	13.	
Organic Samples checked for dechlorination			/	14.	
Filtered volume received for dissolved tests:			/	15.	
All containers checked for preservation: exceptions: VOA, coliform, TOC, O&G, Phenolics, Radon, non-aqueous matrix	/			16.	
All containers meet method preservation requirements:	/			Initial when completed <b>PS</b>	Date/Time of Preservation
				Lot# of added Preservative	
Headspace in VOA Vials (>6mm):			/	17.	
Trip Blank Present:		/		18.	
Trip Blank Custody Seals Present		/			
Rad Samples Screened <0.5 mrem/hr.	/			Initial when completed <b>PS</b>	Date: <b>11/2/22</b> Survey Meter SN: <b>1563</b>
Comments:					

**WO#: 30534545**

PM: SCR Due Date: 11/30/22

CLIENT: ALABAMA PWR

Note: For NC compliance samples with discrepancies, a copy of this form must be sent to the DEHNR Certification office. PM Review is documented electronically in LIMS through the SRF Review schedule in the Workorder Edit Screen.



Pace Greensburg Lab -Sample Container Count

\* 38 samples - all 1 X BPIN each

Profile Number 16788

Client

Site Plant Gadsden Ash Pond

Notes

Sample Line Item	Matrix	AG1H	AG1S	AG1T	AG2U	AG3S	AG3U	AG5U	AG5T	BG1U	BG2U	BP1N	BP1U	BP2S	BP2U	BP3C	BP3N	BP3S	BP3U	DG9S	GCUB	VG9H	VG9T	VG9U	VOAK	WGFU	WGKU	ZPLC
1	WT																											
2																												
3																												
4																												
5																												
6																												
7																												
8																												
9																												
10																												
11																												
138																												

NO#: 30534545

PM: SCR Due Date: 11/30/22  
CLIENT: ALABAMA PWR

Container Codes

Glass	
GJN	1 Gallon Jug with HNO3
AG5U	100mL amber glass unreserved
AG5T	100mL amber glass Na Thiosulfate
GJN	1 Gallon Jug
AG1S	1L amber glass H2SO4
AG1H	1L amber glass HCl
AG1T	1L amber glass Na Thiosulfate
BG1U	1L clear glass unreserved
AG3S	250mL amber glass H2SO4
AG3U	250mL amber glass unreserved
DG9S	40mL amber VOA vial H2SO4
VG9U	40mL clear VOA vial
VG9T	40mL clear VOA vial Na Thiosulfate
VG9H	40mL clear VOA vial HCl
JGFU	4oz amber wide jar
WGFU	4oz wide jar unreserved
BG2U	500mL clear glass unreserved
AG2U	500mL amber glass unreserved
WGKU	8oz wide jar unreserved

Plastic / Misc.	
GCUB	1 Gallon Cubitainer
12GN	1/2 Gallon Cubitainer
SP5T	120mL Coiform Na Thiosulfate
BP1N	1L plastic HNO3
BP1U	1L plastic unreserved
BP3S	250mL plastic H2SO4
BP3N	250mL plastic HNO3
BP3U	250mL plastic unreserved
BP3C	250mL plastic NaOH
BP2S	500mL plastic H2SO4
BP2U	500mL plastic unreserved
EZI	5g Encore
VOAK	Kit for Volatile Solid
I	Wipe/Swab
ZPLC	Ziploc Bag
WT	Water
SL	Solid
OL	Non-aqueous liquid
WP	Wipe

# Quality Control Sample Performance Assessment



*Analyst Must Manually Enter All Fields Highlighted in Yellow.*

Test: Ra-226  
Analyst: RMS  
Date: 11/16/2022  
Worklist: 69791  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2644739
MB Concentration:	0.055
MB Counting Uncertainty:	0.073
MB MDC:	0.153
MB Numerical Performance Indicator:	1.48
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	
LCS (Y or NJ)?	Y
LCS69791	LCS69791
Count Date:	11/29/2022
Spike I.D.:	19-033
Decay Corrected Spike Concentration (pCi/mL):	24.022
Volume Used (mL):	0.10
Aliquot Volume (L, g, F):	0.500
Target Conc. (pCi/L, g, F):	4.801
Uncertainty (Calculated):	0.058
Result (pCi/L, g, F):	5.135
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	0.482
Numerical Performance Indicator:	1.35
Percent Recovery:	106.96%
Status vs Numerical Indicator:	N/A
Status vs Recovery:	Pass
Upper % Recovery Limits:	125%
Lower % Recovery Limits:	75%

Duplicate Sample Assessment	
Sample I.D.:	LCS69791
Duplicate Sample I.D.:	LCS69791
Sample Result (pCi/L, g, F):	5.135
Sample Result Counting Uncertainty (pCi/L, g, F):	0.482
Sample Duplicate Result (pCi/L, g, F):	4.705
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.482
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	1.264
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	8.27%
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:

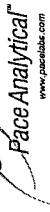
*Handwritten signature/initials*

Sample Matrix Spike Control Assessment		MS/MSD 1	MS/MSD 2
Sample Collection Date:		10/25/2022	
Sample I.D.:		30534545001	
Sample MS I.D.:		30534545002	
Sample MSD I.D.:		30534545003	
Spike I.D.:		19-033	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		24.023	
Spike Volume Used in MS (mL):		0.20	
Spike Volume Used in MSD (mL):		0.20	
MS Aliquot (L, g, F):		0.317	
MS Target Conc. (pCi/L, g, F):		15.144	
MSD Aliquot (L, g, F):		0.283	
MSD Target Conc. (pCi/L, g, F):		17.000	
MS Spike Uncertainty (calculated):		0.182	
MSD Spike Uncertainty (calculated):		0.204	
Sample Result Counting Uncertainty (pCi/L, g, F):		0.194	
Sample Matrix Spike Result:		14.736	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):		1.010	
Sample Matrix Spike Duplicate Result:		17.072	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):		1.169	
MS Numerical Performance Indicator:		-1.138	
MSD Numerical Performance Indicator:		-0.200	
MS Percent Recovery:		96.03%	
MSD Percent Recovery:		99.28%	
MS Status vs Numerical Indicator:		N/A	
MSD Status vs Numerical Indicator:		N/A	
MS Status vs Recovery:		Pass	
MSD Status vs Recovery:		Pass	
MS/MSD Upper % Recovery Limits:		125%	
MS/MSD Lower % Recovery Limits:		75%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	30534545001
Sample MS I.D.:	30534545002
Sample MSD I.D.:	30534545003
Sample Matrix Spike Result:	14.736
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.010
Sample Matrix Spike Duplicate Result:	17.072
Sample Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.169
Duplicate Numerical Performance Indicator:	-2.963
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	3.33%
MS/MSD Duplicate Status vs Numerical Indicator:	N/A
MS/MSD Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

*Handwritten date: 11/30/22*

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228  
Analyst: VAL  
Date: 11/14/2022  
Worklist: 69792  
Matrix: WT

Method Blank Assessment	
MB Sample ID	2644740
MB concentration:	0.349
MB 2 Sigma CSU:	0.275
MB MDC:	0.539
MB Numerical Performance Indicator:	2.48
MB Status vs Numerical Indicator:	Warning
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment	LCSD (Y or N)?	N
		LCSD69792
Count Date:	11/23/2022	
Spike I.D.:	22-029	
Decay Corrected Spike Concentration (pCi/mL):	19.549	
Volume Used (mL):	0.20	
Aliquot Volume (L, g, F):	0.810	
Target Conc. (pCi/L, g, F):	4.827	
Uncertainty (Calculated):	0.348	
Result (pCi/L, g, F):	4.281	
LCSD/LCSD 2 Sigma CSU (pCi/L, g, F):	0.953	
Numerical Performance Indicator:	-1.06	
Percent Recovery:	88.69%	
Status vs Numerical Indicator:	N/A	
Status vs Recovery:	Pass	
Upper % Recovery Limits:	135%	
Lower % Recovery Limits:	60%	

Duplicate Sample Assessment	Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	
Duplicate Sample I.D.:	
Sample Result (pCi/L, g, F):	
Sample Result 2 Sigma CSU (pCi/L, g, F):	
Sample Duplicate Result (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 RPD:	
Duplicate Status vs Numerical Indicator:	
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:

*VAL*  
*11/28/22*

Sample Matrix Spike Control Assessment	MS/MSD 1	MS/MSD 2
Sample Collection Date:	10/25/2022	
Sample I.D.:	30534545001	
Sample MS I.D.:	30534545002	
Sample MSD I.D.:	30534545003	
Spike I.D.:	22-029	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	19.737	
Spike Volume Used in MS (mL):	0.40	
Spike Volume Used in MSD (mL):	0.40	
MS Aliquot (L, g, F):	0.803	
MS Target Conc. (pCi/L, g, F):	9.830	
MSD Aliquot (L, g, F):	0.808	
MSD Target Conc. (pCi/L, g, F):	9.772	
MSD Spike Uncertainty (calculated):	0.708	
MSD Spike Uncertainty (calculated):	0.704	
Sample Result:	0.489	
Sample Result 2 Sigma CSU (pCi/L, g, F):	0.327	
Sample Matrix Spike Result:	8.632	
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	1.716	
Sample Matrix Spike Duplicate Result:	9.656	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.917	
MS Numerical Performance Indicator:	-1.755	
MSD Numerical Performance Indicator:	-0.574	
MS Percent Recovery:	82.83%	
MSD Percent Recovery:	93.81%	
MS Status vs Numerical Indicator:	Pass	
MSD Status vs Numerical Indicator:	Pass	
MS Status vs Recovery:	Pass	
MSD Status vs Recovery:	Pass	
MS/MSD Upper % Recovery Limits:	135%	
MS/MSD Lower % Recovery Limits:	60%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	30534545001
Sample MS I.D.:	30534545002
Sample MSD I.D.:	30534545003
Sample Matrix Spike Result:	8.632
Sample Matrix Spike Duplicate Result:	1.716
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	9.656
Sample Matrix Spike Duplicate Result:	1.917
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	-0.781
Duplicate Numerical Performance Indicator:	12.43%
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	Pass
MS/MSD Duplicate Status vs Numerical Indicator:	Pass
MS/MSD Duplicate Status vs RPD:	Pass
% RPD Limit:	36%



# Quality Control Sample Performance Assessment



*Analyst Must Manually Enter All Fields Highlighted in Yellow.*

Test: Ra-226  
Analyst: RMS  
Date: 11/15/2022  
Worklist: 69793  
Matrix: DW

Method Blank Assessment	
MB Sample ID	2644741
MB Concentration:	0.022
MB Counting Uncertainty:	0.062
MB MDC:	0.152
MB Numerical Performance Indicator:	0.69
MB Status vs Numerical Indicator:	N/A
MB Status vs. MDC:	Pass

Laboratory Control Sample Assessment		LCS D (Y or N)?	Y
LCS 69793		11/30/2022	11/30/2022
Count Date:	19-033	24.021	19-033
Spike I.D.:	0.10	0.505	0.10
Decay Corrected Spike Concentration (pCi/mL):	4.756	0.057	0.505
Volume Used (mL):	5.161	4.161	4.760
Aliquot Volume (L, g, F):	1.66	0.425	4.161
Target Conc. (pCi/L, g, F):	108.53%	-2.74	0.425
Uncertainty (Calculated):	87.40%	N/A	0.425
Result (pCi/L, g, F):	Pass	Pass	0.425
LCS/LCSD Counting Uncertainty (pCi/L, g, F):	125%	125%	0.425
Numerical Performance Indicator:	75%	75%	0.425
Percent Recovery:			0.425
Status vs Numerical Indicator:			0.425
Status vs Recovery:			0.425
Upper % Recovery Limits:			0.425
Lower % Recovery Limits:			0.425

Duplicate Sample Assessment	
Sample I.D.:	LCS 69793
Duplicate Sample I.D.:	LCSD 69793
Sample Result (pCi/L, g, F):	5.161
Sample Duplicate Result (pCi/L, g, F):	4.761
Sample Result Counting Uncertainty (pCi/L, g, F):	4.161
Sample Duplicate Result Counting Uncertainty (pCi/L, g, F):	0.425
Are sample and/or duplicate results below RL?	NO
Duplicate Numerical Performance Indicator:	3.074
(Based on the LCS/LCSD Percent Recoveries) Duplicate RPD:	21.56%
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.

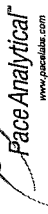
Comments:

Sample Matrix Spike Control Assessment		MS/MSD 1	MS/MSD 2
Sample Collection Date:	10/26/2022	10/26/2022	
Sample I.D.:	30534545030	30534545030	
Sample MS I.D.:	30534545031	30534545031	
Sample MSD I.D.:	19-033	19-033	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):	24.022	24.022	
Spike Volume Used in MS (mL):	0.20	0.20	
Spike Volume Used in MSD (mL):	0.257	0.257	
MS Aliquot (L, g, F):	18.663	18.663	
MS Target Conc. (pCi/L, g, F):	0.280	0.280	
MSD Target Conc. (pCi/L, g, F):	17.149	17.149	
MS Spike Uncertainty (calculated):	0.224	0.224	
MSD Spike Uncertainty (calculated):	0.206	0.206	
Sample Result Counting Uncertainty (pCi/L, g, F):	0.177	0.177	
Sample Matrix Spike Result:	19.829	19.829	
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.336	1.336	
Sample Matrix Spike Duplicate Result:	19.983	19.983	
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.306	1.306	
MS Numerical Performance Indicator:	1.336	1.336	
MSD Numerical Performance Indicator:	3.819	3.819	
MS Percent Recovery:	104.99%	104.99%	
MSD Percent Recovery:	115.16%	115.16%	
MS Status vs Numerical Indicator:	N/A	N/A	
MSD Status vs Numerical Indicator:	N/A	N/A	
MS Status vs Recovery:	Pass	Pass	
MSD Status vs Recovery:	Pass	Pass	
MS/MSD Upper % Recovery Limits:	125%	125%	
MS/MSD Lower % Recovery Limits:	75%	75%	

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	30534545030
Sample MS I.D.:	30534545031
Sample MSD I.D.:	19-033
Matrix Spike Result Counting Uncertainty (pCi/L, g, F):	1.336
Sample Matrix Spike Result:	19.829
Matrix Spike Duplicate Result Counting Uncertainty (pCi/L, g, F):	1.306
Sample Matrix Spike Duplicate Result:	19.983
Duplicate Numerical Performance Indicator:	-0.161
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	9.24%
MS/MSD Duplicate Status vs Numerical Indicator:	N/A
MS/MSD Duplicate Status vs RPD:	Pass
% RPD Limit:	25%

11/30/22

# Quality Control Sample Performance Assessment



**Analyst Must Manually Enter All Fields Highlighted in Yellow.**

Test: Ra-228  
Analyst: JJS1  
Date: 11/14/2022  
Worklist: 69794  
Matrix: WT

**Method Blank Assessment**

MB Sample ID: 2644742  
MB concentration: 0.735  
M/B 2 Sigma CSU: 0.356  
MB MDC: 0.599  
MB Numerical Performance Indicator: 4.04  
MB Status vs. Numerical Indicator: Fail\*  
MB Status vs. MDC: See Comment\*

Laboratory Control Sample Assessment		LCS/D (Y or N)?	N
Count Date:		LCS69794	LCS69794
Spike I.D.:		22-029	
Decay Corrected Spike Concentration (pCi/mL):		19.548	
Volume Used (mL):		0.20	
Aliquot Volume (L, g, F):		0.802	
Target Conc. (pCi/L, g, F):		4.872	
Uncertainty (Calculated):		0.351	
Result (pCi/L, g, F):		4.009	
LCS/LCSD 2 Sigma CSU (pCi/L, g, F):		0.928	
Numerical Performance Indicator:		-1.71	
Percent Recovery:		82.28%	
Status vs Numerical Indicator:		N/A	
Status vs Recovery:		Pass	
Upper % Recovery Limits:		135%	
Lower % Recovery Limits:		60%	

Duplicate Sample Assessment		Enter Duplicate sample IDs if other than LCS/LCSD in the space below.
Sample I.D.:	Sample I.D.:	
Duplicate Sample I.D.:	Duplicate Sample I.D.:	
Sample Result 2 Sigma CSU (pCi/L, g, F):	Sample Result 2 Sigma CSU (pCi/L, g, F):	
Sample Duplicate Result (pCi/L, g, F):	Sample Duplicate Result (pCi/L, g, F):	
Sample Duplicate 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:	
Duplicate Status vs Recovery:	% RPD Limit:	

Sample Matrix Spike Control Assessment		MS/MSD 1	MS/MSD 2
Sample Collection Date:		10/26/2022	
Spike I.D.:		30534545030	
Sample MS I.D.:		30534545031	
Sample MSD I.D.:		30534545032	
Spike I.D.:		22-029	
MS/MSD Decay Corrected Spike Concentration (pCi/mL):		19.731	
Spike Volume Used in MS (mL):		0.40	
Spike Volume Used in MSD (mL):		0.40	
MS Aliquot (L, g, F):		0.800	
MS Target Conc. (pCi/L, g, F):		9.865	
MSD Aliquot (L, g, F):		0.802	
MSD Target Conc. (pCi/L, g, F):		9.837	
MS Spike Uncertainty (calculated):		0.710	
MSD Spike Uncertainty (calculated):		0.708	
Sample Result 2 Sigma CSU (pCi/L, g, F):		0.316	
Sample Matrix Spike Result:		7.114	
Matrix Matrix Spike Duplicate Result:		1.470	
Sample Matrix Spike Duplicate Result:		7.035	
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):		1.470	
MS Numerical Performance Indicator:		-3.678	
MSD Numerical Performance Indicator:		68.91%	
MS Percent Recovery:		68.30%	
MSD Percent Recovery:		Fail****	
MS Status vs Numerical Indicator:		Fail****	
MSD Status vs Numerical Indicator:		Pass	
MS Status vs Recovery:		Pass	
MSD Status vs Recovery:		135%	
MS/MSD Upper % Recovery Limits:		60%	
MS/MSD Lower % Recovery Limits:			

Matrix Spike/Matrix Spike Duplicate Sample Assessment	
Sample I.D.:	30534545030
Sample MS I.D.:	30534545031
Sample MSD I.D.:	30534545032
Sample Collection Date:	10/26/2022
Spike I.D.:	22-029
Matrix Spike Result 2 Sigma CSU (pCi/L, g, F):	7.114
Sample Matrix Spike Duplicate Result:	1.470
Sample Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	7.035
Matrix Spike Duplicate Result 2 Sigma CSU (pCi/L, g, F):	1.470
Duplicate Numerical Performance Indicator:	0.074
Duplicate Numerical Performance Indicator:	0.89%
(Based on the Percent Recoveries) MS/MSD Duplicate RPD:	Pass
MS/MSD Duplicate Status vs Numerical Indicator:	Pass
MS/MSD Duplicate Status vs RPD:	36%
% 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.

\*\*\*\*If all other QC criteria pass, this batch is acceptable. The matrix spike duplicate result indicates a possible bias for this sample only and may not be applicable to any other samples in this analytical batch.

*MS/MSD pass to recover precision*

*VAC 11/28/22*

# Appendix D



## Appendix E. Horizontal Groundwater Flow Velocity Calculations Plant Gadsden Ash Pond

2022 Semi-Annual Monitoring Event								
Date of Measurement	PZ-6	MW-10	Distance	Hydraulic Gradient	Hydraulic Conductivity	Effective Porosity	Calculated Groundwater Flow Velocity	Calculated Groundwater Flow Velocity
	$h_1$ (ft)	$h_2$ (ft)	$\Delta l$ (ft)	$\Delta h/\Delta l$ (ft/ft)	K	n	(ft/d)	(ft/yr)
<b>10/24/2022</b>	508.98	508.35	1455.0	0.00043	12.33	0.20	0.03	9.74

Notes:

ft = feet

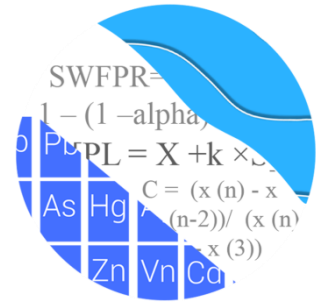
ft/d = feet/day

ft/ft = feet per foot

ft/yr = feet per year

# Appendix E

## GROUNDWATER STATS CONSULTING



December 28, 2022

Southern Company Services  
Attn: Mr. Greg Dyer  
3535 Colonnade Parkway  
Birmingham, AL 35243

Re: Plant Gadsden Ash Pond  
1<sup>st</sup> 2022 Semi-Annual Analysis – October 2022

Dear Mr. Dyer,

Groundwater Stats Consulting, formerly the statistical consulting division of Sanitas Technologies, is pleased to provide the statistical analysis of groundwater data for the October 2022 1<sup>st</sup> 2022 semi-annual sample event for Alabama Power Company's Plant Gadsden Ash Pond. The analysis complies with the federal rule for the Disposal of Coal Combustion Residuals from Electric Utilities (CCR Rule, 2015) and follows the United States Environmental Protection Agency (USEPA) Unified Guidance (2009).

Sampling began for the Coal Combustion Residuals (CCR) program in December 2017, and at least 8 background samples have been collected at each of the groundwater monitoring wells.

The monitoring well network, as provided by Southern Company Services, consists of the following:

- **Upgradient wells:** GSD-AP-MW-14, GSD-AP-MW-16, and GSD-AP-MW-17
- **Downgradient wells:** GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-7, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-PZ-1, GSD-AP-PZ-2, GSD-AP-PZ-5, and GSD-AP-PZ-6

- **Delineation wells:** GSD-AP-MW-2VA, GSD-AP-MW-2VB, GSD-AP-MW-4V, GSD-AP-MW-18H, GSD-AP-MW-19H, GSD-AP-MW-20H, GSD-AP-MW-21VC, and GSD-AP-MW-22VB
- **Piezometers:** GSD-AP-MW-2V

Note that delineation wells did not require statistics; therefore, data for these wells were plotted only on time series and box plots. Downgradient well GSD-AP-PZ-2 has recently been converted from a piezometer to a downgradient well. Since this well has the required minimum of 4 samples, data from this well are evaluated with confidence intervals for Appendix IV constituents. Prediction limits will be used to evaluate Appendix III constituents when a minimum of 8 samples are available.

Data were sent electronically to Groundwater Stats Consulting, and the statistical analysis was reviewed by Kristina Rayner, Founder and Senior Statistician of Groundwater Stats Consulting.

The 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 list of Appendix IV downgradient well/constituent pairs containing 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). A substitution of the most recent reporting limit is used for non-detect data. 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. Previously flagged outliers may be seen in a lighter font and as a disconnected symbol on the graphs, and a summary of all 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 analysis of the spatial variability of groundwater quality data among wells upgradient of the facility;

and 4) eligibility of downgradient wells when intrawell statistical methods are recommended. Power curves are provided in this report to demonstrate that the selected statistical methods for Appendix III parameters comply with the USEPA Unified Guidance. The EPA suggests that the selected statistical method should provide at least 55% power at 3 standard deviations or at least 80% power at 4 standard deviations. Power curves are based on the following statistical methods and site/data characteristics:

- Semi-Annual Sampling
- Intrawell Prediction Limits with 1-of-2 resample plan
- Interwell Prediction Limits with 1-of-2 resample plan
- # Background Samples (Intrawell): 13
- # Background Samples (Interwell): 49
- # Constituents: 7
- # Downgradient wells: 15

Note that while the 1-of-3 resample plan was initially recommended for parameters that use intrawell statistical methods due to the sample size; the power curves included in this analysis demonstrate that the increased number of samples in background provide sufficient power using the 1-of-2 resample plan.

### **Summary of Statistical Methods – Appendix III Parameters**

Based on the earlier evaluation described above, the following statistical methods were selected:

- Intrawell prediction limits, combined with a 1-of-2 resample plan for fluoride and pH
- Interwell prediction limits, combined with a 1-of-2 resample plan for boron, calcium, chloride, 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 annual false positive rate associated with parametric limits is fixed at 10% as recommended by the EPA Unified Guidance (2009), the false positive rate associated with nonparametric limits is not fixed and depends 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 (USEPA, 2009), data are analyzed using either parametric or non-parametric prediction limits as appropriate.



- 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, 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 intrawell case, data for all wells and constituents may be re-evaluated when a minimum of 4 new samples are available to determine whether earlier concentrations are representative of present-day groundwater quality. In the interwell case, prediction limits are updated with upgradient well data following each sampling event after careful screening for any new outliers. While not required for this report, in some cases, deselecting the earlier portion of data may be necessary prior to construction of limits so that resulting statistical limits are conservative (lower) from a regulatory perspective and capable of rapidly detecting 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 April 2019**

### Outlier Analysis

Time series plots were 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 were 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, two outliers were identified. A summary of those findings was included with the 2019 background screening. While this is not the case in the present data set, when the most recent value is identified as an outlier, values are not

flagged in the database at this time as they may represent a possible 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 one value was flagged as an outlier in the database since the other value was similar to remaining measurements within the same well and neighboring wells. 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.

### 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 Testing

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 showed several statistically significant decreasing and increasing trends for the Appendix III parameters and were included with the 2019

background screening. Most of the trends noted were relatively low in magnitude when compared to average concentrations, and the background time period is short with less than two years of record, making it difficult to separate trends from normal year-to-year variation; therefore, no adjustments were made to the data sets. If the observed decreasing or increasing trends persist over a longer time frame, some records may need to be truncated.

### Appendix III – Evaluation of Statistical Approaches

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.

Based on the results of the 2019 background screening for Appendix III parameters, intrawell methods were recommended for fluoride and pH, and interwell methods were recommended for boron, calcium, chloride, sulfate, and TDS. If further evaluation confirms natural variation in groundwater, intrawell methods will be considered for parameters currently recommended for interwell methods.

### **Summary of Background Update – Fall 2021**

#### Outlier Analysis

Prior to performing prediction limits, proposed background data through March 2021 were reviewed through visual screening to identify any newly suspected outliers at all wells for fluoride and pH and at upgradient wells for boron, calcium, chloride, sulfate, and TDS. When identified as outliers, values were flagged with “o” and excluded to reduce variation, better represent background conditions, and provide limits that are conservative from a regulatory perspective. No suspected outliers were identified for Appendix III parameters. As mentioned above, flagged data are displayed in a lighter font and as a disconnected symbol on the time series reports, as well as in a lighter font on the accompanying data pages.

## Mann-Whitney Test of Medians

For constituents requiring intrawell prediction limits, the Mann-Whitney (Wilcoxon Rank Sum) test was used to compare the medians of historical data through February 7, 2019, to compliance data through March 2021. When the medians of the two groups are not statistically significantly different at the 99% confidence level, background data sets are updated to include the newer compliance data. Statistically significant differences (either an increase or decrease in median concentrations) were found between the two groups for the following well/constituent pairs:

Increase:

- Fluoride: GSD-AP-MW-1

Decrease:

- pH: GSD-AP-MW-1, GSD-AP-MW-3, GSD-AP-PZ-5, GSD-AP-MW-7, GSD-AP-MW-8, and GSD-AP-MW-11

Typically, when the test concludes that the medians of the two groups are statistically significantly different, particularly in the downgradient wells, the background data are not updated to include the newer data unless it can be reasonably justified that the change in concentrations reflects a naturally occurring shift unrelated to practices at the site. In studies such as the current one, in which at least one of the segments being compared is of short duration, the comparison is complicated by the fact that normal short-term variation may be mistaken for long-term change in medians.

While a statistically significant increase in median concentrations was identified for fluoride in well GSD-AP-MW-1, this record was updated with more recent data because the compliance data contained 100% non-detects. Although statistically significant decreases in median concentrations were identified for pH in wells GSD-AP-MW-1, GSD-AP-MW-3, GSD-AP-PZ-5, GSD-AP-MW-7, GSD-AP-MW-8, and GSD-AP-MW-11, the magnitude of the decreases were marginal compared to the historical concentrations. Therefore, all of the records with statistically significant Mann-Whitney results for CCR Appendix III constituents that use intrawell methods were updated.

All records will be re-evaluated during the next background update and if future concentrations are similar to those observed currently, the earlier portion of the records may require deselection so only more recent data are used to construct statistical limits which are reflective of present-day water quality conditions. If, however, concentrations return to historical lower levels, more recent higher measurements may be flagged as outliers and deselected prior to construction of statistical limits.

## Trend Tests – Upgradient Wells

The Sen’s Slope/Mann Kendall trend test was used to evaluate the entire record of data from upgradient wells for parameters utilizing interwell prediction limits. When statistically significant increasing trends are identified in upgradient wells, the earlier portion of data may require deselection prior to construction of interwell statistical limits if the trending data would result in statistical limits that are not conservative from a regulatory perspective. The following upgradient well/constituent pairs were found to have statistically significant trends:

### Increasing

- None

### Decreasing

- Chloride: GSD-AP-MW-17

The slope for chloride at well GSD-AP-MW-17 is influenced by several similar and slightly higher values earlier in the record, but the median slope for the overall record was small relative to average concentrations at these wells and reported measurements were similar across all upgradient wells. Therefore, no adjustments were required.

## **Evaluation of Appendix III Parameters – October 2022**

Intrawell limits constructed from carefully screened background data from within each well serve to provide statistical limits that are representative of the background data population, and that will rapidly identify a change in more recent compliance data from within a given well. The most recent sample from the same well is compared to its respective background. This statistical method removes the element of variation from across wells and eliminates the chance of mistaking natural spatial variation for a release from the facility. Background data are re-evaluated when a minimum of 4 compliance samples are available.

Interwell prediction limits pool upgradient well data to establish a background limit for an individual constituent. The most recent sample from each downgradient well is compared to the background limit to determine whether initial exceedances are present.

For some well/constituent pairs containing <15% non-detects in background, parametric prediction limits slightly changed compared to those established during the background update. An update was made to the Sanitas™ statistical software in October 2022 that determines the percentage of non-detects within a given background record rather than

all records evaluated for a given constituent. Simple substitution of ½ the reporting limit is applied when the percentage of non-detects in background is <15% in accordance with the USEPA EPA Unified Guidance (2009). No significant changes resulted from this implementation.

### Prediction Limits

Intrawell prediction limits, combined with a 1-of-2 resample plan, were constructed for fluoride and pH using screened background data through March 2021 at each well (Figure D). The October 2022 sample at each well was compared to its respective intrawell prediction limit. Note that during this event, the reporting limit for fluoride increased from 0.1 mg/L to 0.125 mg/L and resulted in a slight change in the prediction limit for well GSD-AP-MW-3. Previously flagged outliers may be seen in a lighter font and as a disconnected symbol on the graphs, and a summary of all flagged outliers follows this report.

Interwell prediction limits combined with a 1-of-2 verification strategy were constructed for boron, calcium, chloride, sulfate, and TDS (Figure E).

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 the resample confirms the initial exceedance, a statistically significant increase (SSI) is identified, and further research is required to identify the cause of the exceedance (i.e., impact from the site, natural variation, or an off-site source). If a resample falls within the statistical limit, the initial exceedance is considered to be a false positive result; therefore, no further action is necessary. A summary of the prediction limits results may be found in the Prediction Limit Summary tables following this letter (pages 16-20). The following exceedances were noted for the intrawell and interwell prediction limits:

#### Intrawell

- Fluoride: GSD-AP-MW-7
- pH: GSD-AP-MW-5 and GSD-AP-MW-11

#### Interwell

- Boron: GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, and GSD-AP-MW-11
- Calcium: GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-MW-10, GSD-AP-MW-11, and GSD-AP-MW-12

- Chloride: GSD-AP-MW-1, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-7, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-MW-10, GSD-AP-MW-11, and GSD-AP-MW-12
- Sulfate: GSD-AP-MW-1, GSD-AP-MW-11, and GSD-AP-MW-12
- TDS: GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-11, and GSD-AP-MW-12

### Trend Tests

When prediction limit exceedances are identified in downgradient wells, data are further evaluated using the Sen's Slope/Mann Kendall trend test to determine whether concentrations are statistically increasing, decreasing, or stable at the 99% confidence level (Figure F). 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. The existence of similar trends in both upgradient and downgradient wells is an indication of natural variability in groundwater that is unrelated to practices at the site. A summary of the trend test results follows this letter (pages 21-22). Statistically significant trends were identified for the following well/constituent pairs:

#### Increasing:

- Boron: GSD-AP-MW-11
- Calcium: GSD-AP-MW-11
- Sulfate: GSD-AP-MW-11
- TDS: GSD-AP-MW-11

#### Decreasing:

- Boron: GSD-AP-MW-1, GSD-AP-MW-2, GSD-AP-MW-4, and GSD-AP-MW-5
- Calcium: GSD-AP-MW-1, GSD-AP-MW-2, and GSD-AP-MW-3
- Chloride: GSD-AP-MW-17 (upgradient), GSD-AP-MW-3, and GSD-AP-MW-5
- pH: GSD-AP-MW-16 (upgradient) and GSD-AP-MW-11
- Sulfate: GSD-AP-MW-17 (upgradient)
- TDS: GSD-AP-MW-1, GSD-AP-MW-2, and GSD-AP-MW-3

## **Evaluation of Appendix IV Parameters – October 2022**

Data from all wells for Appendix IV parameters are reassessed for outliers during each analysis and no new values were flagged as outliers. A summary of previously flagged outliers follows this report (Figure C).

In accordance with Alabama Department of Environmental Management (ADEM), the Groundwater Protections Standards (GWPS) were updated during the 2021 1<sup>st</sup> semi-annual statistical analysis. The GWPS will be updated again during the 2023 1<sup>st</sup> semi-annual statistical analysis. The methodology used to create these GWPS is described below.

### Interwell Upper Tolerance Limits

First, background limits were determined using tolerance limits constructed from pooled upgradient well data through October 2021 (Figure G). The tolerance limits contain a known fraction (coverage) of the background population with a known level of confidence. The confidence and coverage levels for nonparametric tolerance limits are dependent upon the number of background samples. As requested by ADEM to eliminate variation among upgradient well data, nonparametric tolerance limits, which use the highest value in background as the statistical limit, were constructed. A summary table of the upper tolerance limits follows this report (page 23).

### Groundwater Protection Standards

These background limits were then compared to the Maximum Contaminant Levels (MCLs) for each parameter, and the higher of the two was used as the GWPS (Figure H, page 24)) in the confidence interval comparisons described below.

### Confidence Intervals

Confidence intervals were then constructed on downgradient wells using a maximum of the most recent 8 samples through October 2022 for each of the Appendix IV parameters (Figure I). These intervals were constructed as either parametric or nonparametric confidence intervals depending on the data distribution and percentage of non-detects. When data followed a normal or transformed-normal distribution, parametric confidence intervals were used for Appendix IV parameters. Nonparametric confidence intervals, which use the highest and lowest values in background as interval limits, were constructed when data did not follow a normal or transformed-normal distribution or when there were greater than 50% non-detects.



As mentioned above, well/constituent pairs containing 100% non-detects did not require statistics and were, therefore, deselected prior to construction confidence intervals. A list of deselected well/constituent pairs also follows this report. Each confidence interval was compared with the corresponding GWPS. Only when the entire confidence interval is above the GWPS is the well/constituent pair considered to exceed its respective standard. Both a tabular summary and graphical presentation of the confidence interval results follow this letter (pages 25-27). No exceedances were noted for any of the well/constituent pairs.

- Arsenic: GSD-AP-MW-2 and GSD-AP-MW-4

Thank you for the opportunity to assist you in the statistical analysis of groundwater quality for Plant Gadsden Ash Pond. If you have any questions or comments, please feel free to contact us.

For Groundwater Stats Consulting,

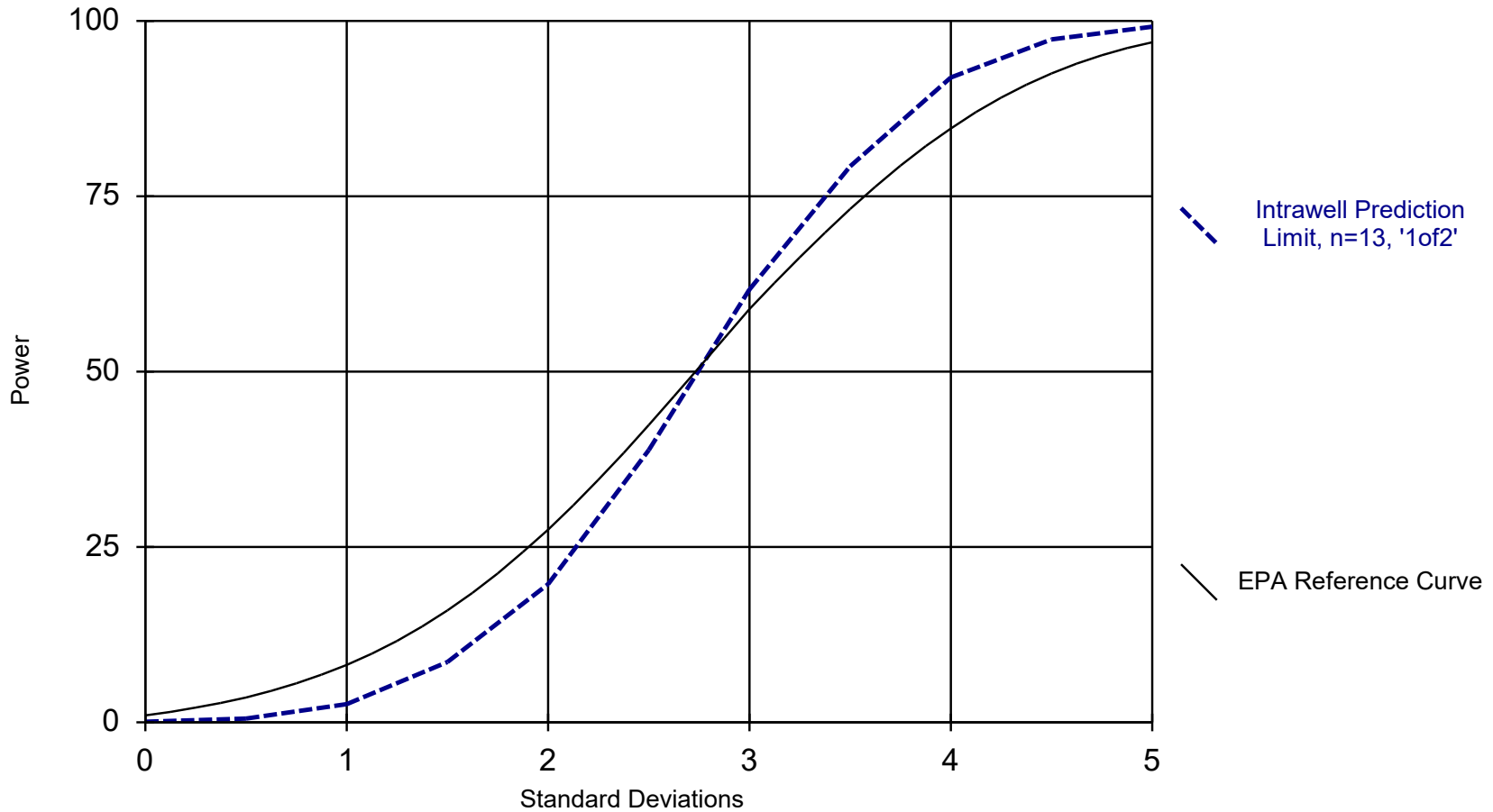


Andrew Collins  
Project Manager



Kristina Rayner  
Senior Statistician

### Intrawell Power Curve

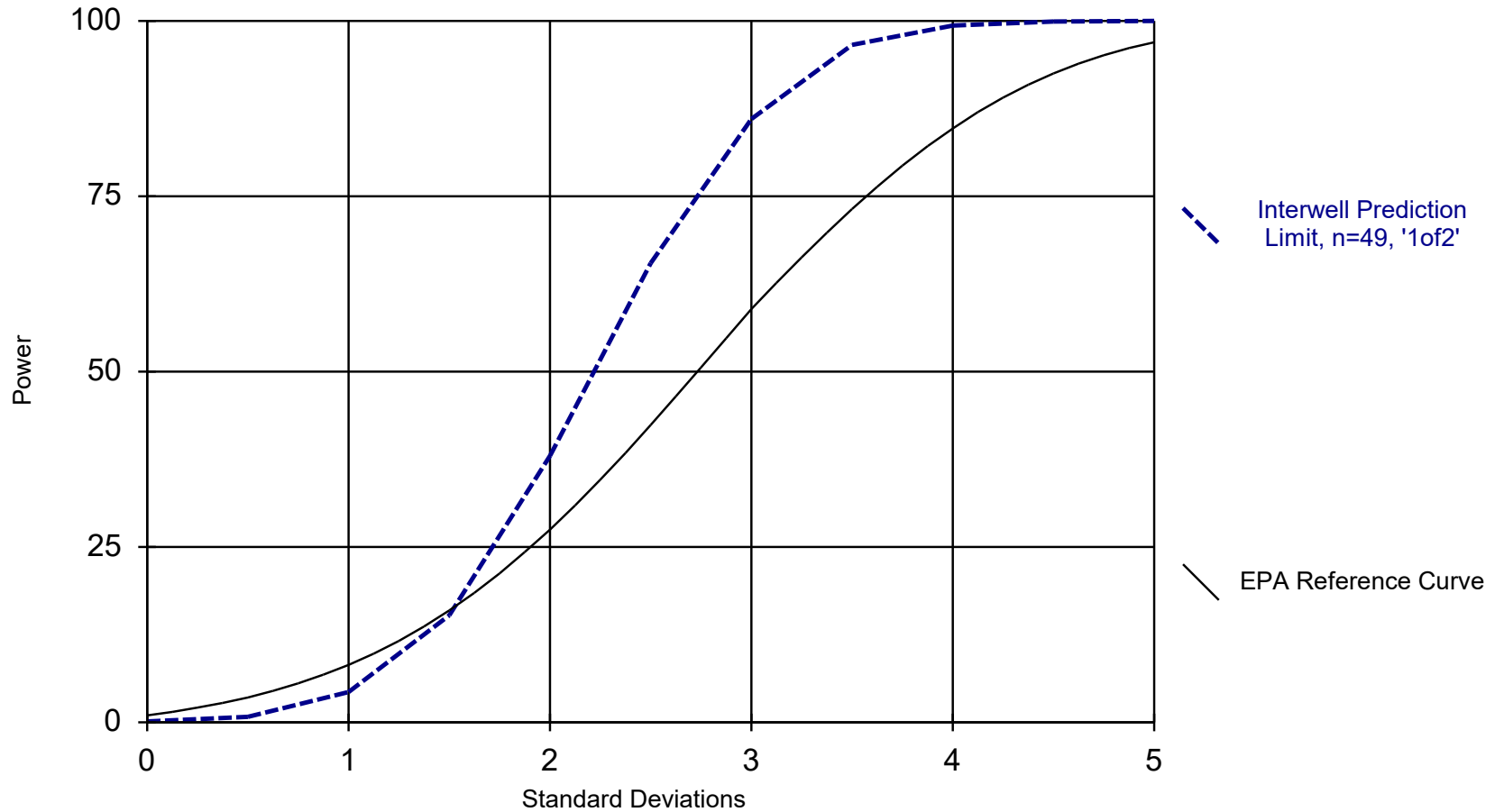


Kappa = 2.711, based on 15 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 12/28/2022 7:41 AM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Interwell Power Curve



Kappa = 2.142, based on 15 compliance wells and 7 constituents, evaluated semi-annually (this report reflects annual total).

Analysis Run 12/28/2022 7:40 AM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

# 100% Non-Detects: Appendix IV Downgradient

Analysis Run 12/27/2022 7:02 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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## Antimony (mg/L)

GSD-AP-MW-1, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-7, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-PZ-1, GSD-AP-PZ-2

## Beryllium (mg/L)

GSD-AP-MW-1, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-7, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-PZ-1, GSD-AP-PZ-2, GSD-AP-PZ-5, GSD-AP-PZ-6

## Cadmium (mg/L)

GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-9, GSD-AP-PZ-1, GSD-AP-PZ-2, GSD-AP-PZ-6

## Fluoride (mg/L)

GSD-AP-MW-12, GSD-AP-PZ-2, GSD-AP-PZ-5, GSD-AP-PZ-6

## Lead (mg/L)

GSD-AP-MW-1, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-7, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-PZ-1

## Lithium (mg/L)

GSD-AP-MW-1, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-7, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-PZ-1, GSD-AP-PZ-2, GSD-AP-PZ-5, GSD-AP-PZ-6

## Mercury (mg/L)

GSD-AP-MW-1, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-7, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-PZ-1, GSD-AP-PZ-2, GSD-AP-PZ-5

## Molybdenum (mg/L)

GSD-AP-MW-12, GSD-AP-MW-3, GSD-AP-MW-6, GSD-AP-PZ-5, GSD-AP-PZ-6

## Selenium (mg/L)

GSD-AP-MW-1, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-7, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-PZ-1, GSD-AP-PZ-2, GSD-AP-PZ-5, GSD-AP-PZ-6

## Thallium (mg/L)

GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-MW-4, GSD-AP-MW-5, GSD-AP-MW-6, GSD-AP-MW-7, GSD-AP-MW-8, GSD-AP-MW-9, GSD-AP-PZ-1, GSD-AP-PZ-2, GSD-AP-PZ-5, GSD-AP-PZ-6

# Intrawell Prediction Limits - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 12/27/2022, 6:46 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	GSD-AP-MW-7	0.109	n/a	10/26/2022	0.128	Yes	13	0.0755	0.01236	23.08	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-11	7.012	6.206	10/26/2022	6.2	Yes	13	6.609	0.1486	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-5	6.352	5.982	10/26/2022	6.44	Yes	13	6.167	0.06836	0	None	No	0.0002508	Param Intra 1 of 2

# Intrawell Prediction Limits - All Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 12/27/2022, 6:46 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	GSD-AP-MW-1	0.1151	n/a	10/26/2022	0.125ND	No	13	0.06075	0.02003	38.46	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-10	0.1381	n/a	10/26/2022	0.0929J	No	13	0.08731	0.01872	0	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-11	0.1122	n/a	10/26/2022	0.069J	No	13	0.0646	0.01756	23.08	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-12	0.125	n/a	10/26/2022	0.125ND	No	13	n/a	n/a	92.31	n/a	n/a	0.009692	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-14	0.2947	n/a	10/26/2022	0.125ND	No	13	0.1209	0.06411	46.15	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-16	0.1599	n/a	10/25/2022	0.125ND	No	14	0.1026	0.02163	50	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-17	0.2376	n/a	10/25/2022	0.15	No	13	0.1837	0.01989	0	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-2	0.3534	n/a	10/25/2022	0.271	No	13	0.2362	0.04323	0	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-3	0.1359	n/a	10/26/2022	0.125ND	No	14	0.07651	0.02239	28.57	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-4	0.2837	n/a	10/26/2022	0.283	No	13	0.2314	0.01931	0	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-5	0.08126	n/a	10/26/2022	0.0845J	No	13	0.05878	0.008293	0	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-6	0.09393	n/a	10/26/2022	0.125ND	No	13	0.3704	0.03104	38.46	Kaplan-Meier	x^(1/3)	0.0005016	Param Intra 1 of 2
<b>Fluoride (mg/L)</b>	<b>GSD-AP-MW-7</b>	<b>0.109</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>0.128</b>	<b>Yes</b>	<b>13</b>	<b>0.0755</b>	<b>0.01236</b>	<b>23.08</b>	<b>Kaplan-Meier</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Intra 1 of 2</b>
Fluoride (mg/L)	GSD-AP-MW-8	0.1549	n/a	10/26/2022	0.0911J	No	13	0.09159	0.02334	7.692	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-9	0.1718	n/a	10/26/2022	0.119J	No	13	0.01358	0.00588	7.692	None	x^2	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-PZ-1	0.1638	n/a	10/26/2022	0.125ND	No	13	0.109	0.02021	7.692	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-PZ-5	0.125	n/a	10/26/2022	0.125ND	No	13	n/a	n/a	53.85	n/a	n/a	0.009692	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	GSD-AP-PZ-6	0.125	n/a	10/26/2022	0.125ND	No	13	n/a	n/a	53.85	n/a	n/a	0.009692	NP Intra (NDs) 1 of 2
pH (pH)	GSD-AP-MW-1	6.84	5.503	10/26/2022	5.86	No	13	6.172	0.2466	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-10	7.042	6.384	10/26/2022	6.84	No	13	2060	147.3	0	None	x^4	0.0002508	Param Intra 1 of 2
<b>pH (pH)</b>	<b>GSD-AP-MW-11</b>	<b>7.012</b>	<b>6.206</b>	<b>10/26/2022</b>	<b>6.2</b>	<b>Yes</b>	<b>13</b>	<b>6.609</b>	<b>0.1486</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0002508</b>	<b>Param Intra 1 of 2</b>
pH (pH)	GSD-AP-MW-12	5.692	5.209	10/26/2022	5.52	No	13	5.451	0.08911	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-14	4.1	3.25	10/26/2022	4.07	No	13	n/a	n/a	0	n/a	n/a	0.01938	NP Intra (normality) 1 of 2
pH (pH)	GSD-AP-MW-16	5.683	3.348	10/25/2022	4.64	No	13	4.515	0.4307	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-17	10.35	6.943	10/25/2022	7.97	No	13	8.645	0.6277	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-2	6.801	6.273	10/25/2022	6.64	No	13	6.537	0.09742	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-3	6.88	5.224	10/26/2022	5.97	No	13	6.052	0.3053	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-4	6.998	6.332	10/26/2022	6.67	No	13	6.665	0.1229	0	None	No	0.0002508	Param Intra 1 of 2
<b>pH (pH)</b>	<b>GSD-AP-MW-5</b>	<b>6.352</b>	<b>5.982</b>	<b>10/26/2022</b>	<b>6.44</b>	<b>Yes</b>	<b>13</b>	<b>6.167</b>	<b>0.06836</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0002508</b>	<b>Param Intra 1 of 2</b>
pH (pH)	GSD-AP-MW-6	6.703	5.385	10/26/2022	5.98	No	13	6.044	0.243	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-7	6.847	5.694	10/26/2022	6.44	No	13	6.271	0.2126	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-8	7.032	6.084	10/26/2022	6.68	No	13	6.558	0.1748	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-9	7.152	6.581	10/26/2022	7.07	No	14	6.866	0.1077	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-PZ-1	6.83	5.85	10/26/2022	6.66	No	13	n/a	n/a	0	n/a	n/a	0.01938	NP Intra (normality) 1 of 2
pH (pH)	GSD-AP-PZ-5	6.328	4.632	10/26/2022	5.31	No	13	5.48	0.3127	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-PZ-6	5.699	5.348	10/26/2022	5.43	No	13	5.523	0.06473	0	None	No	0.0002508	Param Intra 1 of 2

# Interwell Prediction Limits - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 12/27/2022, 6:49 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	N Bg	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	GSD-AP-MW-1	0.1015	n/a	10/26/2022	0.977	Yes	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-11	0.1015	n/a	10/26/2022	0.306	Yes	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-2	0.1015	n/a	10/25/2022	0.5	Yes	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-3	0.1015	n/a	10/26/2022	0.85	Yes	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-4	0.1015	n/a	10/26/2022	0.371	Yes	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-5	0.1015	n/a	10/26/2022	0.23	Yes	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Calcium (mg/L)	GSD-AP-MW-1	33.58	n/a	10/26/2022	200	Yes	49	4.222	0.7344	0	None	None	sqrt(x)	0.0005016	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-10	33.58	n/a	10/26/2022	39.5	Yes	49	4.222	0.7344	0	None	None	sqrt(x)	0.0005016	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-11	33.58	n/a	10/26/2022	129	Yes	49	4.222	0.7344	0	None	None	sqrt(x)	0.0005016	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-12	33.58	n/a	10/26/2022	60.2	Yes	49	4.222	0.7344	0	None	None	sqrt(x)	0.0005016	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-2	33.58	n/a	10/25/2022	86.9	Yes	49	4.222	0.7344	0	None	None	sqrt(x)	0.0005016	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-3	33.58	n/a	10/26/2022	55.3	Yes	49	4.222	0.7344	0	None	None	sqrt(x)	0.0005016	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-4	33.58	n/a	10/26/2022	33.6	Yes	49	4.222	0.7344	0	None	None	sqrt(x)	0.0005016	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-5	33.58	n/a	10/26/2022	39.6	Yes	49	4.222	0.7344	0	None	None	sqrt(x)	0.0005016	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-8	33.58	n/a	10/26/2022	63.7	Yes	49	4.222	0.7344	0	None	None	sqrt(x)	0.0005016	Param Inter 1 of 2
Calcium (mg/L)	GSD-AP-MW-9	33.58	n/a	10/26/2022	47.7	Yes	49	4.222	0.7344	0	None	None	sqrt(x)	0.0005016	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-1	4.048	n/a	10/26/2022	6.02	Yes	49	3.229	0.382	0	None	None	No	0.0005016	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-10	4.048	n/a	10/26/2022	5.87	Yes	49	3.229	0.382	0	None	None	No	0.0005016	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-11	4.048	n/a	10/26/2022	4.98	Yes	49	3.229	0.382	0	None	None	No	0.0005016	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-12	4.048	n/a	10/26/2022	5.76	Yes	49	3.229	0.382	0	None	None	No	0.0005016	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-3	4.048	n/a	10/26/2022	4.38	Yes	49	3.229	0.382	0	None	None	No	0.0005016	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-4	4.048	n/a	10/26/2022	7.88	Yes	49	3.229	0.382	0	None	None	No	0.0005016	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-5	4.048	n/a	10/26/2022	6.4	Yes	49	3.229	0.382	0	None	None	No	0.0005016	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-6	4.048	n/a	10/26/2022	9.4	Yes	49	3.229	0.382	0	None	None	No	0.0005016	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-7	4.048	n/a	10/26/2022	7.09	Yes	49	3.229	0.382	0	None	None	No	0.0005016	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-8	4.048	n/a	10/26/2022	5.72	Yes	49	3.229	0.382	0	None	None	No	0.0005016	Param Inter 1 of 2
Chloride (mg/L)	GSD-AP-MW-9	4.048	n/a	10/26/2022	6.99	Yes	49	3.229	0.382	0	None	None	No	0.0005016	Param Inter 1 of 2
Sulfate (mg/L)	GSD-AP-MW-1	207	n/a	10/26/2022	512	Yes	49	n/a	n/a	0	n/a	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-11	207	n/a	10/26/2022	278	Yes	49	n/a	n/a	0	n/a	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-12	207	n/a	10/26/2022	230	Yes	49	n/a	n/a	0	n/a	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-1	276.7	n/a	10/26/2022	840	Yes	49	167.4	51.01	0	None	None	No	0.0005016	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-11	276.7	n/a	10/26/2022	545	Yes	49	167.4	51.01	0	None	None	No	0.0005016	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-12	276.7	n/a	10/26/2022	402	Yes	49	167.4	51.01	0	None	None	No	0.0005016	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-2	276.7	n/a	10/25/2022	337	Yes	49	167.4	51.01	0	None	None	No	0.0005016	Param Inter 1 of 2
Total Dissolved Solids (mg/L)	GSD-AP-MW-3	276.7	n/a	10/26/2022	328	Yes	49	167.4	51.01	0	None	None	No	0.0005016	Param Inter 1 of 2

# Interwell Prediction Limits - All Results

Plant Gadsden    Client: Southern Company    Data: Plant Gadsden CCR    Printed 12/27/2022, 6:49 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bq	N Bq	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-1</b>	<b>0.1015</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>0.977</b>	<b>Yes</b>	<b>49</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>55.1</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0007557</b>	<b>NP Inter (NDs) 1 of 2</b>
Boron (mg/L)	GSD-AP-MW-10	0.1015	n/a	10/26/2022	0.0868J	No	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>0.1015</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>0.306</b>	<b>Yes</b>	<b>49</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>55.1</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0007557</b>	<b>NP Inter (NDs) 1 of 2</b>
Boron (mg/L)	GSD-AP-MW-12	0.1015	n/a	10/26/2022	0.0995J	No	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>0.1015</b>	<b>n/a</b>	<b>10/25/2022</b>	<b>0.5</b>	<b>Yes</b>	<b>49</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>55.1</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0007557</b>	<b>NP Inter (NDs) 1 of 2</b>
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-3</b>	<b>0.1015</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>0.85</b>	<b>Yes</b>	<b>49</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>55.1</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0007557</b>	<b>NP Inter (NDs) 1 of 2</b>
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-4</b>	<b>0.1015</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>0.371</b>	<b>Yes</b>	<b>49</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>55.1</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0007557</b>	<b>NP Inter (NDs) 1 of 2</b>
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-5</b>	<b>0.1015</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>0.23</b>	<b>Yes</b>	<b>49</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>55.1</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0007557</b>	<b>NP Inter (NDs) 1 of 2</b>
Boron (mg/L)	GSD-AP-MW-6	0.1015	n/a	10/26/2022	0.0788J	No	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-7	0.1015	n/a	10/26/2022	0.0839J	No	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-8	0.1015	n/a	10/26/2022	0.0526J	No	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-9	0.1015	n/a	10/26/2022	0.0595J	No	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-PZ-1	0.1015	n/a	10/26/2022	0.1015ND	No	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-PZ-5	0.1015	n/a	10/26/2022	0.1015ND	No	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-PZ-6	0.1015	n/a	10/26/2022	0.1015ND	No	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-1</b>	<b>33.58</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>200</b>	<b>Yes</b>	<b>49</b>	<b>4.222</b>	<b>0.7344</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-10</b>	<b>33.58</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>39.5</b>	<b>Yes</b>	<b>49</b>	<b>4.222</b>	<b>0.7344</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>33.58</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>129</b>	<b>Yes</b>	<b>49</b>	<b>4.222</b>	<b>0.7344</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-12</b>	<b>33.58</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>60.2</b>	<b>Yes</b>	<b>49</b>	<b>4.222</b>	<b>0.7344</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>33.58</b>	<b>n/a</b>	<b>10/25/2022</b>	<b>86.9</b>	<b>Yes</b>	<b>49</b>	<b>4.222</b>	<b>0.7344</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-3</b>	<b>33.58</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>55.3</b>	<b>Yes</b>	<b>49</b>	<b>4.222</b>	<b>0.7344</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-4</b>	<b>33.58</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>33.6</b>	<b>Yes</b>	<b>49</b>	<b>4.222</b>	<b>0.7344</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-5</b>	<b>33.58</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>39.6</b>	<b>Yes</b>	<b>49</b>	<b>4.222</b>	<b>0.7344</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
Calcium (mg/L)	GSD-AP-MW-6	33.58	n/a	10/26/2022	12.2	No	49	4.222	0.7344	0	None	sqrt(x)	0.0005016	Param Inter 1 of 2	
Calcium (mg/L)	GSD-AP-MW-7	33.58	n/a	10/26/2022	21.4	No	49	4.222	0.7344	0	None	sqrt(x)	0.0005016	Param Inter 1 of 2	
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-8</b>	<b>33.58</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>63.7</b>	<b>Yes</b>	<b>49</b>	<b>4.222</b>	<b>0.7344</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-9</b>	<b>33.58</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>47.7</b>	<b>Yes</b>	<b>49</b>	<b>4.222</b>	<b>0.7344</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
Calcium (mg/L)	GSD-AP-PZ-1	33.58	n/a	10/26/2022	23.1	No	49	4.222	0.7344	0	None	sqrt(x)	0.0005016	Param Inter 1 of 2	
Calcium (mg/L)	GSD-AP-PZ-5	33.58	n/a	10/26/2022	3.09	No	49	4.222	0.7344	0	None	sqrt(x)	0.0005016	Param Inter 1 of 2	
Calcium (mg/L)	GSD-AP-PZ-6	33.58	n/a	10/26/2022	3.42	No	49	4.222	0.7344	0	None	sqrt(x)	0.0005016	Param Inter 1 of 2	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-1</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>6.02</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-10</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>5.87</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>4.98</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-12</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>5.76</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
Chloride (mg/L)	GSD-AP-MW-2	4.048	n/a	10/25/2022	2.45	No	49	3.229	0.382	0	None	No	0.0005016	Param Inter 1 of 2	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-3</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>4.38</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-4</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>7.88</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-5</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>6.4</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-6</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>9.4</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-7</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>7.09</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-8</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>5.72</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-9</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>6.99</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
Chloride (mg/L)	GSD-AP-PZ-1	4.048	n/a	10/26/2022	3.39	No	49	3.229	0.382	0	None	No	0.0005016	Param Inter 1 of 2	
Chloride (mg/L)	GSD-AP-PZ-5	4.048	n/a	10/26/2022	4.03	No	49	3.229	0.382	0	None	No	0.0005016	Param Inter 1 of 2	
Chloride (mg/L)	GSD-AP-PZ-6	4.048	n/a	10/26/2022	3.5	No	49	3.229	0.382	0	None	No	0.0005016	Param Inter 1 of 2	
<b>Sulfate (mg/L)</b>	<b>GSD-AP-MW-1</b>	<b>207</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>512</b>	<b>Yes</b>	<b>49</b>	<b>n/a</b>	<b>n/a</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0007557</b>	<b>NP Inter (normality) 1 of 2</b>	
Sulfate (mg/L)	GSD-AP-MW-10	207	n/a	10/26/2022	4.42	No	49	n/a	n/a	0	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2	
<b>Sulfate (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>207</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>278</b>	<b>Yes</b>	<b>49</b>	<b>n/a</b>	<b>n/a</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0007557</b>	<b>NP Inter (normality) 1 of 2</b>	
<b>Sulfate (mg/L)</b>	<b>GSD-AP-MW-12</b>	<b>207</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>230</b>	<b>Yes</b>	<b>49</b>	<b>n/a</b>	<b>n/a</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0007557</b>	<b>NP Inter (normality) 1 of 2</b>	
Sulfate (mg/L)	GSD-AP-MW-2	207	n/a	10/25/2022	111	No	49	n/a	n/a	0	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2	



# Interwell Prediction Limits - All Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 12/27/2022, 6:49 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	N	Bg	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Sulfate (mg/L)	GSD-AP-MW-3	207	n/a	10/26/2022	206	No	49	n/a	n/a	n/a	0	n/a	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-4	207	n/a	10/26/2022	61.8	No	49	n/a	n/a	n/a	0	n/a	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-5	207	n/a	10/26/2022	16.1	No	49	n/a	n/a	n/a	0	n/a	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-6	207	n/a	10/26/2022	12.2	No	49	n/a	n/a	n/a	0	n/a	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-7	207	n/a	10/26/2022	11.4	No	49	n/a	n/a	n/a	0	n/a	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-8	207	n/a	10/26/2022	10.1	No	49	n/a	n/a	n/a	0	n/a	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-9	207	n/a	10/26/2022	13.8	No	49	n/a	n/a	n/a	0	n/a	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-PZ-1	207	n/a	10/26/2022	3.43	No	49	n/a	n/a	n/a	0	n/a	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-PZ-5	207	n/a	10/26/2022	0.992J	No	49	n/a	n/a	n/a	0	n/a	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-PZ-6	207	n/a	10/26/2022	1.7J	No	49	n/a	n/a	n/a	0	n/a	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-1</b>	<b>276.7</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>840</b>	<b>Yes</b>	<b>49</b>	<b>167.4</b>	<b>51.01</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>		
Total Dissolved Solids (mg/L)	GSD-AP-MW-10	276.7	n/a	10/26/2022	202	No	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2		
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>276.7</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>545</b>	<b>Yes</b>	<b>49</b>	<b>167.4</b>	<b>51.01</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>		
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-12</b>	<b>276.7</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>402</b>	<b>Yes</b>	<b>49</b>	<b>167.4</b>	<b>51.01</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>		
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>276.7</b>	<b>n/a</b>	<b>10/25/2022</b>	<b>337</b>	<b>Yes</b>	<b>49</b>	<b>167.4</b>	<b>51.01</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>		
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-3</b>	<b>276.7</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>328</b>	<b>Yes</b>	<b>49</b>	<b>167.4</b>	<b>51.01</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>		
Total Dissolved Solids (mg/L)	GSD-AP-MW-4	276.7	n/a	10/26/2022	247	No	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2		
Total Dissolved Solids (mg/L)	GSD-AP-MW-5	276.7	n/a	10/26/2022	178	No	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2		
Total Dissolved Solids (mg/L)	GSD-AP-MW-6	276.7	n/a	10/26/2022	91.3	No	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2		
Total Dissolved Solids (mg/L)	GSD-AP-MW-7	276.7	n/a	10/26/2022	121	No	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2		
Total Dissolved Solids (mg/L)	GSD-AP-MW-8	276.7	n/a	10/26/2022	226	No	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2		
Total Dissolved Solids (mg/L)	GSD-AP-MW-9	276.7	n/a	10/26/2022	194	No	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2		
Total Dissolved Solids (mg/L)	GSD-AP-PZ-1	276.7	n/a	10/26/2022	96	No	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2		
Total Dissolved Solids (mg/L)	GSD-AP-PZ-5	276.7	n/a	10/26/2022	45.3	No	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2		
Total Dissolved Solids (mg/L)	GSD-AP-PZ-6	276.7	n/a	10/26/2022	38	No	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2		

# Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Gadsden    Client: Southern Company    Data: Plant Gadsden CCR    Printed 12/27/2022, 6:58 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	GSD-AP-MW-1	-0.06272	-88	-58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-11	0.0113	63	58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-2	-0.06977	-85	-58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-4	-0.043	-87	-58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-5	-0.05974	-94	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-1	-19.11	-80	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-11	4.053	71	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-2	-11.63	-69	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-3	-9.136	-98	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-17 (bg)	-0.2175	-80	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-3	-0.697	-123	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-5	-0.2449	-61	-58	Yes	16	0	n/a	n/a	0.01	NP
pH (pH)	GSD-AP-MW-11	-0.08419	-72	-58	Yes	16	0	n/a	n/a	0.01	NP
pH (pH)	GSD-AP-MW-16 (bg)	-0.2316	-69	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-11	23.94	77	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-17 (bg)	-0.792	-63	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-1	-89.27	-95	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-11	22.05	70	58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-2	-55.25	-85	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-3	-41.2	-104	-63	Yes	17	0	n/a	n/a	0.01	NP

# Trend Tests - Prediction Limit Exceedances - All Results

Plant Gadsden    Client: Southern Company    Data: Plant Gadsden CCR    Printed 12/27/2022, 6:58 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-1</b>	<b>-0.06272</b>	<b>-88</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>0.0113</b>	<b>63</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron (mg/L)	GSD-AP-MW-14 (bg)	0	0	58	No	16	100	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-16 (bg)	0.001587	56	63	No	17	64.71	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-17 (bg)	-0.0009573	-34	-58	No	16	0	n/a	n/a	0.01	NP
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>-0.06977</b>	<b>-85</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron (mg/L)	GSD-AP-MW-3	0.02648	34	63	No	17	0	n/a	n/a	0.01	NP
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-4</b>	<b>-0.043</b>	<b>-87</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-5</b>	<b>-0.05974</b>	<b>-94</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-1</b>	<b>-19.11</b>	<b>-80</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	GSD-AP-MW-10	0.2953	12	58	No	16	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>4.053</b>	<b>71</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	GSD-AP-MW-12	1.444	9	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-14 (bg)	-0.7905	-27	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-16 (bg)	-0.8295	-19	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-17 (bg)	1.555	39	58	No	16	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>-11.63</b>	<b>-69</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-3</b>	<b>-9.136</b>	<b>-98</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	GSD-AP-MW-4	-1.089	-20	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-5	-0.7867	-23	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-8	0.9641	6	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-9	0.873	14	58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-1	0.02129	11	58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-10	0.01104	3	58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-11	-0.05352	-7	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-12	-0.01676	-4	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-14 (bg)	-0.008802	-4	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-16 (bg)	-0.03896	-16	-63	No	17	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-17 (bg)</b>	<b>-0.2175</b>	<b>-80</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-3</b>	<b>-0.697</b>	<b>-123</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	GSD-AP-MW-4	-0.08104	-6	-58	No	16	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-5</b>	<b>-0.2449</b>	<b>-61</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	GSD-AP-MW-6	-0.1248	-39	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-7	-0.4945	-53	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-8	0.144	31	58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-9	0.1519	34	58	No	16	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	GSD-AP-MW-14 (bg)	-0.01829	-57	-58	No	16	56.25	n/a	n/a	0.01	NP
Fluoride (mg/L)	GSD-AP-MW-16 (bg)	0	21	63	No	17	58.82	n/a	n/a	0.01	NP
Fluoride (mg/L)	GSD-AP-MW-17 (bg)	-0.008461	-50	-58	No	16	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	GSD-AP-MW-7	0.002021	18	58	No	16	18.75	n/a	n/a	0.01	NP
<b>pH (pH)</b>	<b>GSD-AP-MW-11</b>	<b>-0.08419</b>	<b>-72</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
pH (pH)	GSD-AP-MW-14 (bg)	-0.01296	-22	-58	No	16	0	n/a	n/a	0.01	NP
<b>pH (pH)</b>	<b>GSD-AP-MW-16 (bg)</b>	<b>-0.2316</b>	<b>-69</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
pH (pH)	GSD-AP-MW-17 (bg)	-0.2293	-29	-58	No	16	0	n/a	n/a	0.01	NP
pH (pH)	GSD-AP-MW-5	-0.01447	-11	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-1	-17.42	-29	-58	No	16	0	n/a	n/a	0.01	NP
<b>Sulfate (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>23.94</b>	<b>77</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate (mg/L)	GSD-AP-MW-12	-0.6523	-2	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-14 (bg)	-5.22	-17	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-16 (bg)	17.25	37	63	No	17	0	n/a	n/a	0.01	NP
<b>Sulfate (mg/L)</b>	<b>GSD-AP-MW-17 (bg)</b>	<b>-0.792</b>	<b>-63</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-1</b>	<b>-89.27</b>	<b>-95</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>22.05</b>	<b>70</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids (mg/L)	GSD-AP-MW-12	-6.344	-9	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-14 (bg)	-11.74	-22	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-16 (bg)	16.45	32	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-17 (bg)	-3.317	-31	-58	No	16	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>-55.25</b>	<b>-85</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-3</b>	<b>-41.2</b>	<b>-104</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>

# Upper Tolerance Limits - Appendix IV

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/13/2022, 3:11 PM

<u>Constituent</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	0.00102	n/a	n/a	n/a	n/a	40	97.5	n/a	0.1285	NP Inter
Arsenic (mg/L)	0.00614	n/a	n/a	n/a	n/a	40	42.5	n/a	0.1285	NP Inter
Barium (mg/L)	0.312	n/a	n/a	n/a	n/a	40	0	n/a	0.1285	NP Inter
Beryllium (mg/L)	0.00157	n/a	n/a	n/a	n/a	40	47.5	n/a	0.1285	NP Inter
Cadmium (mg/L)	0.00101	n/a	n/a	n/a	n/a	40	32.5	n/a	0.1285	NP Inter
Chromium (mg/L)	0.01	n/a	n/a	n/a	n/a	40	80	n/a	0.1285	NP Inter
Cobalt (mg/L)	0.056	n/a	n/a	n/a	n/a	40	27.5	n/a	0.1285	NP Inter
Combined Radium 226 + 228 (pCi/L)	2.01	n/a	n/a	n/a	n/a	33	0	n/a	0.184	NP Inter
Fluoride (mg/L)	0.23	n/a	n/a	n/a	n/a	43	34.88	n/a	0.1102	NP Inter
Lead (mg/L)	0.00258	n/a	n/a	n/a	n/a	40	50	n/a	0.1285	NP Inter
Lithium (mg/L)	0.02	n/a	n/a	n/a	n/a	40	77.5	n/a	0.1285	NP Inter
Mercury (mg/L)	0.000775	n/a	n/a	n/a	n/a	39	66.67	n/a	0.1353	NP Inter
Molybdenum (mg/L)	0.00507	n/a	n/a	n/a	n/a	40	75	n/a	0.1285	NP Inter
Selenium (mg/L)	0.0134	n/a	n/a	n/a	n/a	40	55	n/a	0.1285	NP Inter
Thallium (mg/L)	0.0002	n/a	n/a	n/a	n/a	40	100	n/a	0.1285	NP Inter

<b>GADSDEN ASH POND GWPS</b>			
<b>Analyte</b>	<b>Units</b>	<b>Background</b>	<b>GWPS</b>
Antimony	mg/L	0.00102	0.006
Arsenic	mg/L	0.00614	0.01
Barium	mg/L	0.312	2
Beryllium	mg/L	0.00157	0.004
Cadmium	mg/L	0.00101	0.005
Chromium	mg/L	0.01	0.1
Cobalt	mg/L	0.056	0.056
Combined Radium-226/228	pCi/L	2.01	5
Fluoride	mg/L	0.23	4
Lead	mg/L	0.00258	0.015
Lithium	mg/L	0.02	0.04
Mercury	mg/L	0.000775	0.002
Molybdenum	mg/L	0.00507	0.1
Selenium	mg/L	0.0134	0.05
Thallium	mg/L	0.0002	0.002

Notes:

1. mg/L - Milligrams per liter
2. pCi/L - Picocuries per liter
3. The background limits were used as the groundwater protection standard (GWPS) when appropriate under 40 CFR §257.95(h), ADEM Rule 335-13-15-.06(h), and the ADEM Variance.
4. GWPS established during first semi-annual sampling event in 2021.

# Confidence Intervals - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 12/28/2022, 3:18 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	GSD-AP-MW-2	0.7783	0.4812	0.01	Yes	8	0.6298	0.1401	0	None	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-4	0.01458	0.01132	0.01	Yes	8	0.01295	0.001538	0	None	No	0.01	Param.

# Confidence Intervals - All Results

Plant Gadsden    Client: Southern Company    Data: Plant Gadsden CCR    Printed 12/28/2022, 3:18 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	GSD-AP-MW-2	0.00102	0.000538	0.006	No	8	0.0009597	0.0001704	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	GSD-AP-PZ-5	0.00114	0.001015	0.006	No	8	0.001031	0.00004419	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	GSD-AP-PZ-6	0.00181	0.001015	0.006	No	8	0.001114	0.0002811	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-MW-1	0.004211	0.002396	0.01	No	8	0.003304	0.000856	0	None	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-10	0.004336	0.002397	0.01	No	8	0.003366	0.0009146	0	None	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-11	0.002873	0.002317	0.01	No	8	0.002595	0.0002621	0	None	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-12	0.0002	0.000102	0.01	No	8	0.0001877	0.00003465	87.5	None	No	0.004	NP (NDs)
<b>Arsenic (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>0.7783</b>	<b>0.4812</b>	<b>0.01</b>	<b>Yes</b>	<b>8</b>	<b>0.6298</b>	<b>0.1401</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Arsenic (mg/L)	GSD-AP-MW-3	0.005	0.00016	0.01	No	8	0.00261	0.002555	50	None	No	0.004	NP (normality)
<b>Arsenic (mg/L)</b>	<b>GSD-AP-MW-4</b>	<b>0.01458</b>	<b>0.01132</b>	<b>0.01</b>	<b>Yes</b>	<b>8</b>	<b>0.01295</b>	<b>0.001538</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Arsenic (mg/L)	GSD-AP-MW-5	0.005	0.00008	0.01	No	8	0.002568	0.002601	50	None	No	0.004	NP (normality)
Arsenic (mg/L)	GSD-AP-MW-6	0.0002	0.000151	0.01	No	8	0.0001939	0.00001732	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-MW-7	0.0002	0.00007	0.01	No	8	0.0001719	0.00005291	75	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-MW-8	0.003252	0.002868	0.01	No	8	0.00306	0.0001814	0	None	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-9	0.005	0.00055	0.01	No	8	0.002327	0.002222	37.5	None	No	0.004	NP (normality)
Arsenic (mg/L)	GSD-AP-PZ-1	0.0002	0.000164	0.01	No	8	0.0001955	0.00001273	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-PZ-2	0.005	0.0000826	0.01	No	6	0.001743	0.002523	33.33	None	No	0.0155	NP (normality)
Arsenic (mg/L)	GSD-AP-PZ-5	0.000203	0.0000808	0.01	No	8	0.0001877	0.0000432	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-PZ-6	0.0002	0.00015	0.01	No	8	0.0001937	0.00001768	87.5	None	No	0.004	NP (NDs)
Barium (mg/L)	GSD-AP-MW-1	0.03927	0.02788	2	No	8	0.03358	0.005372	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-10	0.3596	0.2709	2	No	8	0.3153	0.04183	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-11	0.2376	0.1334	2	No	8	0.1855	0.04918	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-12	0.04621	0.03084	2	No	8	0.03853	0.007246	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-2	0.09189	0.05478	2	No	8	0.07334	0.0175	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-3	0.03861	0.03082	2	No	8	0.03471	0.003674	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-4	0.2233	0.1624	2	No	8	0.1929	0.02872	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-5	0.2407	0.2186	2	No	8	0.2296	0.01042	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-6	0.07733	0.06139	2	No	8	0.06936	0.007518	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-7	0.08784	0.05781	2	No	8	0.07283	0.01417	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-8	0.281	0.1973	2	No	8	0.2391	0.0395	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-9	0.1901	0.1392	2	No	8	0.1646	0.02401	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-PZ-1	0.08415	0.0508	2	No	8	0.06748	0.01573	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-PZ-2	0.1474	0.04275	2	No	6	0.09508	0.03809	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-PZ-5	0.085	0.0474	2	No	8	0.05713	0.01203	0	None	No	0.004	NP (normality)
Barium (mg/L)	GSD-AP-PZ-6	0.03114	0.02849	2	No	8	0.02981	0.001251	0	None	No	0.01	Param.
Cadmium (mg/L)	GSD-AP-MW-1	0.001	0.0001	0.005	No	8	0.000569	0.0004622	50	None	No	0.004	NP (normality)
Cadmium (mg/L)	GSD-AP-MW-12	0.0006435	0.0003027	0.005	No	8	0.0004731	0.0001608	0	None	No	0.01	Param.
Cadmium (mg/L)	GSD-AP-MW-2	0.000203	0.0000688	0.005	No	8	0.0001862	0.00004745	87.5	None	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-MW-3	0.0004302	0.0001866	0.005	No	8	0.0005669	0.0003706	37.5	Kaplan-Meier	sqrt(x)	0.01	Param.
Cadmium (mg/L)	GSD-AP-MW-7	0.000203	0.000097	0.005	No	8	0.0001898	0.00003748	87.5	Kaplan-Meier	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-MW-8	0.000203	0.00007	0.005	No	8	0.0001714	0.00005862	75	Kaplan-Meier	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-PZ-5	0.000203	0.00008	0.005	No	8	0.0001876	0.00004349	87.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-1	0.01	0.00023	0.1	No	8	0.005147	0.005188	50	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-10	0.01	0.000207	0.1	No	8	0.005142	0.005193	50	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-11	0.01	0.00027	0.1	No	8	0.005185	0.005148	50	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-12	0.01	0.000276	0.1	No	8	0.005182	0.005151	50	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-2	0.01	0.00022	0.1	No	8	0.005189	0.005144	50	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-3	0.01	0.00023	0.1	No	8	0.004242	0.004847	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-4	0.001015	0.00023	0.1	No	8	0.0008304	0.0003428	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-5	0.001015	0.00028	0.1	No	8	0.0007853	0.0003241	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-6	0.00102	0.000222	0.1	No	8	0.0007387	0.0003895	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-7	0.001015	0.00025	0.1	No	8	0.0007476	0.0003721	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-8	0.001015	0.00022	0.1	No	8	0.0008263	0.0003502	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-9	0.001015	0.00021	0.1	No	8	0.0007521	0.0003672	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-PZ-1	0.001015	0.00027	0.1	No	8	0.0007671	0.0003452	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-PZ-2	0.0008137	0.0003423	0.1	No	6	0.0007965	0.0002738	50	Kaplan-Meier	No	0.01	Param.
Chromium (mg/L)	GSD-AP-PZ-5	0.01	0.000251	0.1	No	8	0.005187	0.005146	50	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-PZ-6	0.01	0.000224	0.1	No	8	0.00518	0.005154	50	None	No	0.004	NP (normality)
Cobalt (mg/L)	GSD-AP-MW-1	0.02357	0.01438	0.056	No	8	0.01898	0.004337	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-10	0.005	0.00037	0.056	No	8	0.002885	0.002268	50	None	No	0.004	NP (normality)
Cobalt (mg/L)	GSD-AP-MW-11	0.006803	-0.000708	0.056	No	8	0.004206	0.003442	25	Kaplan-Meier	No	0.01	Param.

# Confidence Intervals - All Results

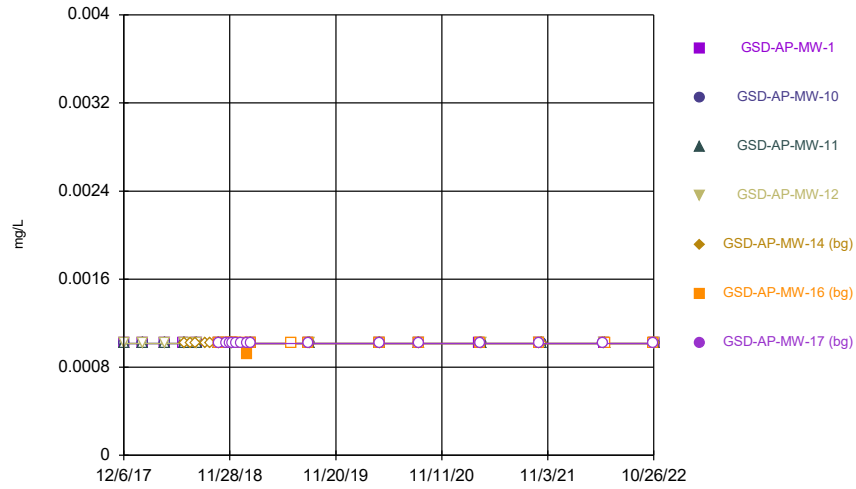
Plant Gadsden    Client: Southern Company    Data: Plant Gadsden CCR    Printed 12/28/2022, 3:18 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	GSD-AP-MW-12	0.006068	0.00383	0.056	No	8	0.004949	0.001055	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-2	0.03678	0.02603	0.056	No	8	0.03124	0.00659	0	None	x^3	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-3	0.02439	0.01416	0.056	No	8	0.01928	0.004823	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-4	0.02907	0.024	0.056	No	8	0.02654	0.002391	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-5	0.002362	0.001017	0.056	No	8	0.001689	0.0006344	12.5	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-6	0.005	0.00102	0.056	No	8	0.00305	0.002085	50	None	No	0.004	NP (normality)
Cobalt (mg/L)	GSD-AP-MW-7	0.005	0.00016	0.056	No	8	0.00272	0.002452	50	None	No	0.004	NP (normality)
Cobalt (mg/L)	GSD-AP-MW-8	0.004091	0.002491	0.056	No	8	0.003291	0.000755	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-9	0.005	0.000812	0.056	No	8	0.002985	0.002156	50	None	No	0.004	NP (normality)
Cobalt (mg/L)	GSD-AP-PZ-1	0.00044	0.00014	0.056	No	8	0.0002225	0.00009036	75	None	No	0.004	NP (NDs)
Cobalt (mg/L)	GSD-AP-PZ-2	0.007045	0.001389	0.056	No	6	0.004217	0.002059	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-PZ-5	0.00225	0.00008	0.056	No	8	0.000458	0.0007291	50	None	No	0.004	NP (normality)
Cobalt (mg/L)	GSD-AP-PZ-6	0.005	0.000078	0.056	No	8	0.002556	0.002613	50	None	No	0.004	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-1	0.9381	0.4102	5	No	8	0.6741	0.249	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-10	2.772	0.00515	5	No	8	1.196	2.167	0	None	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-11	1.247	0.6148	5	No	8	0.931	0.2983	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-12	1.189	0.08541	5	No	8	0.637	0.5204	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-2	1.546	0.2948	5	No	8	0.8934	0.6732	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-3	1.369	0.1725	5	No	8	0.7925	1.014	0	None	ln(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-4	1.258	0.1069	5	No	8	0.6822	0.5428	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-5	1.244	0.3515	5	No	8	0.7976	0.4209	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-6	1.36	-0.086	5	No	8	0.3806	0.4479	0	None	No	0.004	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-7	0.9371	0.1026	5	No	8	0.5199	0.3937	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-8	0.6291	0.3374	5	No	8	0.4833	0.1376	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-9	1.168	0.1459	5	No	8	0.6569	0.4821	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-1	2.07	-0.129	5	No	8	0.5806	0.6697	0	None	No	0.004	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-2	1.048	-0.01521	5	No	6	0.5163	0.3869	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-5	0.9116	0.1809	5	No	8	0.5463	0.3447	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-6	1.174	0.004111	5	No	8	0.4634	0.4946	0	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-1	0.125	0.0601	4	No	8	0.1169	0.02295	87.5	None	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-MW-10	0.201	0.0813	4	No	8	0.108	0.03884	0	None	No	0.004	NP (normality)
Fluoride (mg/L)	GSD-AP-MW-11	0.1109	0.07014	4	No	8	0.1058	0.02451	37.5	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-2	0.2816	0.2207	4	No	8	0.2514	0.03202	0	None	x^3	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-3	0.125	0.0592	4	No	8	0.1028	0.03088	62.5	None	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-MW-4	0.2652	0.1913	4	No	8	0.2283	0.03485	0	None	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-5	0.122	0.0567	4	No	8	0.07296	0.02167	0	None	No	0.004	NP (normality)
Fluoride (mg/L)	GSD-AP-MW-6	0.125	0.0816	4	No	8	0.1196	0.01534	87.5	None	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-MW-7	0.1041	0.06229	4	No	8	0.08899	0.02101	25	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-8	0.108	0.06561	4	No	8	0.08679	0.01998	0	None	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-9	0.1452	0.1084	4	No	8	0.1268	0.01737	0	None	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-PZ-1	0.1078	0.07653	4	No	8	0.1045	0.02107	37.5	Kaplan-Meier	No	0.01	Param.
Lead (mg/L)	GSD-AP-MW-2	0.000203	0.00009	0.015	No	8	0.0001889	0.00003995	87.5	None	No	0.004	NP (NDs)
Lead (mg/L)	GSD-AP-PZ-2	0.000203	0.00012	0.015	No	6	0.0001833	0.00003238	50	None	No	0.0155	NP (normality)
Lead (mg/L)	GSD-AP-PZ-5	0.000203	0.00013	0.015	No	8	0.0001939	0.00002581	87.5	None	No	0.004	NP (NDs)
Lead (mg/L)	GSD-AP-PZ-6	0.000203	0.0000835	0.015	No	8	0.0001673	0.00005053	62.5	None	No	0.004	NP (NDs)
Lithium (mg/L)	GSD-AP-MW-2	0.05189	0.02466	0.04	No	8	0.03828	0.01284	0	None	No	0.01	Param.
Mercury (mg/L)	GSD-AP-PZ-6	0.00286	0.0005	0.002	No	8	0.000795	0.0008344	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-1	0.0002	0.000198	0.1	No	8	0.0001997	7.1e-7	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-10	0.01	0.000204	0.1	No	8	0.005195	0.005137	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	GSD-AP-MW-11	0.000203	0.00012	0.1	No	8	0.0001761	0.0000381	62.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-2	0.027	0.0164	0.1	No	8	0.02135	0.003692	0	None	No	0.004	NP (normality)
Molybdenum (mg/L)	GSD-AP-MW-4	0.01	0.00106	0.1	No	8	0.005571	0.004735	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	GSD-AP-MW-5	0.000371	0.00011	0.1	No	8	0.0002058	0.00007523	62.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-7	0.0002	0.0001	0.1	No	8	0.0001836	0.00003549	75	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-8	0.01	0.00032	0.1	No	8	0.005187	0.005145	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	GSD-AP-MW-9	0.01	0.00018	0.1	No	8	0.005121	0.005216	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	GSD-AP-PZ-1	0.000203	0.00007	0.1	No	8	0.0001734	0.00005544	75	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-PZ-2	0.00028	0.0002	0.1	No	6	0.0002167	0.00003204	66.67	None	No	0.0155	NP (NDs)
Thallium (mg/L)	GSD-AP-MW-1	0.000203	0.000112	0.002	No	8	0.0001825	0.00003826	75	None	No	0.004	NP (NDs)
Thallium (mg/L)	GSD-AP-MW-2	0.0003855	0.000283	0.002	No	8	0.0003343	0.00004839	0	None	No	0.01	Param.
Thallium (mg/L)	GSD-AP-MW-3	0.001	0.00011	0.002	No	8	0.0005601	0.0004703	50	None	No	0.004	NP (normality)



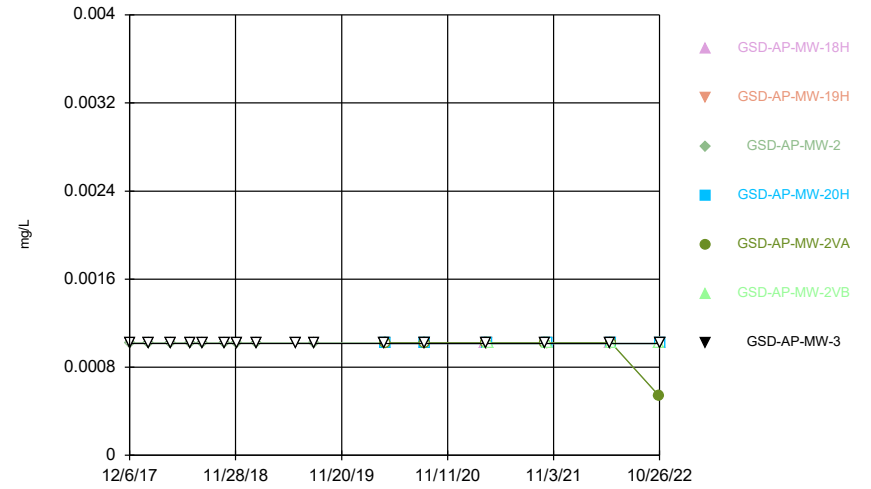
FIGURE A.

Time Series



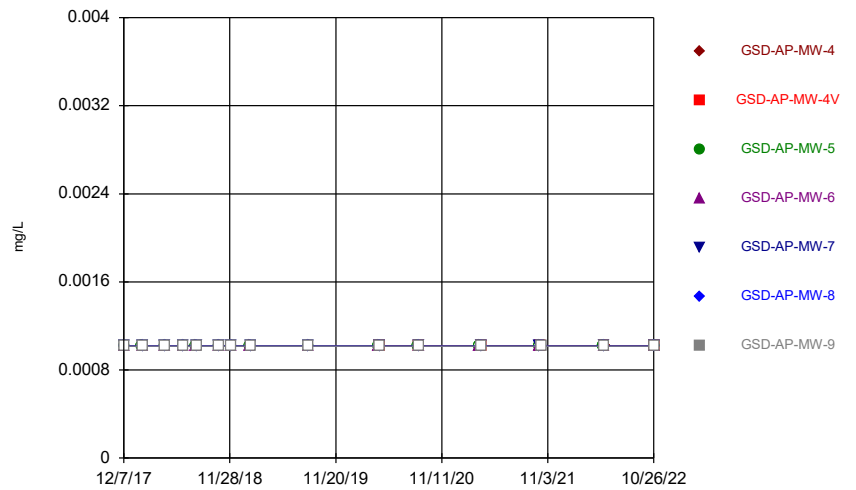
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



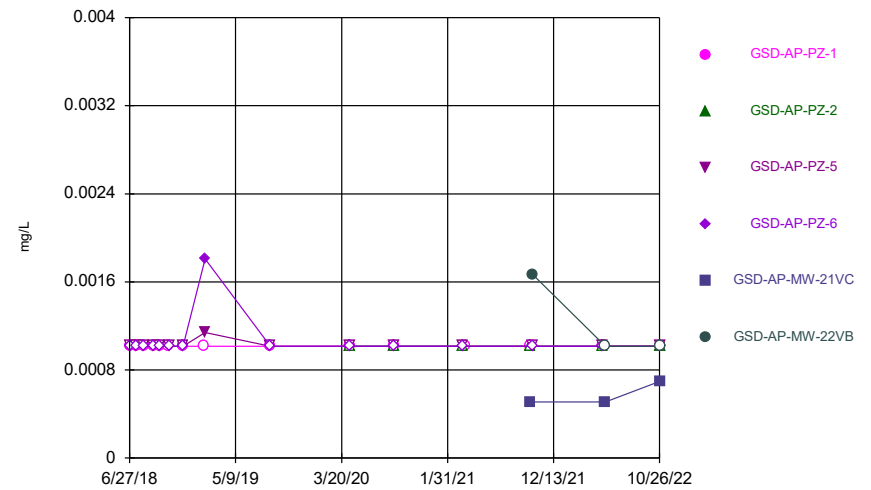
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



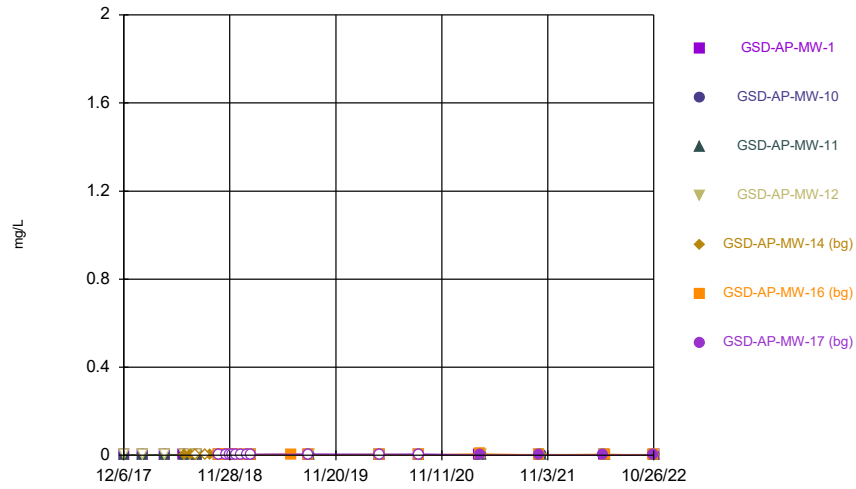
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Time Series



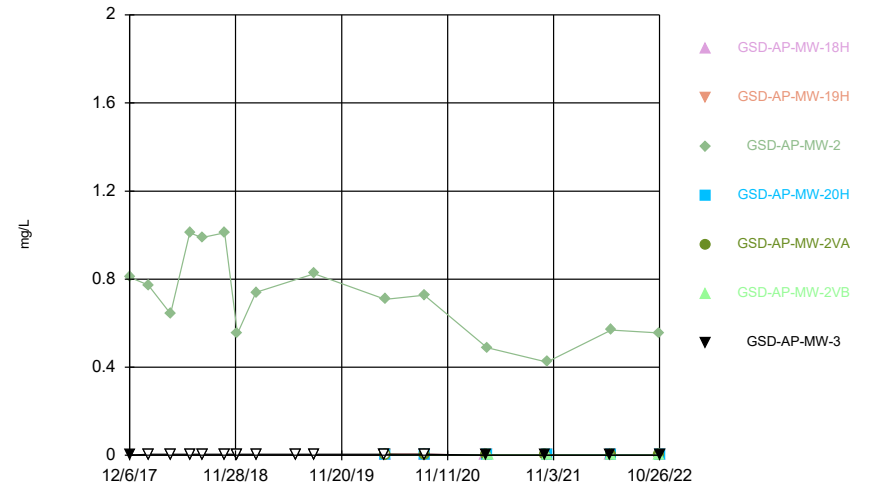
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Time Series



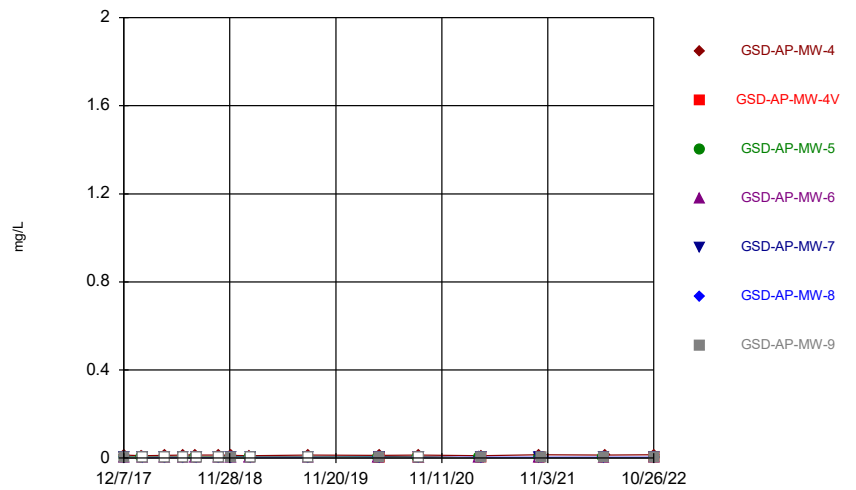
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



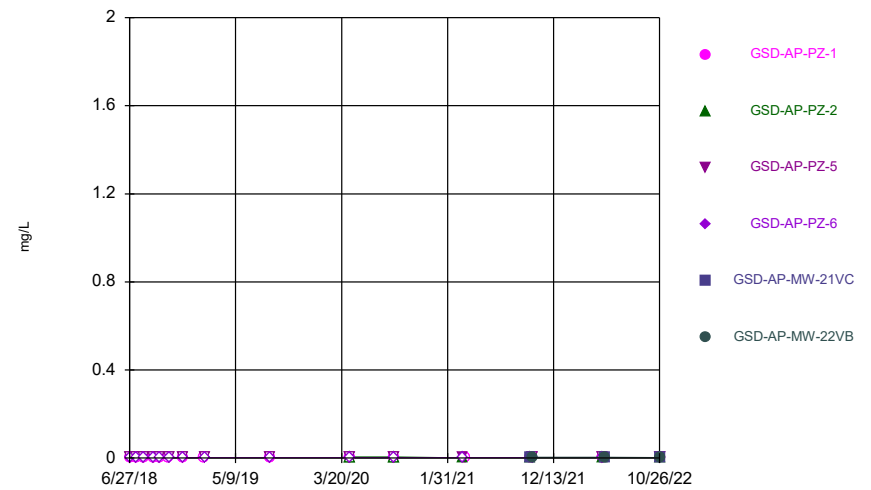
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



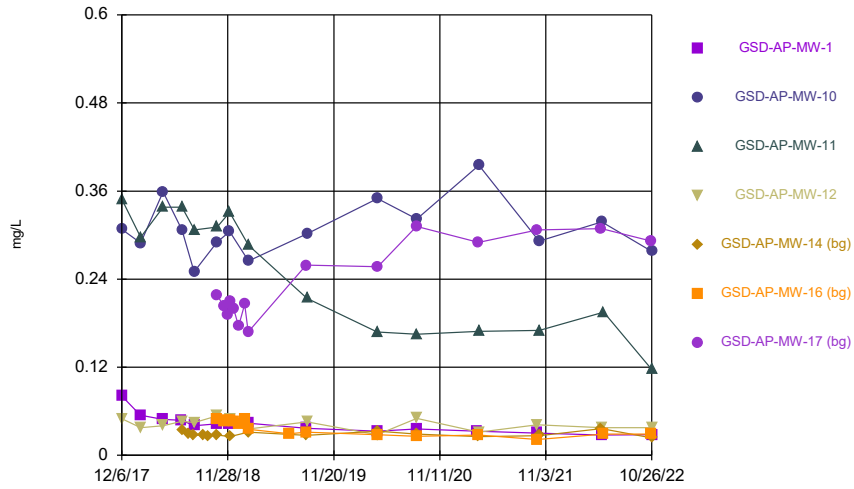
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Time Series



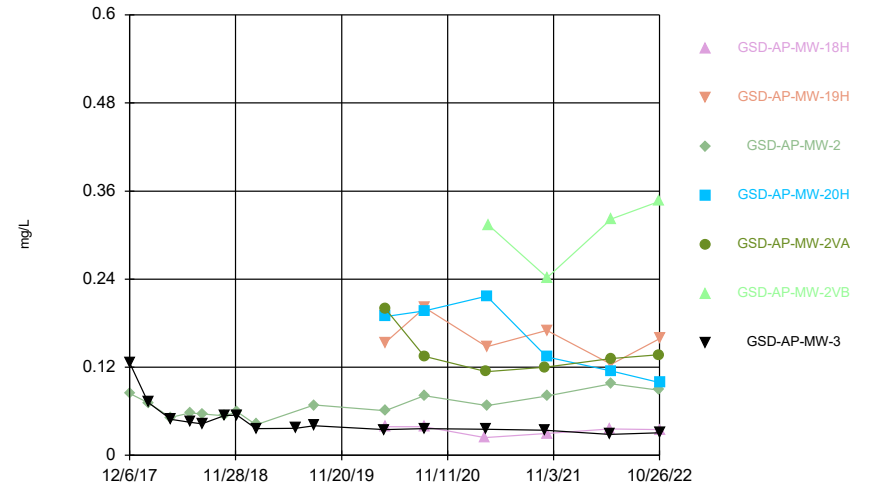
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Time Series



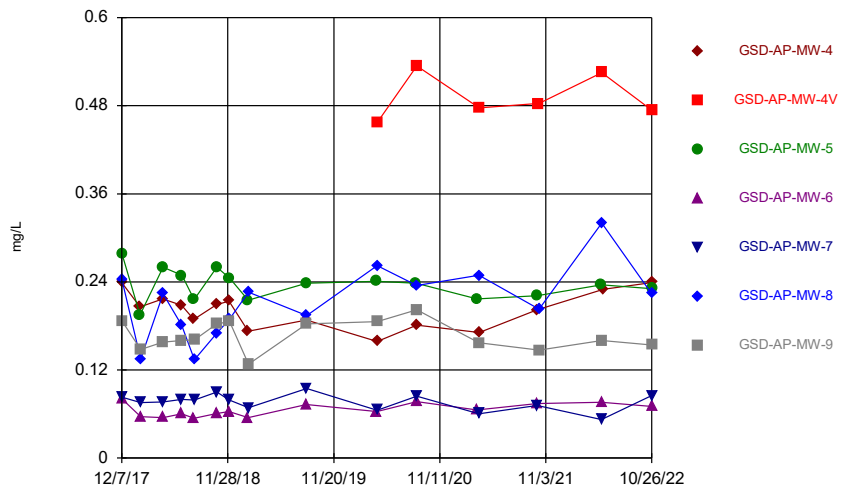
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Time Series



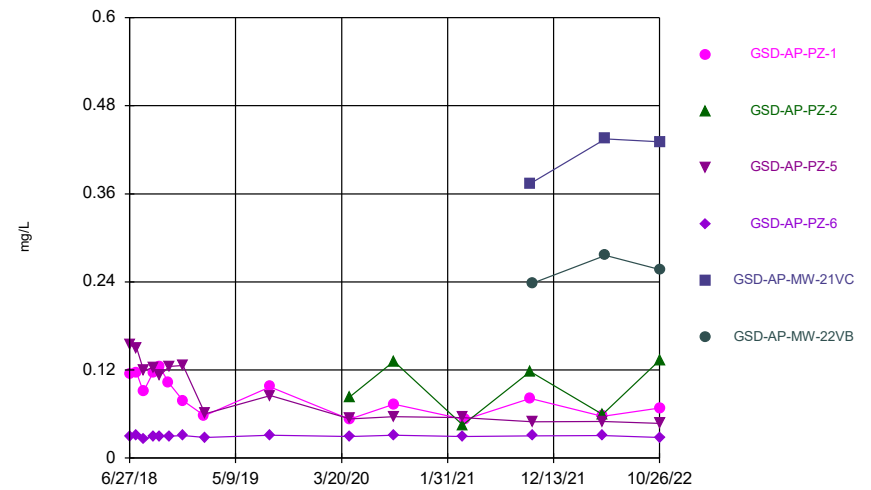
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Time Series



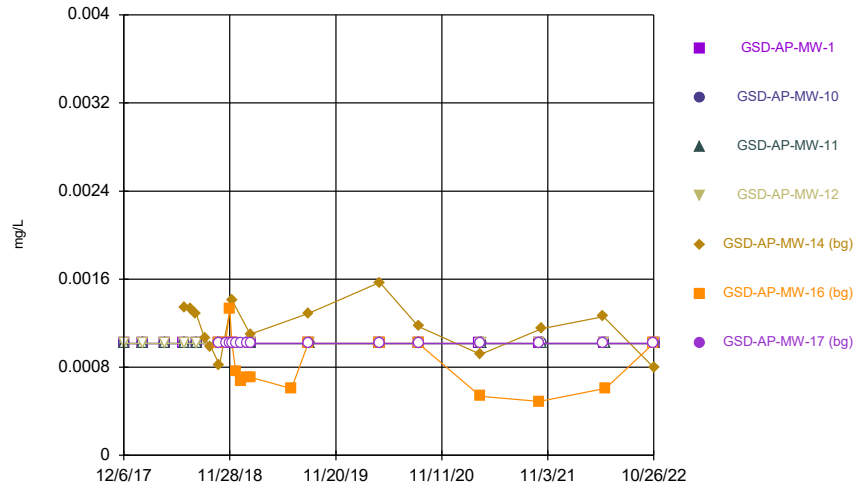
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series

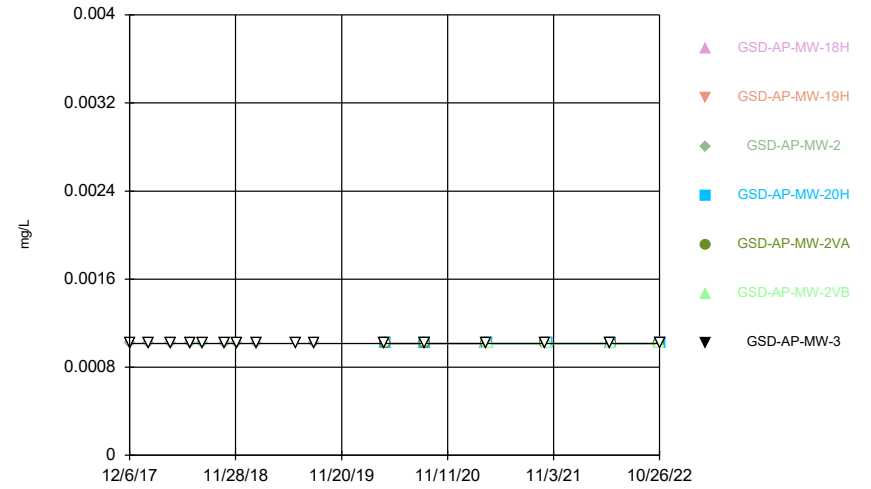


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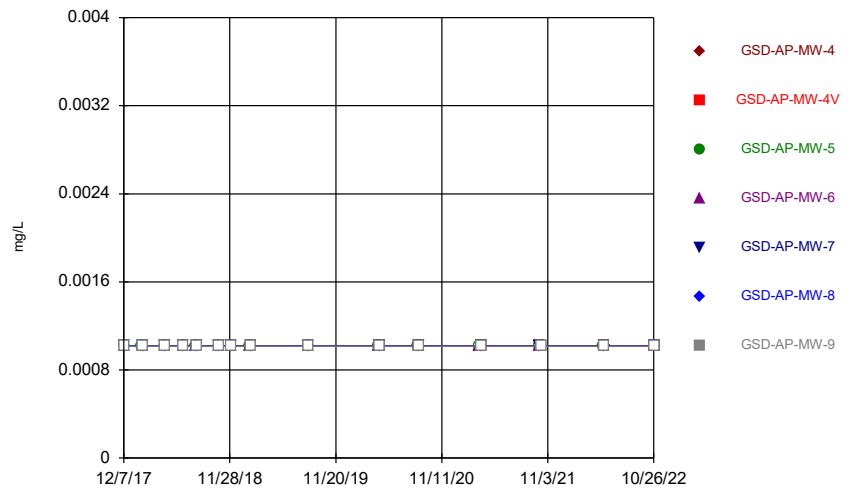
Time Series



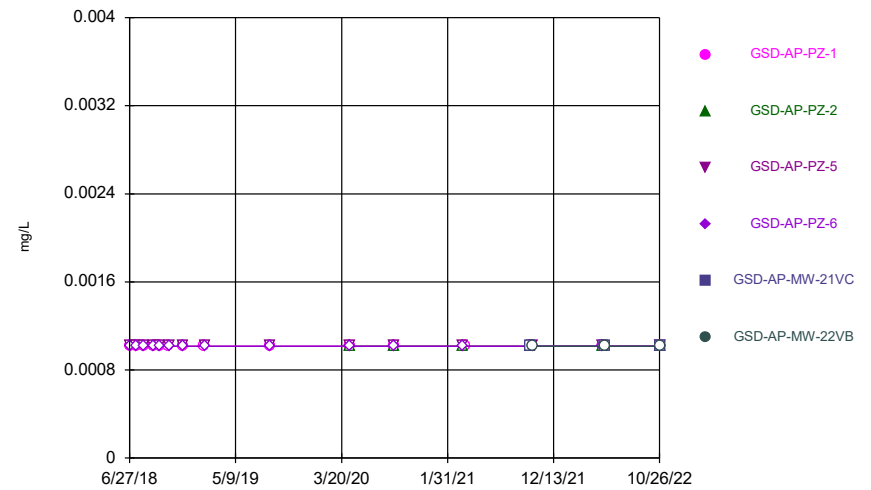
Time Series



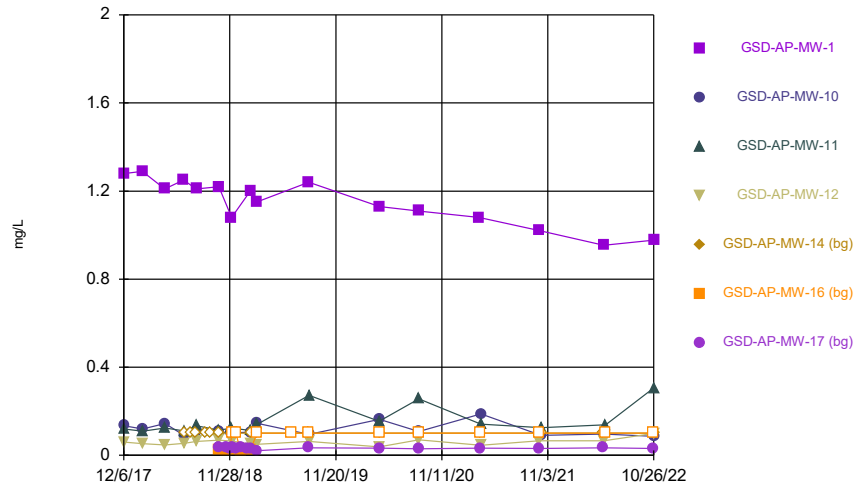
Time Series



Time Series

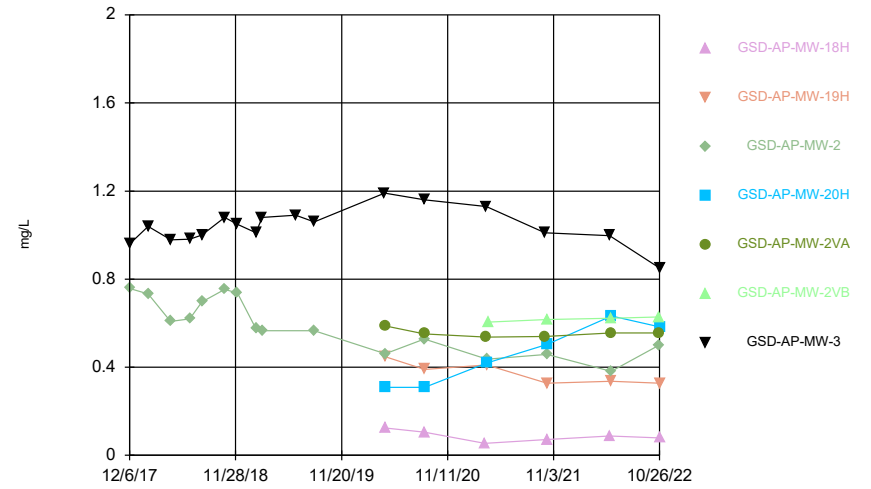


Time Series



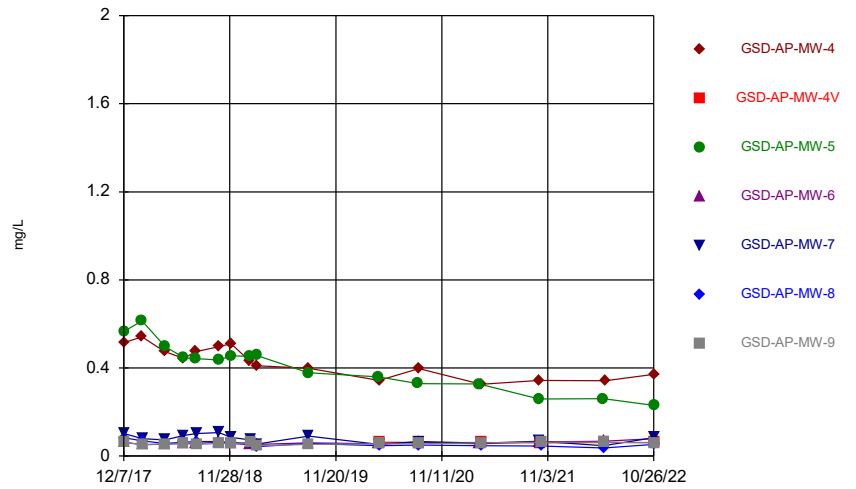
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Time Series



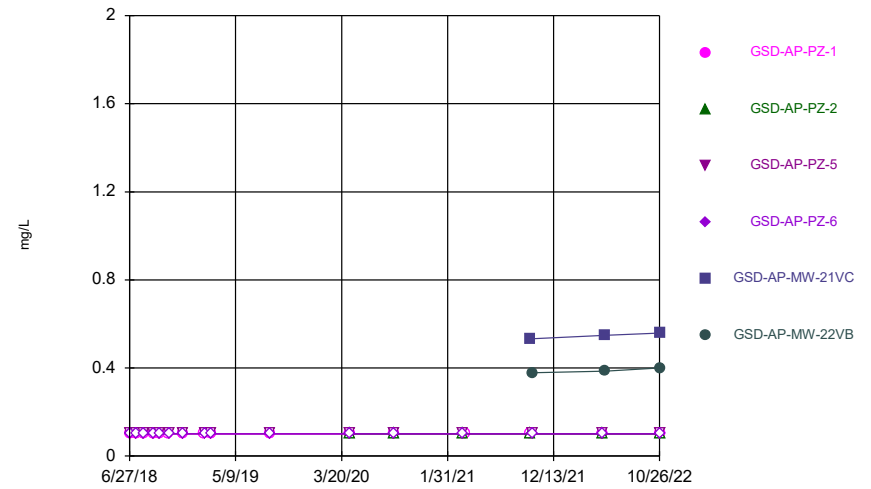
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Time Series



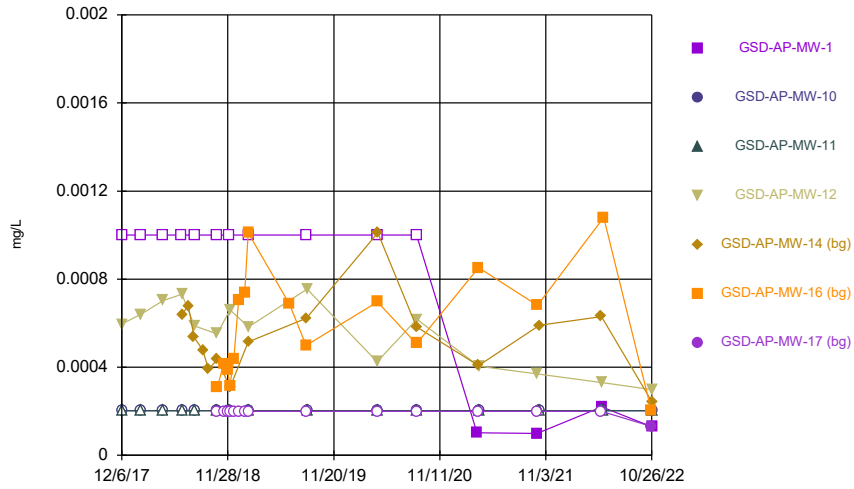
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



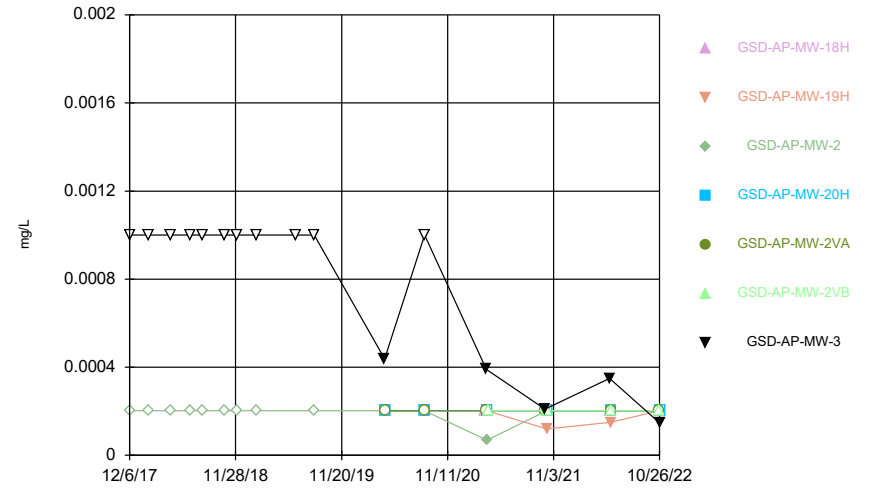
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



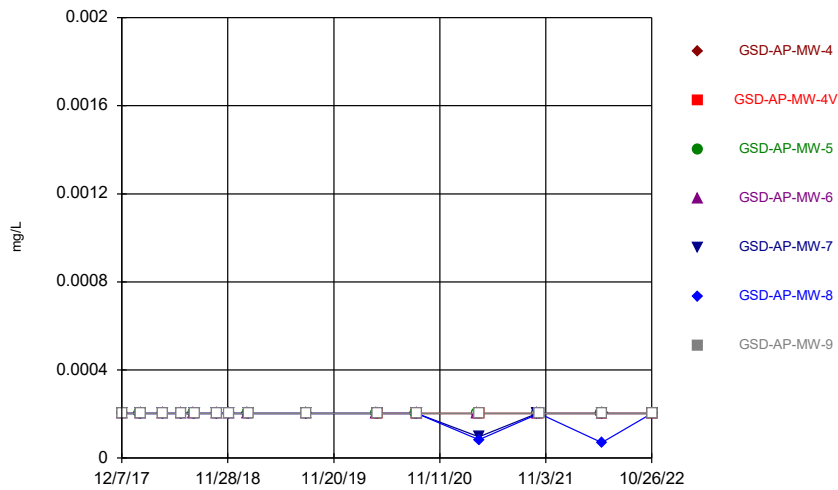
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Time Series



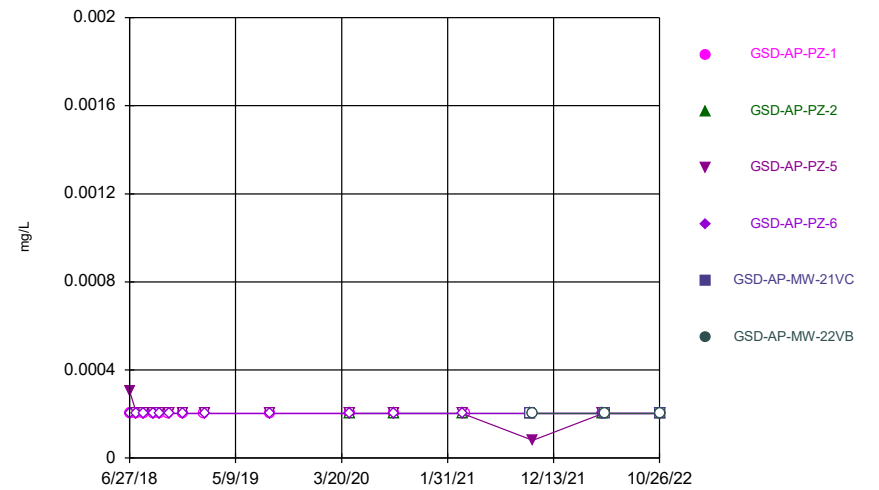
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



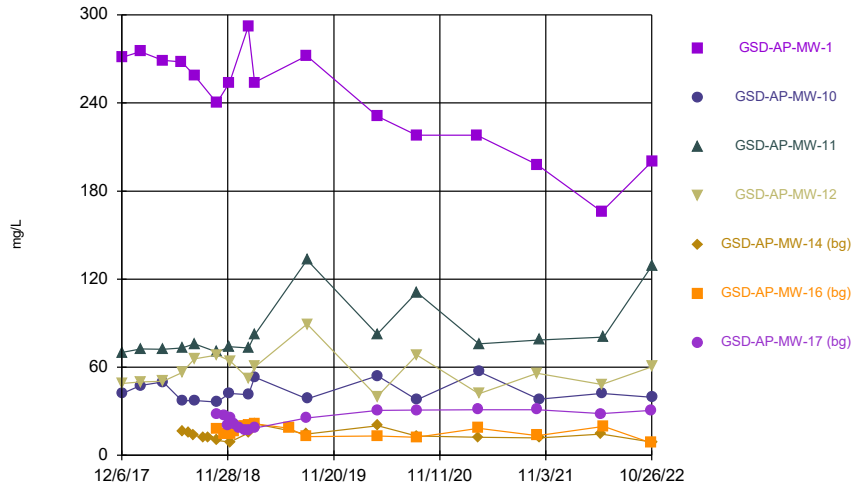
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



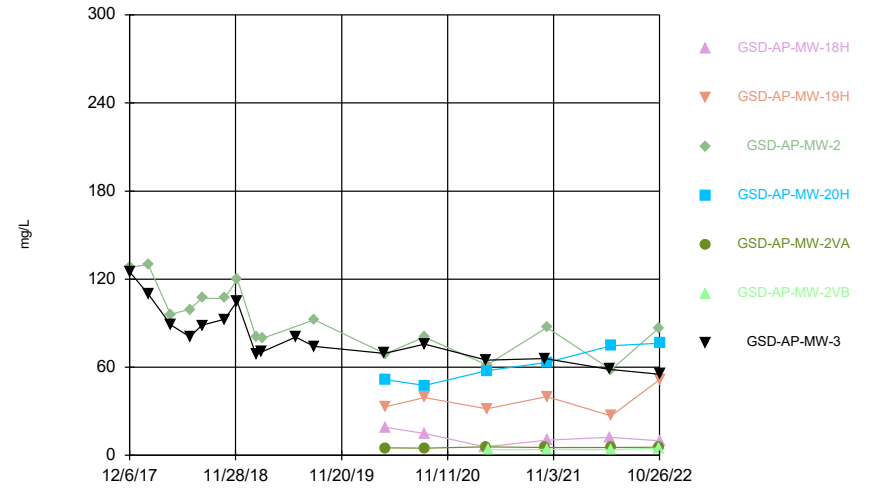
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



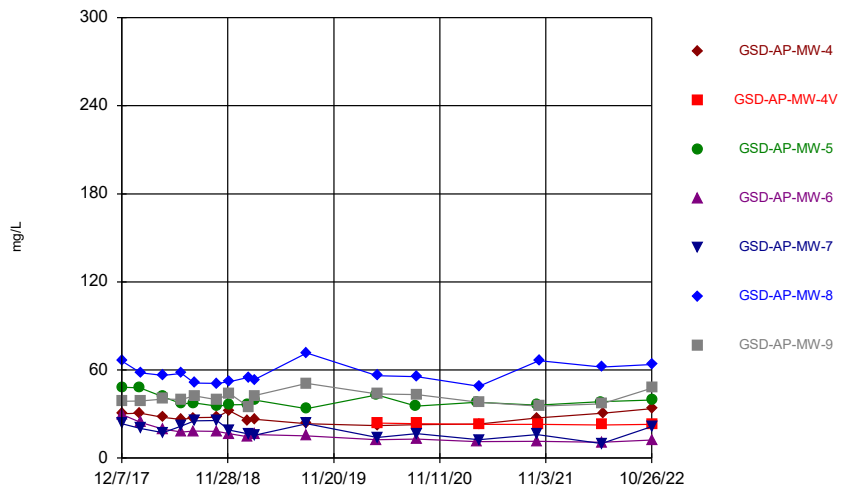
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



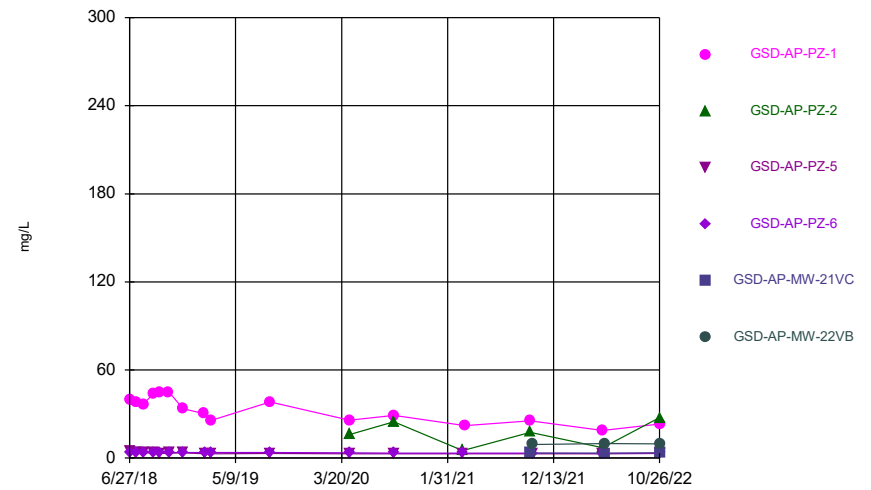
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



Constituent: Calcium Analysis Run 12/27/2022 6:34 PM  
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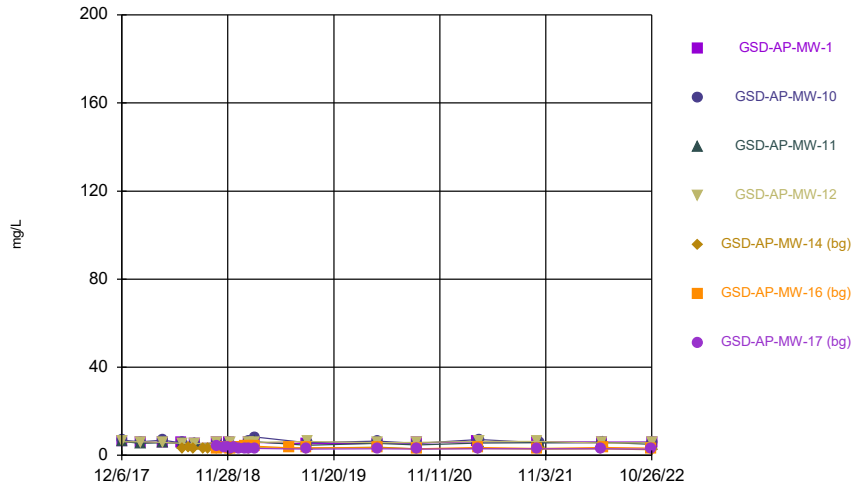
Time Series



Constituent: Calcium Analysis Run 12/27/2022 6:34 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

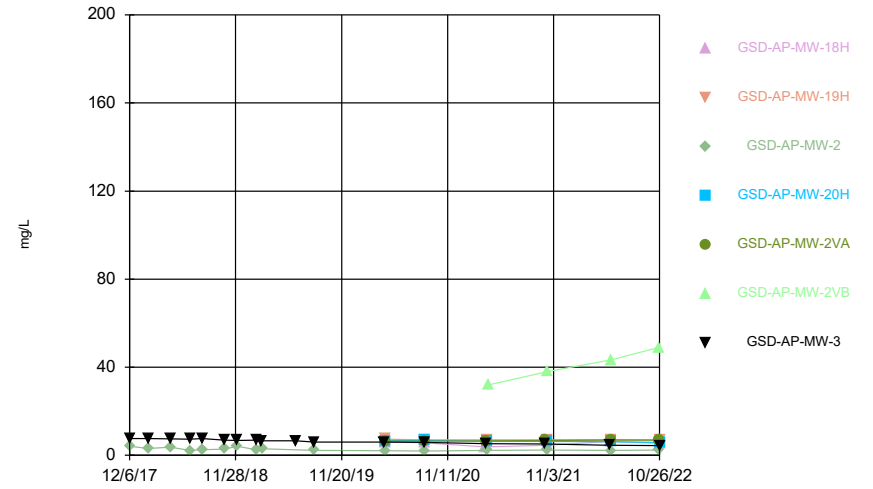


Time Series



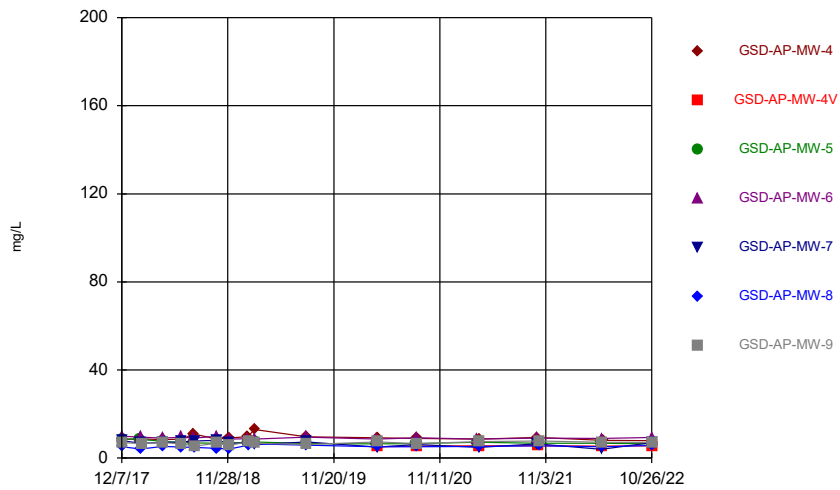
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



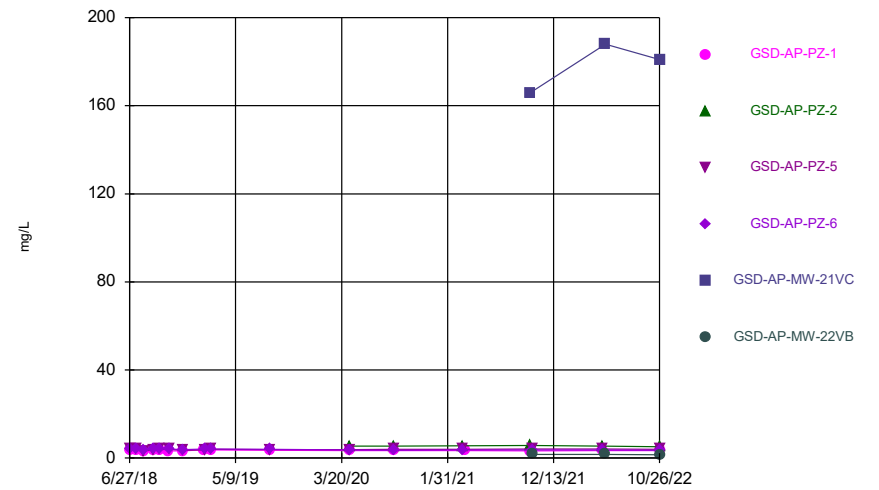
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



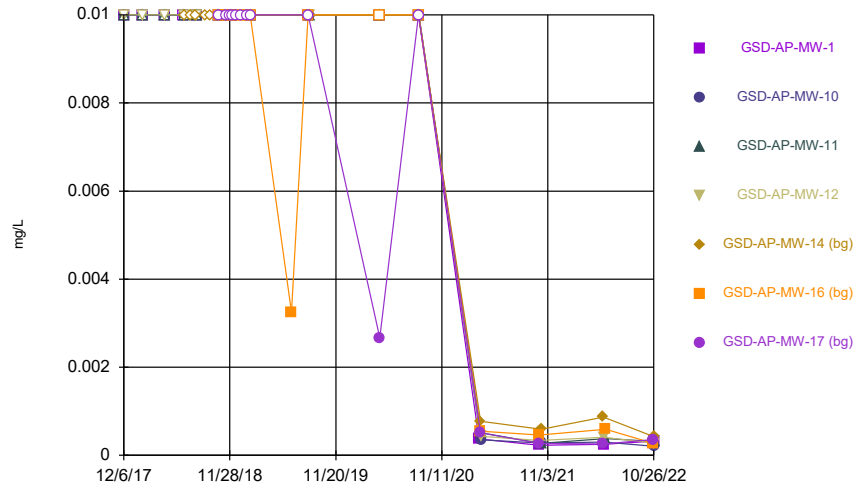
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



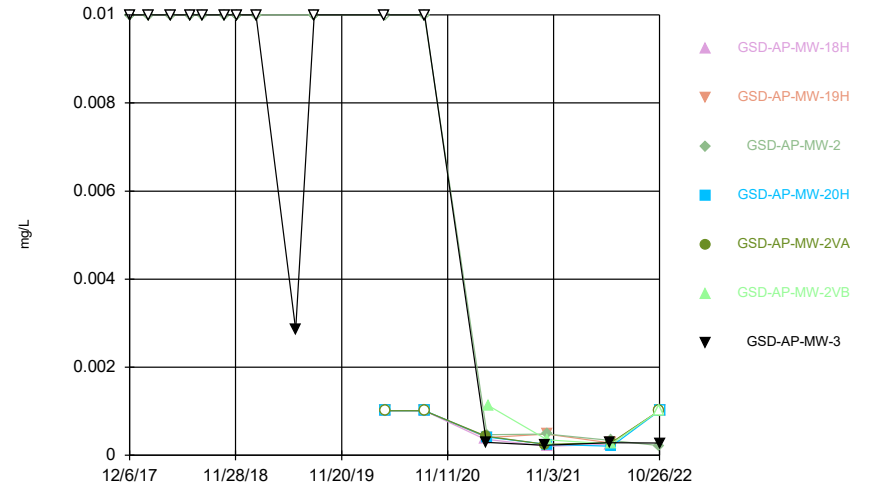
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



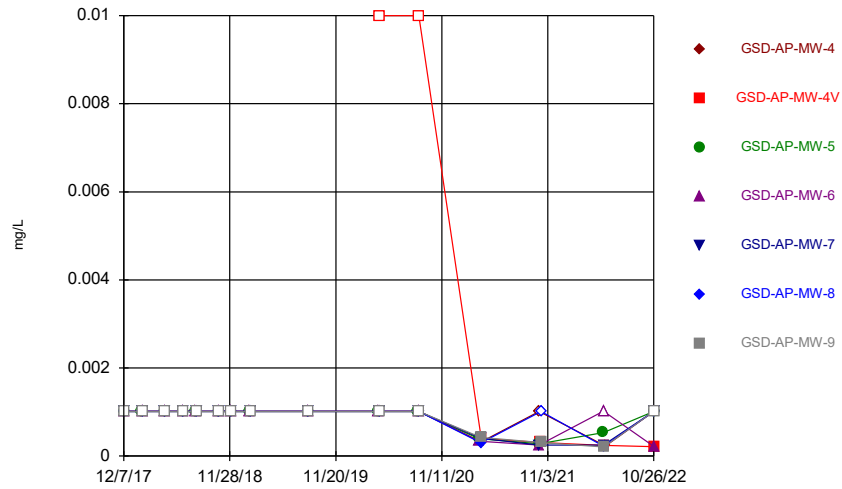
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



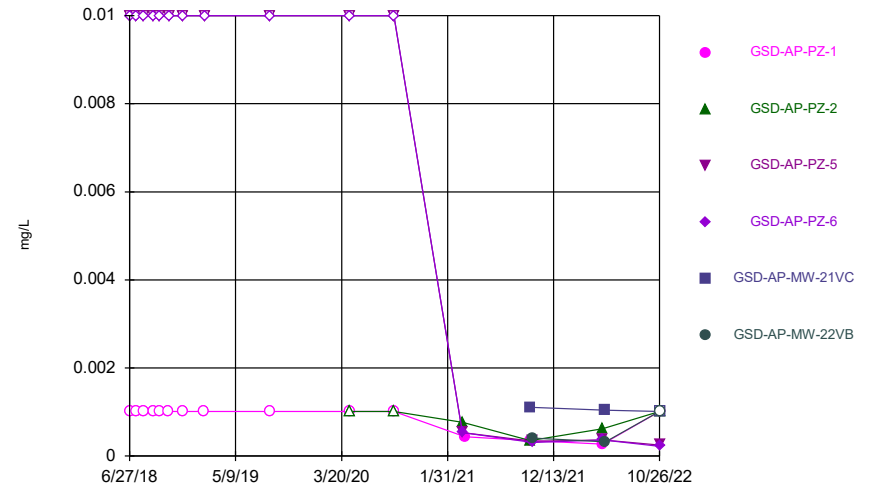
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



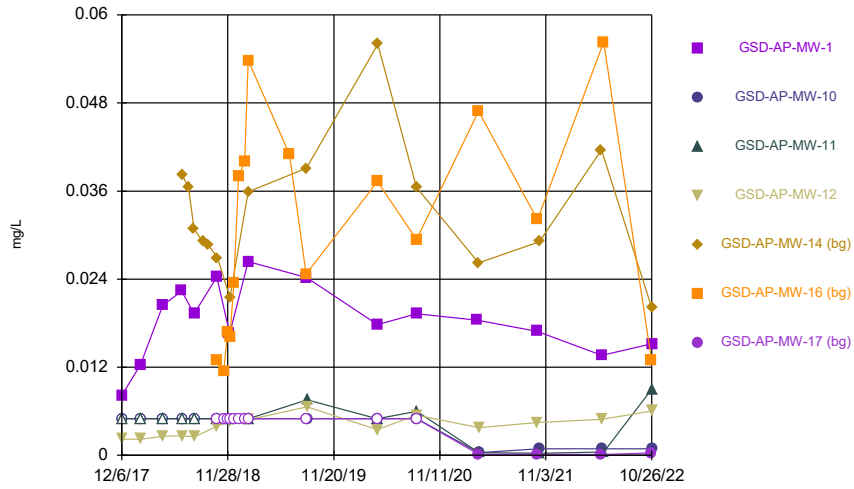
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



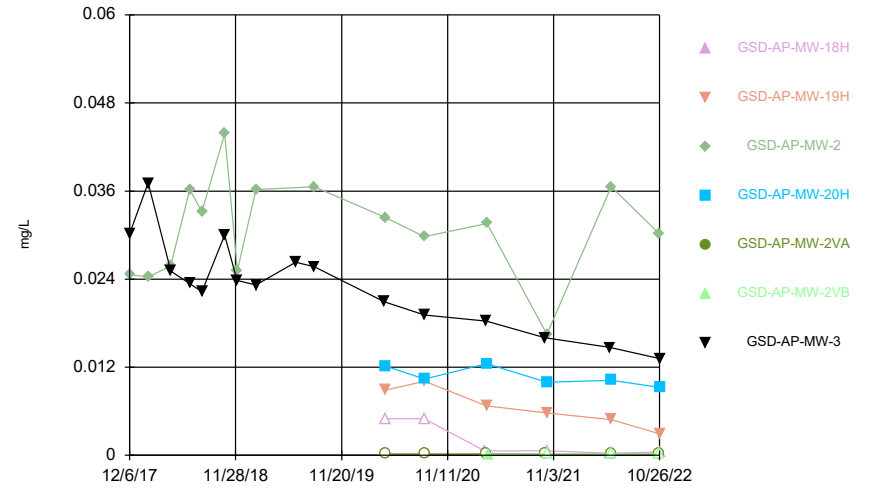
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



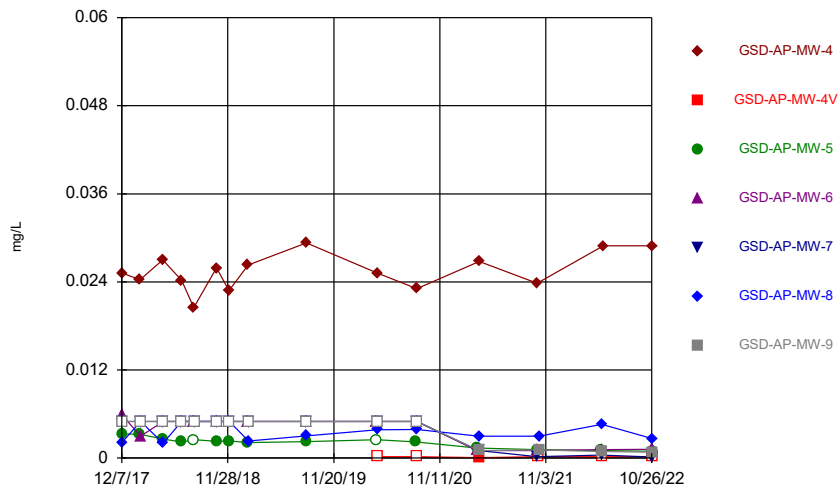
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



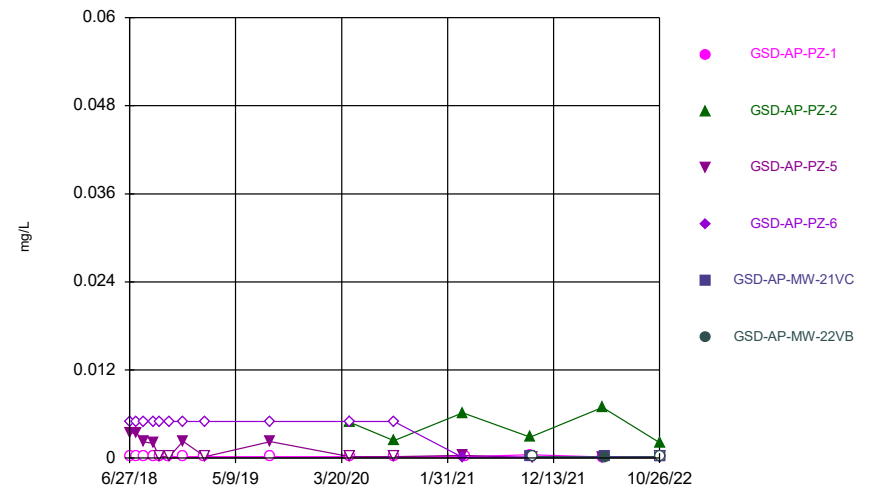
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



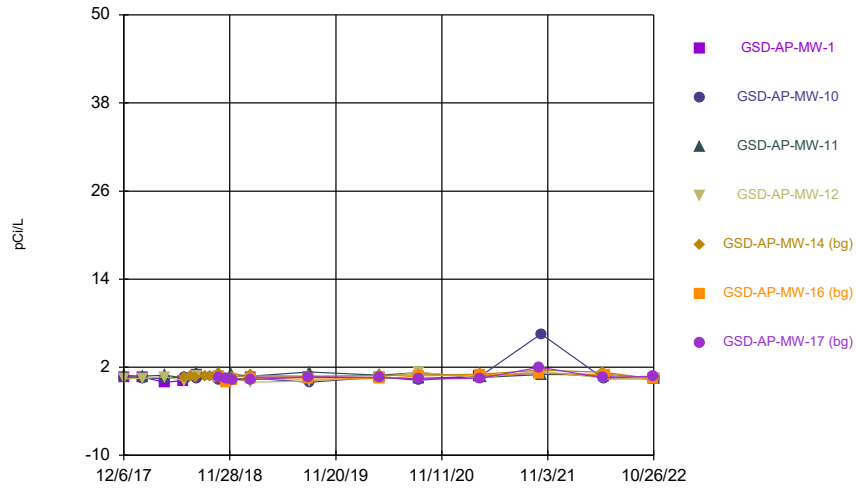
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



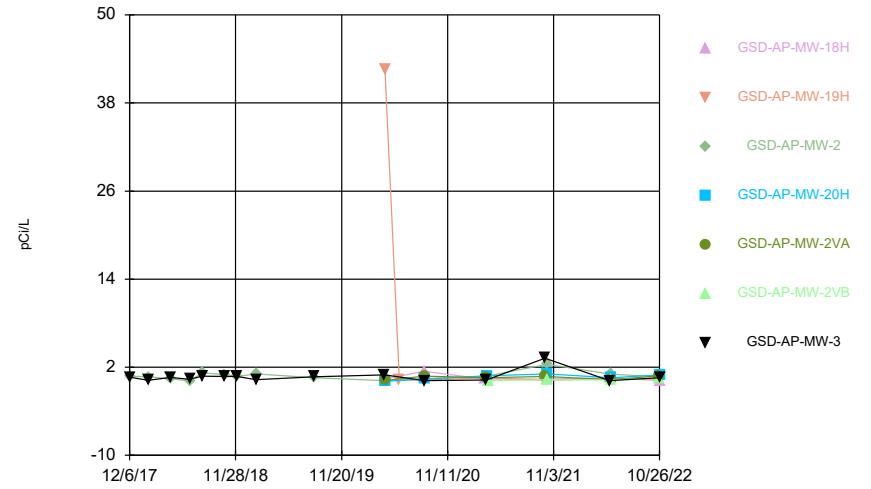
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



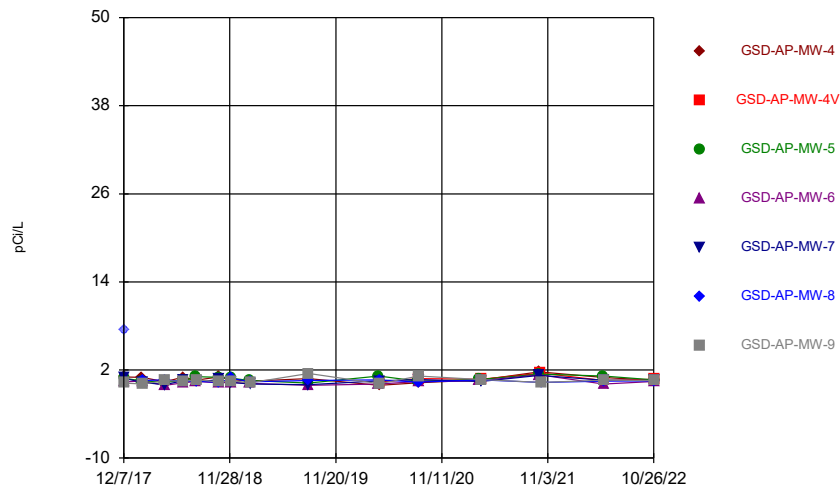
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



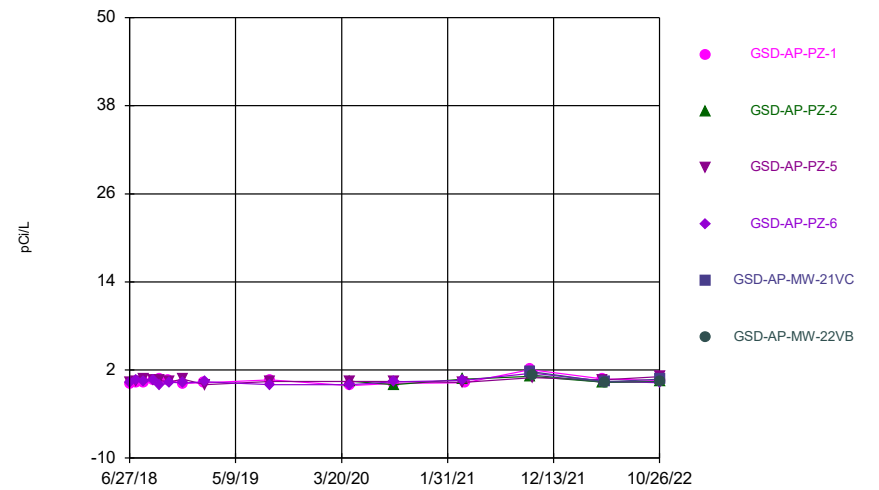
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



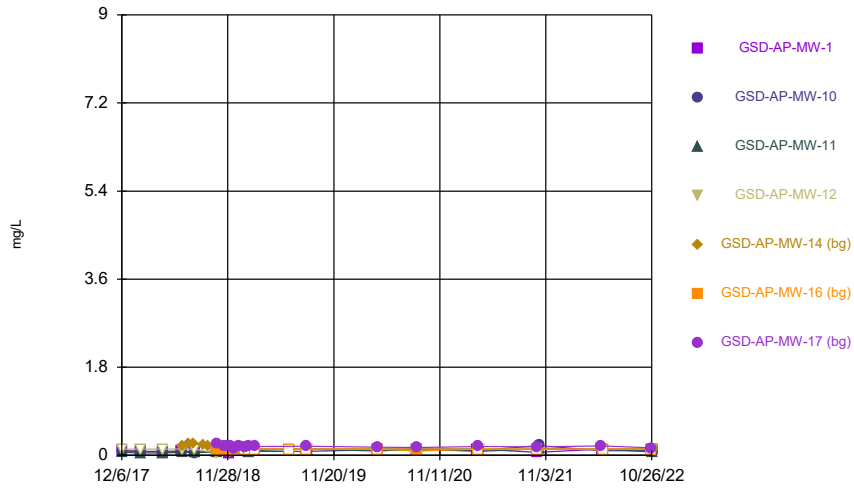
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Time Series



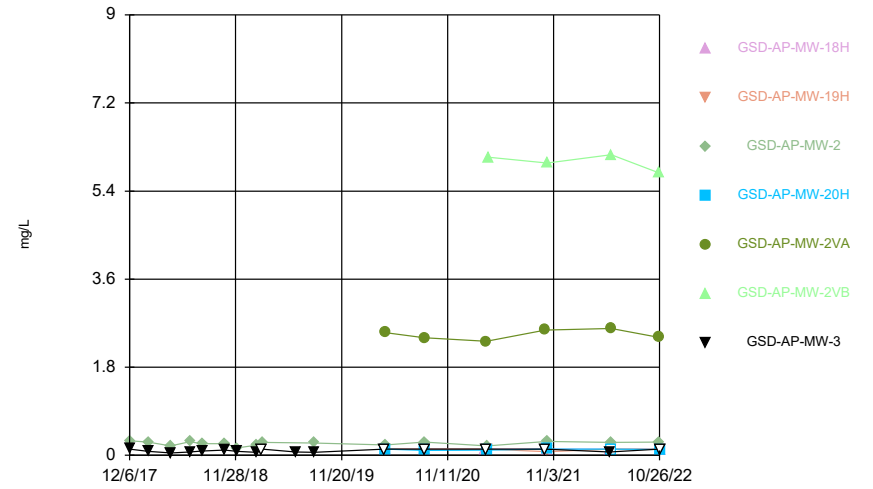
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



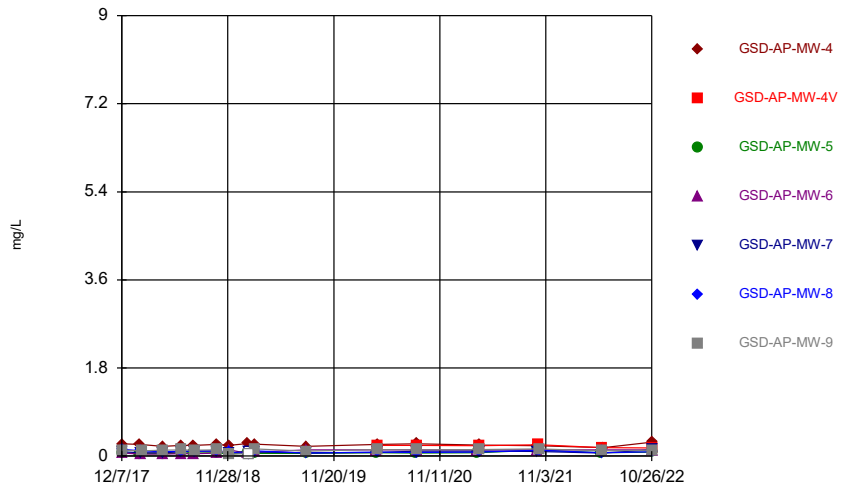
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



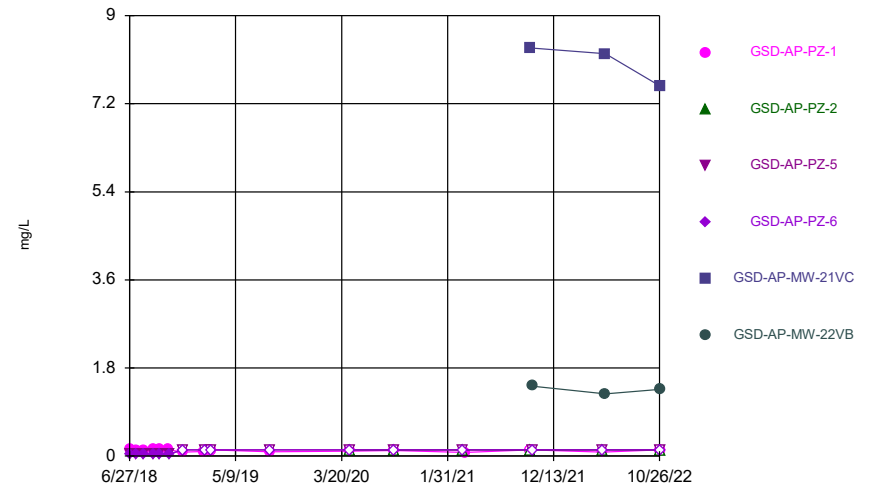
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Time Series



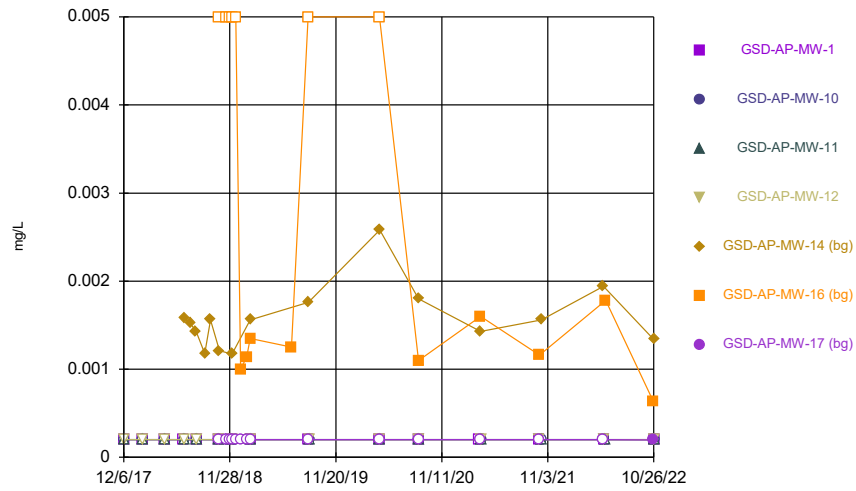
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Time Series



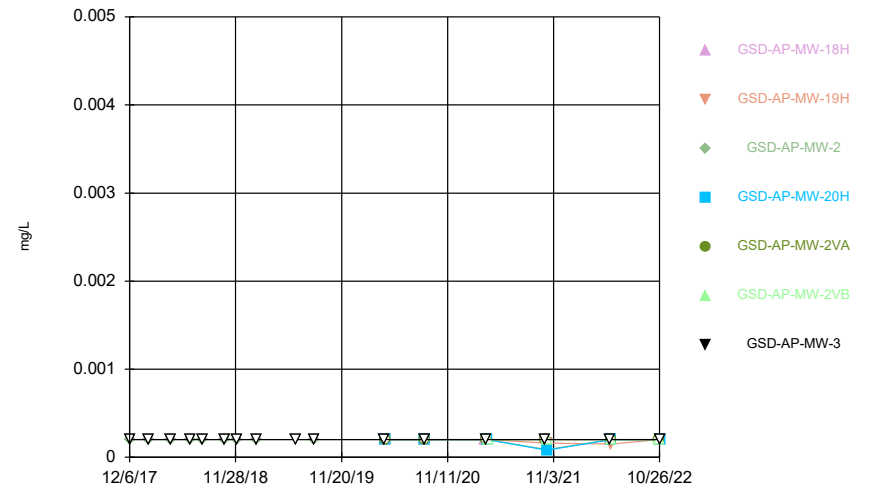
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Time Series



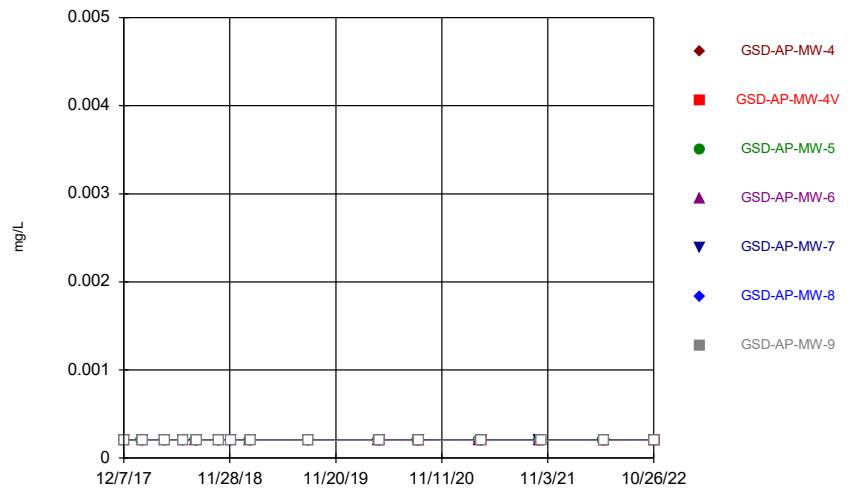
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Time Series



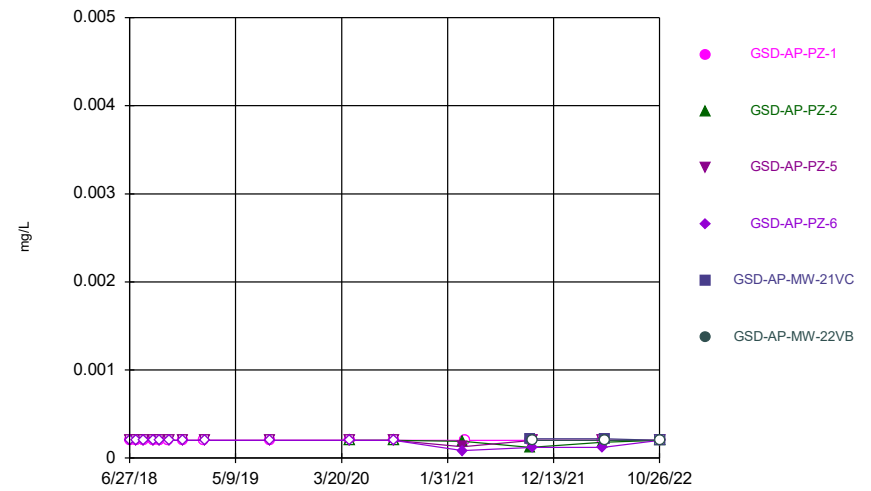
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Time Series



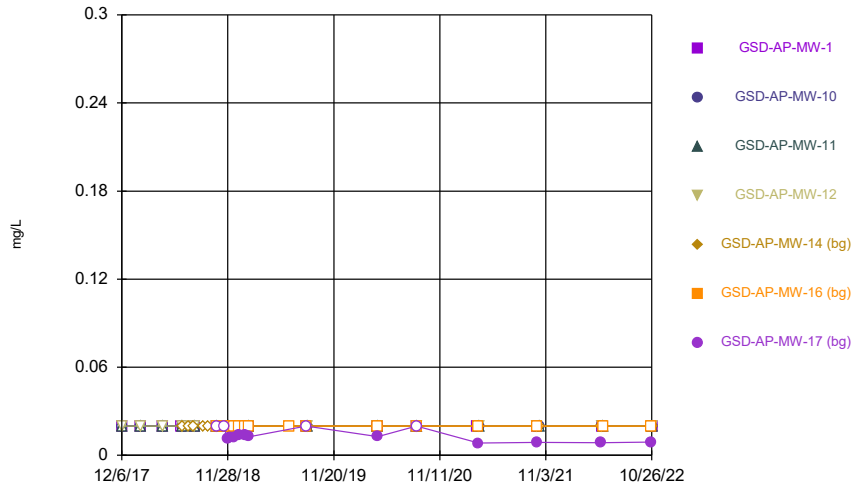
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Time Series



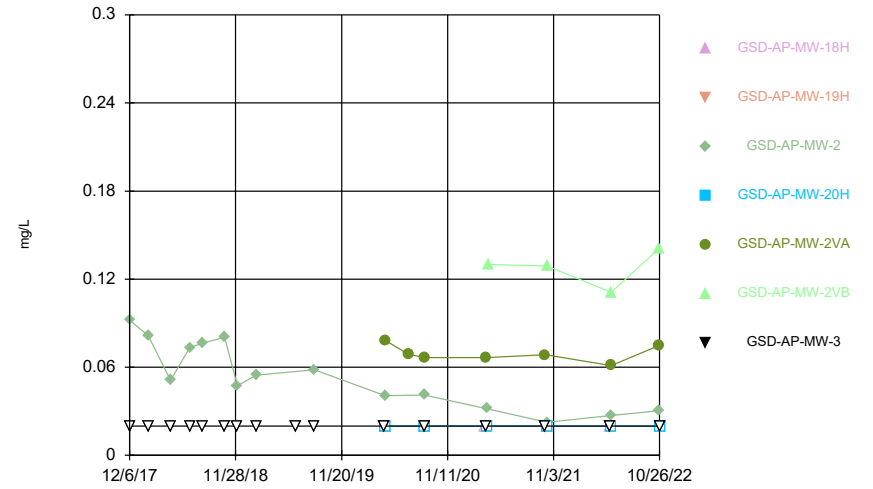
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Time Series



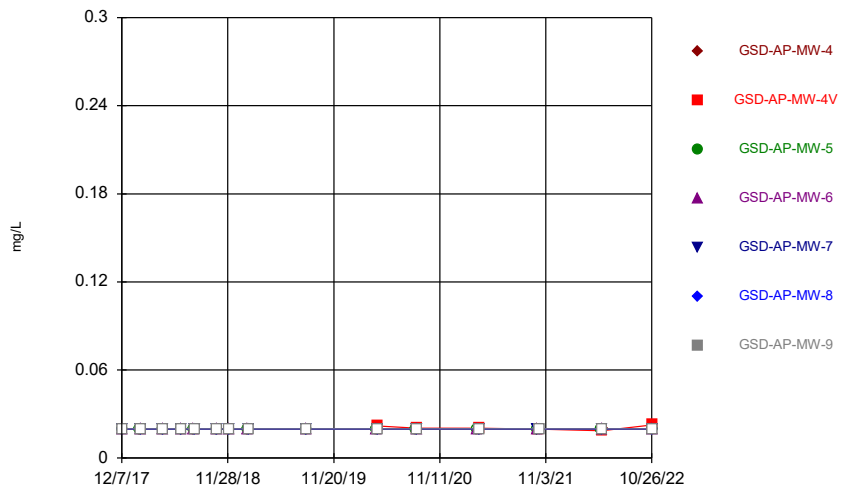
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Time Series



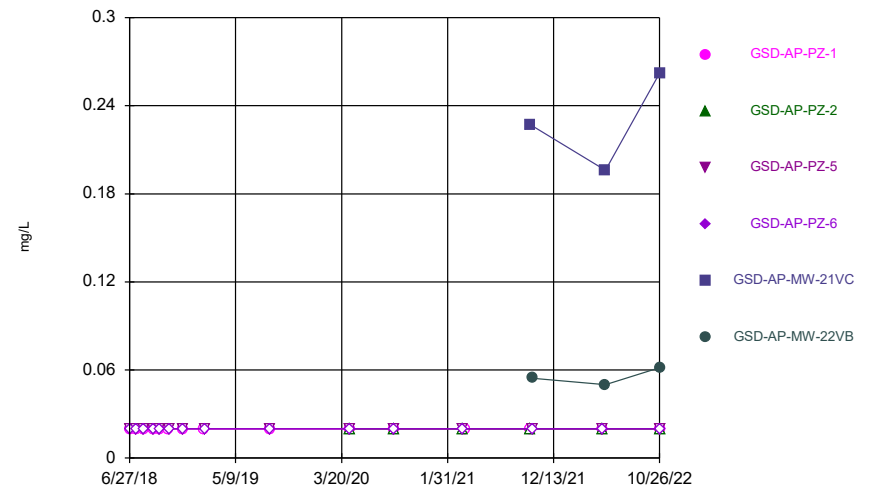
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



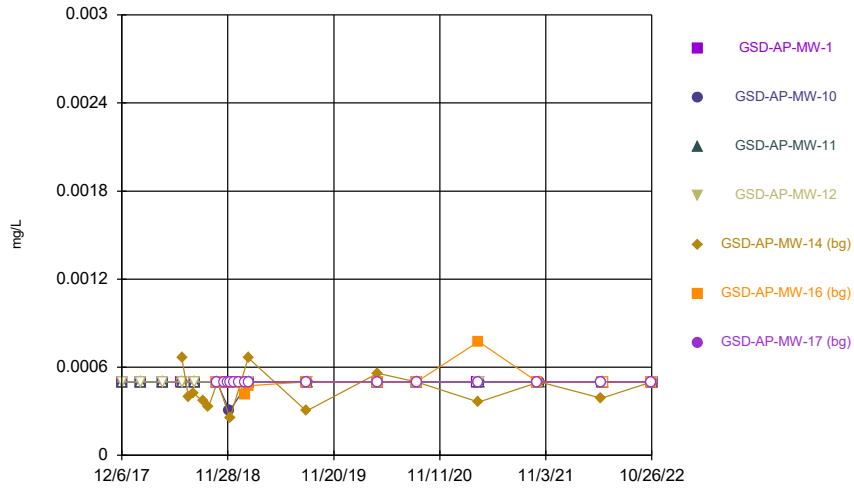
Constituent: Lithium Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



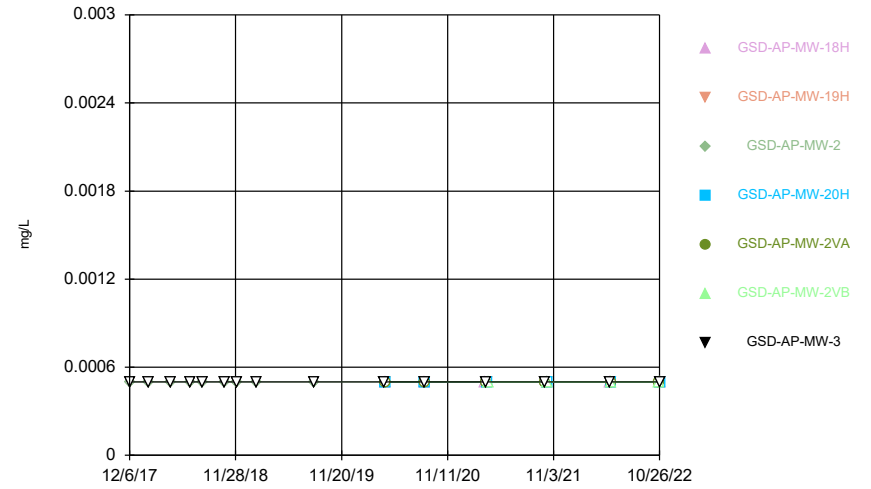
Constituent: Lithium Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



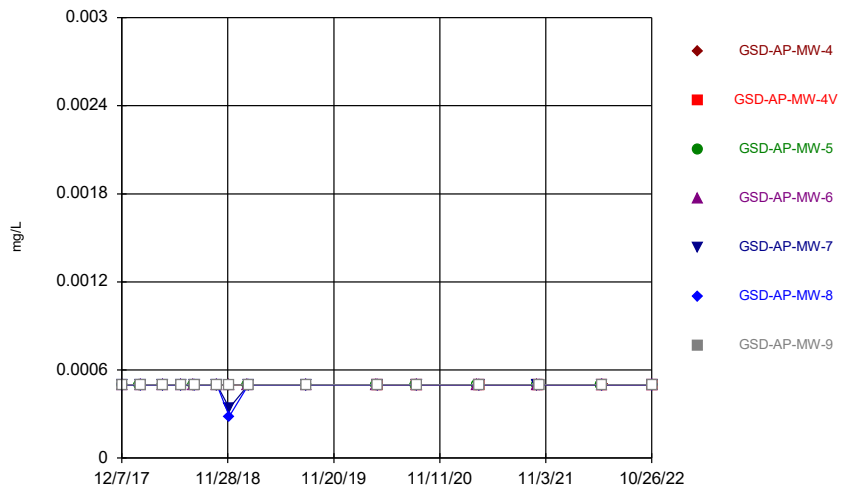
Constituent: Mercury Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



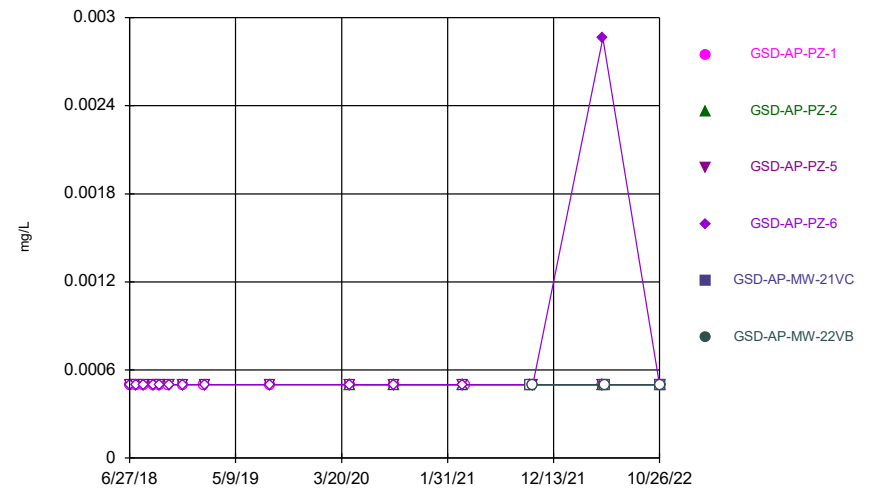
Constituent: Mercury Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



Constituent: Mercury Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

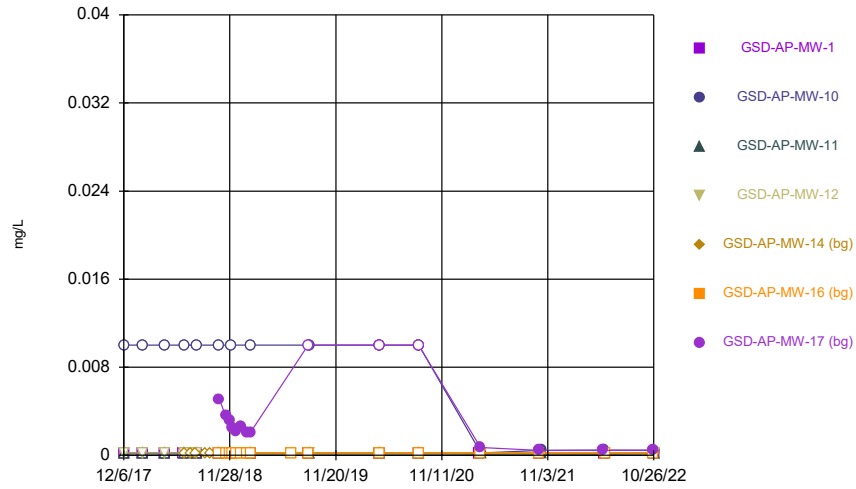
Time Series



Constituent: Mercury Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

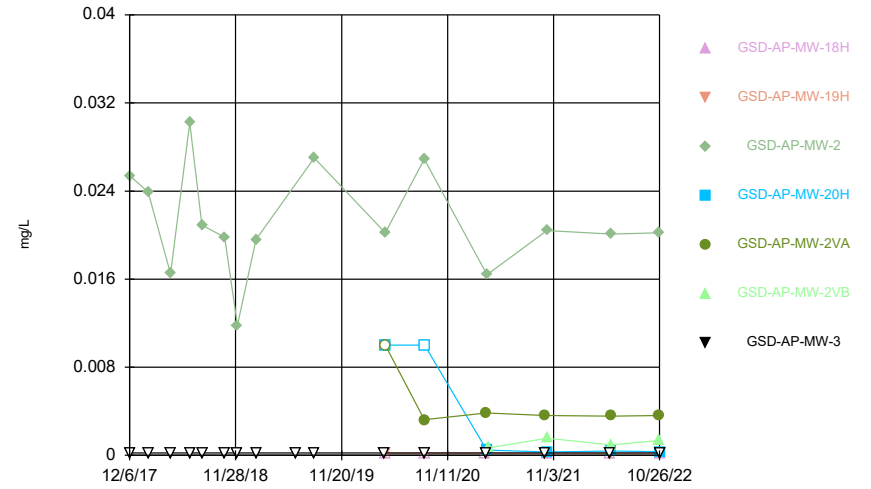


Time Series



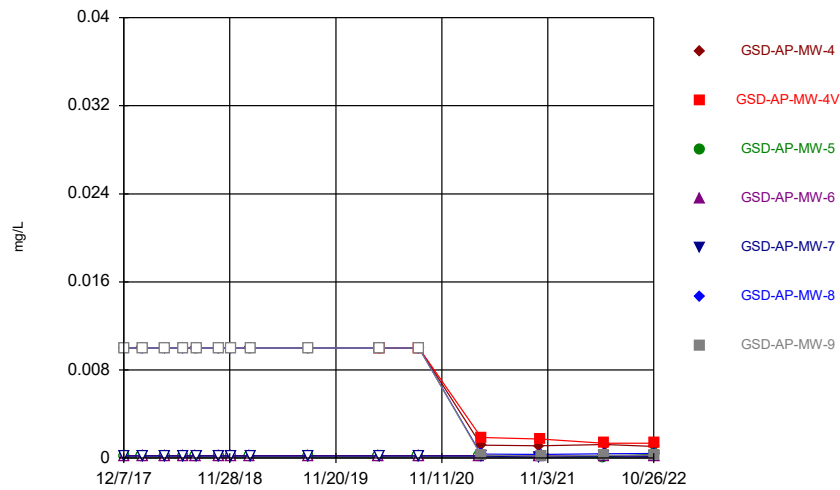
Constituent: Molybdenum Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



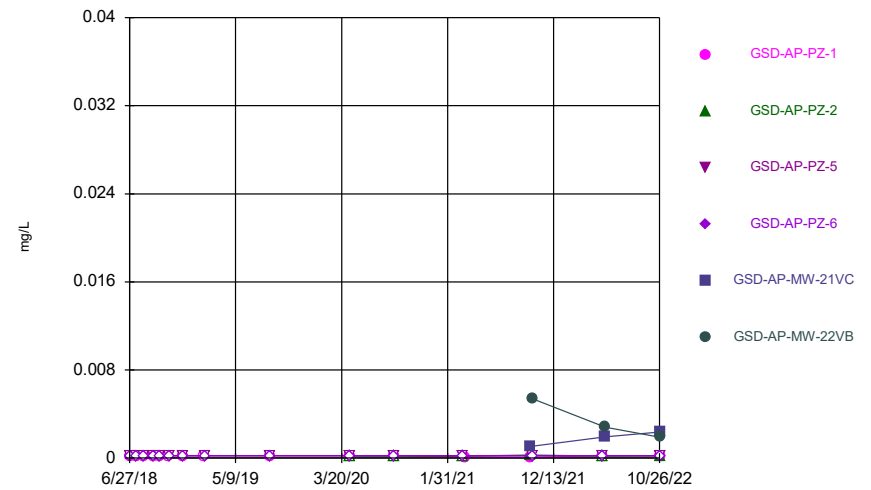
Constituent: Molybdenum Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



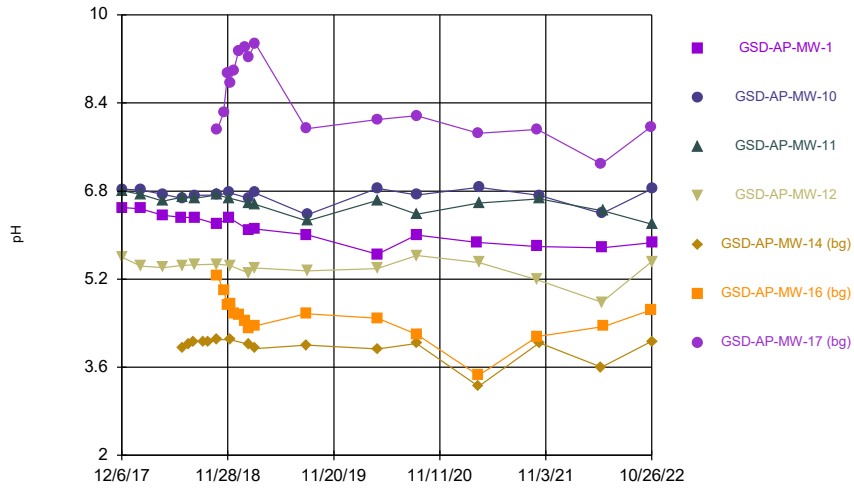
Constituent: Molybdenum Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



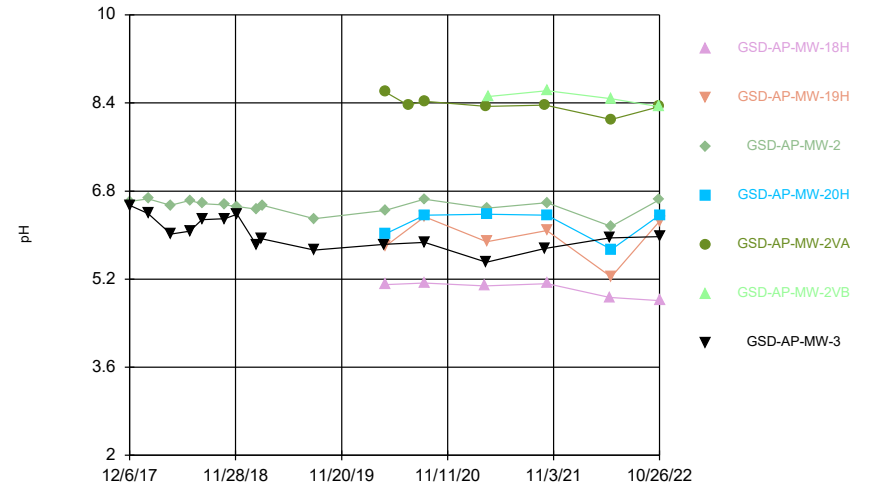
Constituent: Molybdenum Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



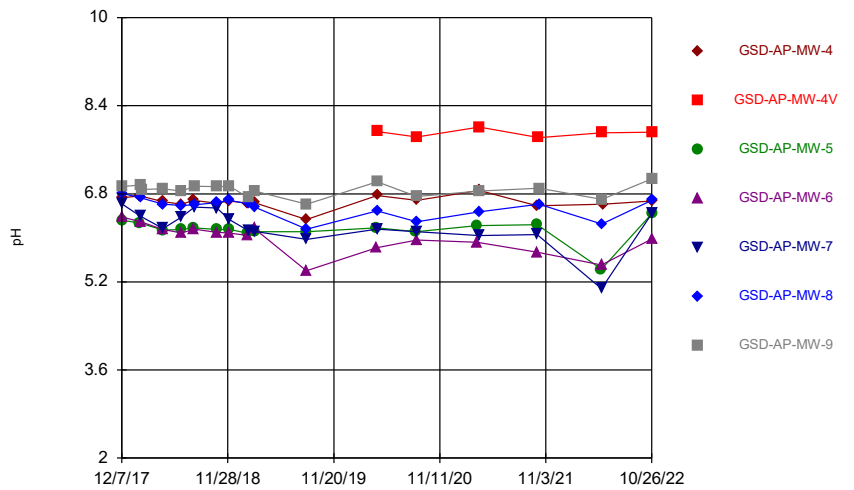
Constituent: pH Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



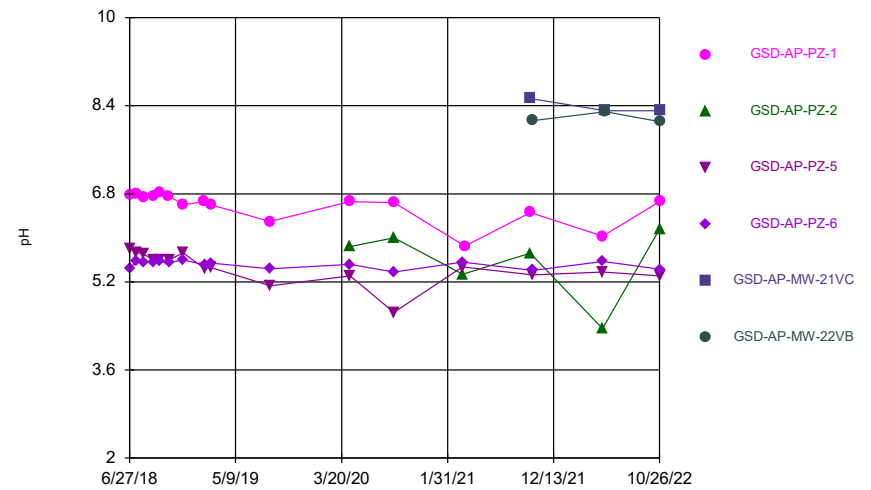
Constituent: pH Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



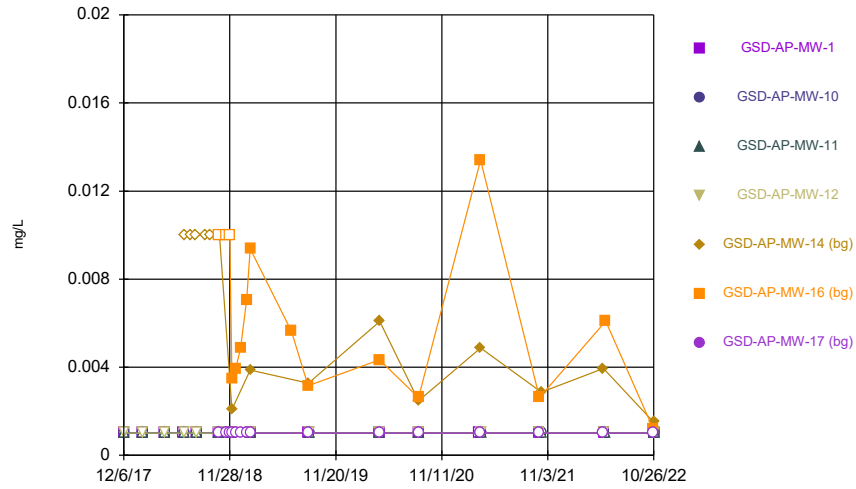
Constituent: pH Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



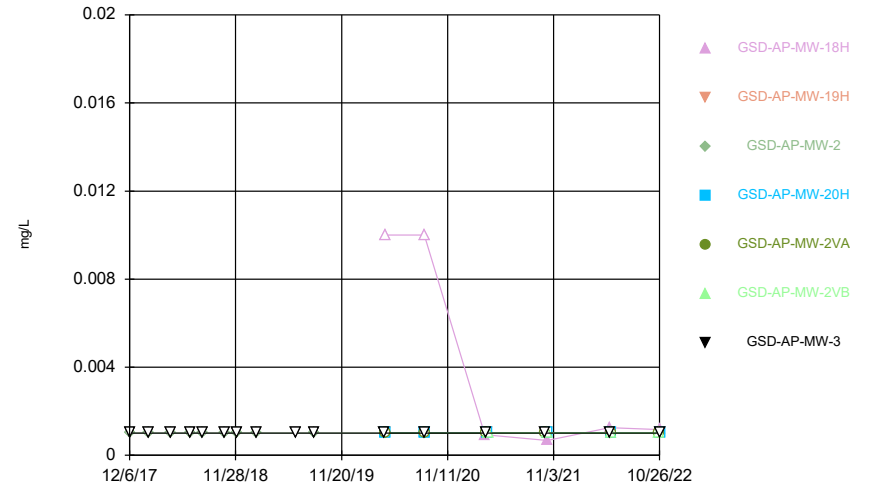
Constituent: pH Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



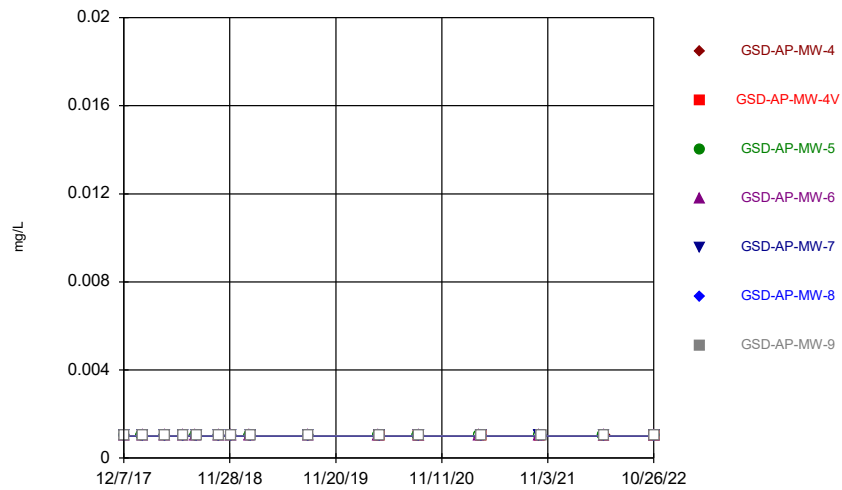
Constituent: Seleniun Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



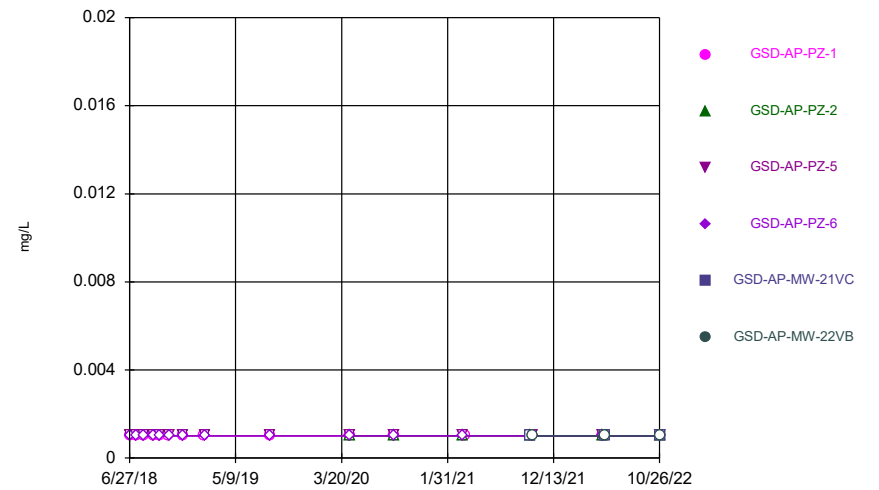
Constituent: Seleniun Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



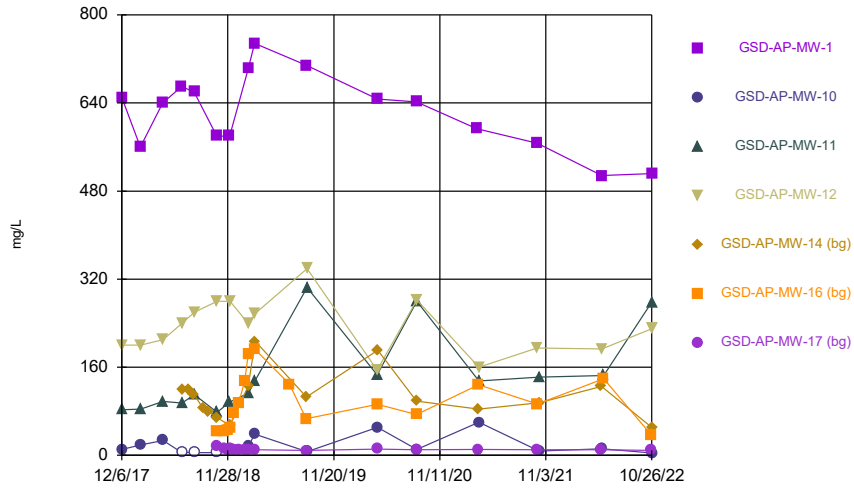
Constituent: Seleniun Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



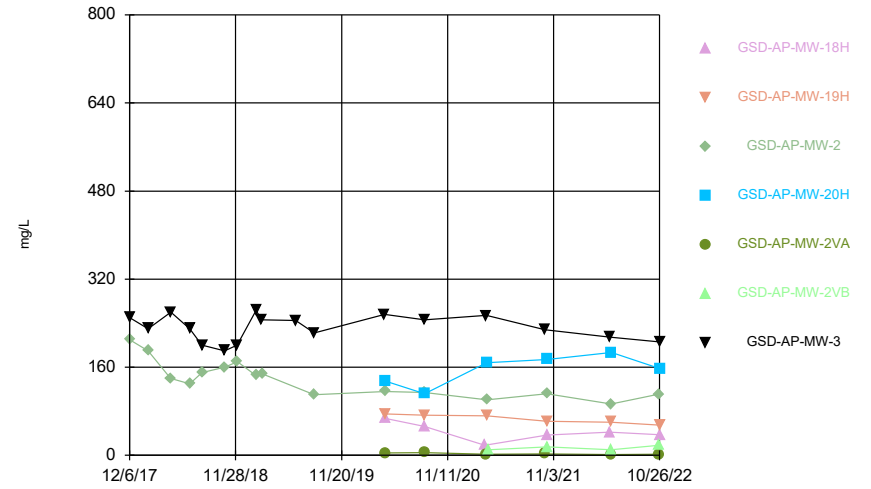
Constituent: Seleniun Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



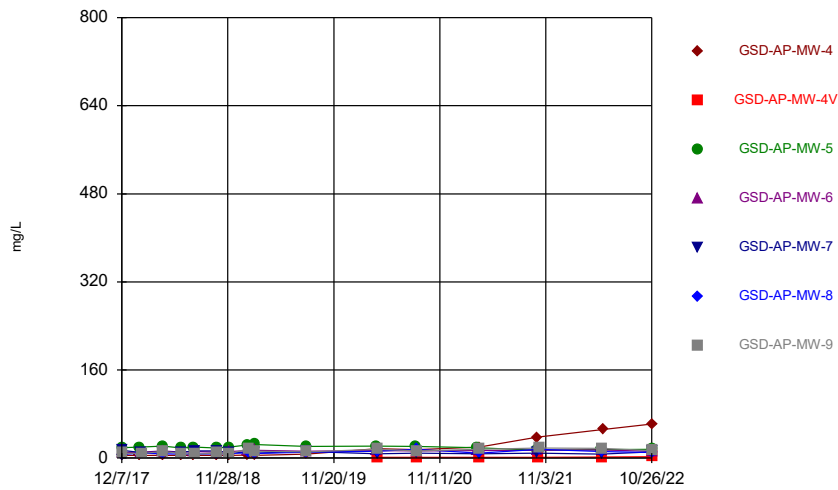
Constituent: Sulfate Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



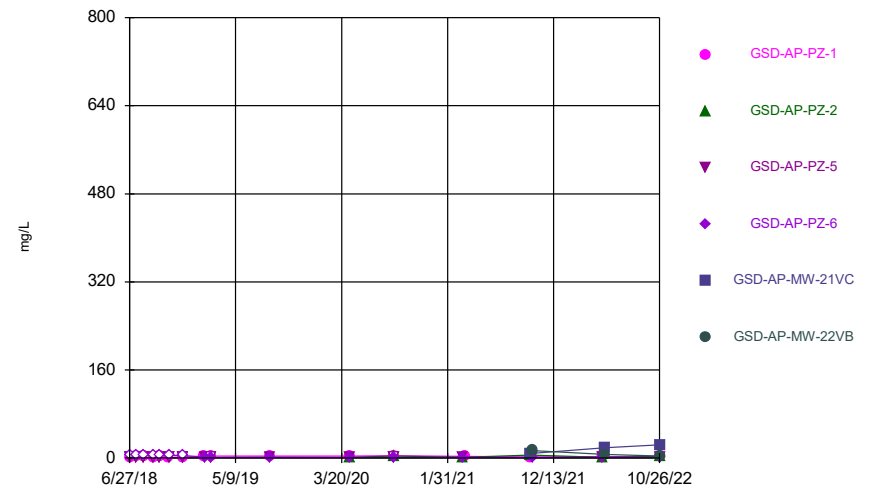
Constituent: Sulfate Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



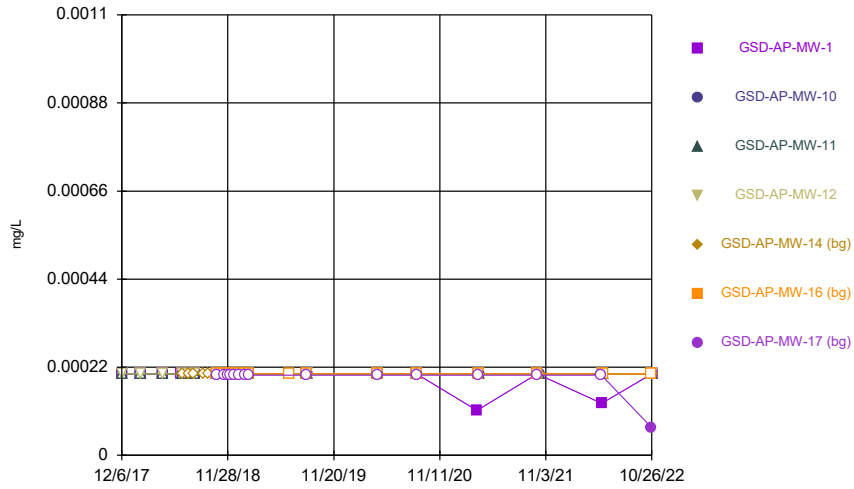
Constituent: Sulfate Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



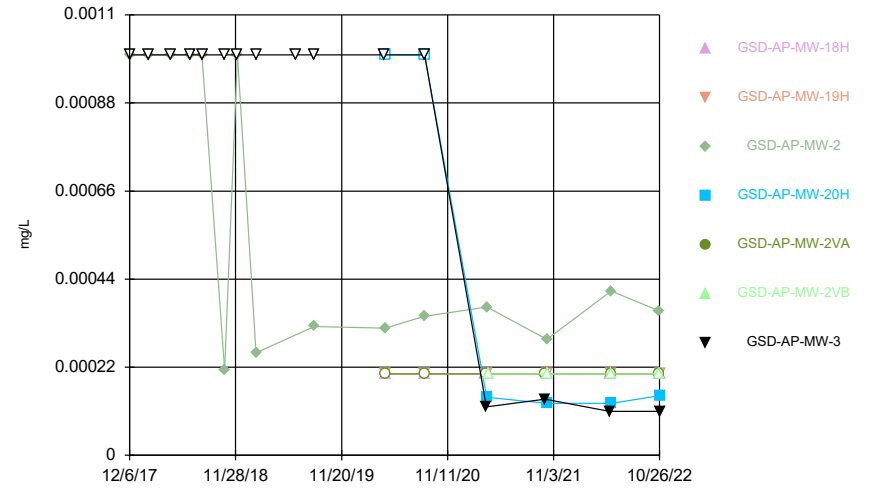
Constituent: Sulfate Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



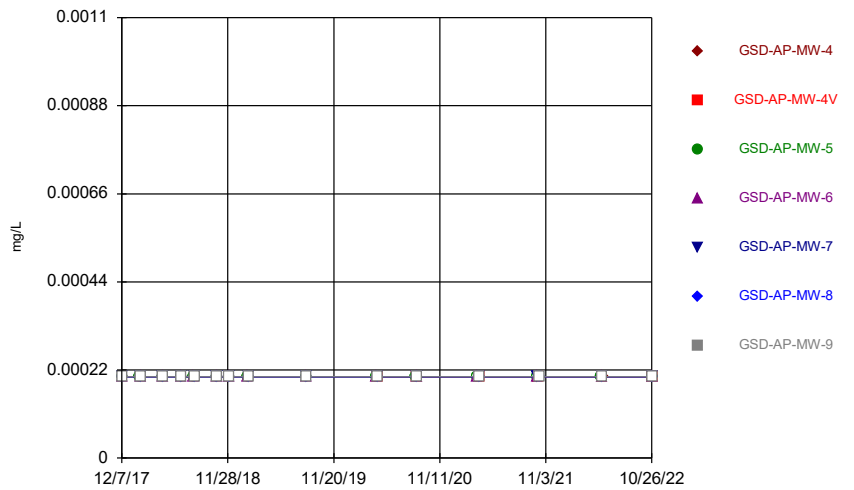
Constituent: Thallium Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



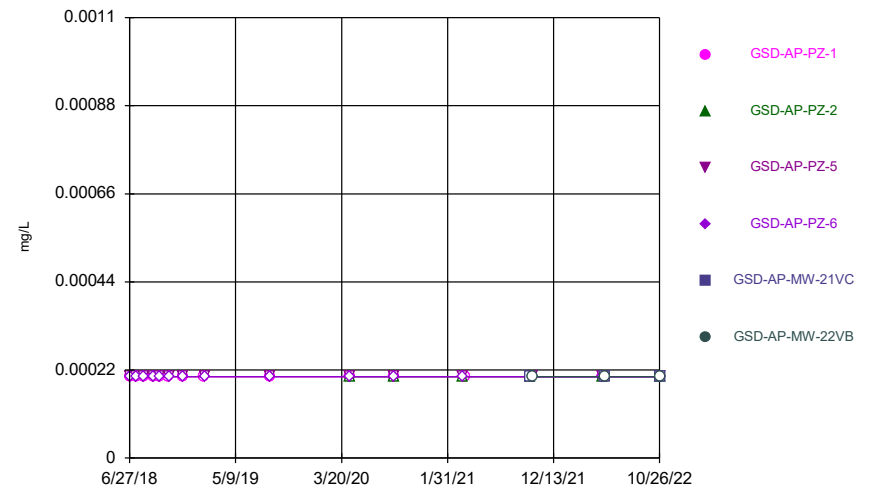
Constituent: Thallium Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



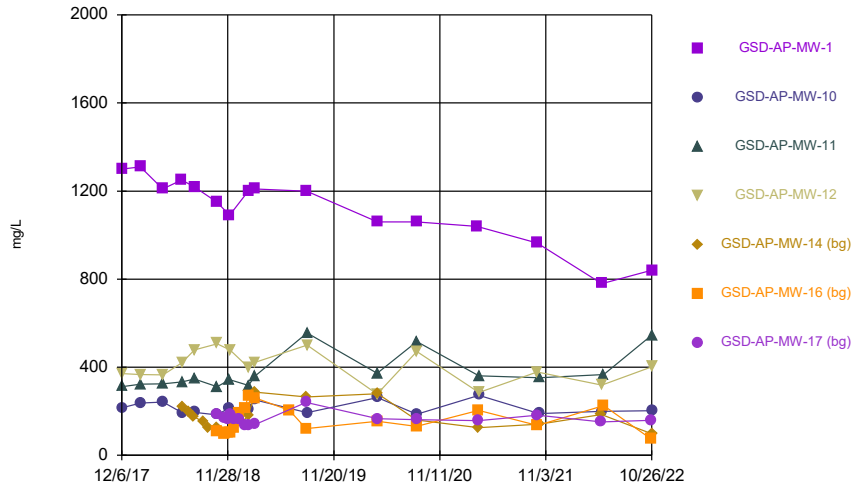
Constituent: Thallium Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



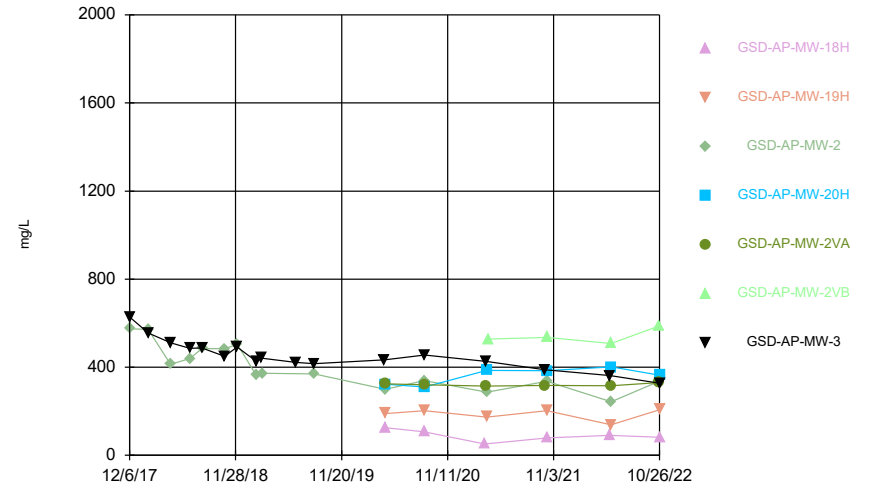
Constituent: Thallium Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



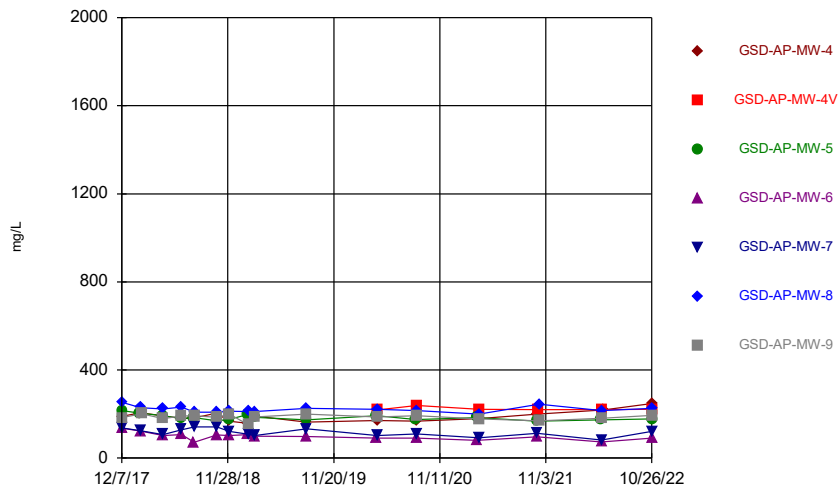
Constituent: Total Dissolved Solids Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



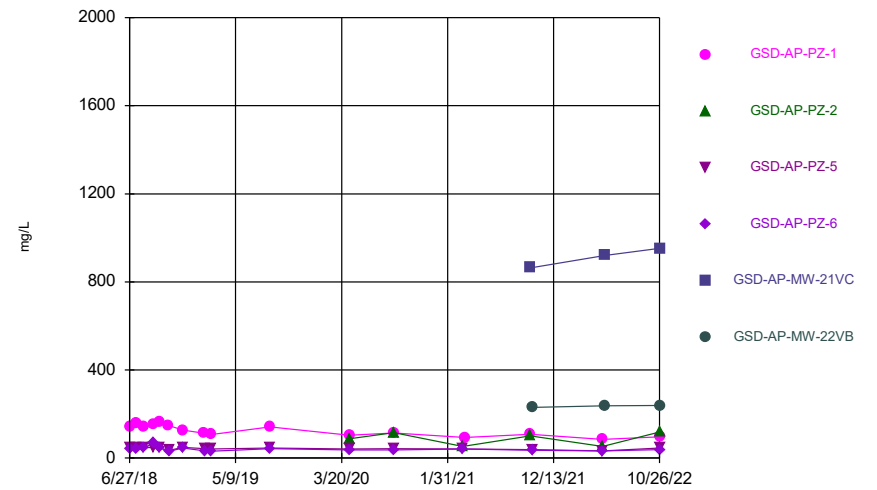
Constituent: Total Dissolved Solids Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



Constituent: Total Dissolved Solids Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Time Series



Constituent: Total Dissolved Solids Analysis Run 12/27/2022 6:35 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

# Time Series

Constituent: Antimony (mg/L) Analysis Run 12/27/2022 6:36 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	<0.001015	<0.001015	<0.001015	<0.001015			
2/6/2018	<0.001015						
2/7/2018		<0.001015	<0.001015				
2/8/2018				<0.001015			
4/23/2018	<0.001015						
4/24/2018		<0.001015	<0.001015	<0.001015			
6/26/2018	<0.001015						
6/27/2018		<0.001015	<0.001015	<0.001015	<0.001015		
7/18/2018					<0.001015		
8/6/2018					<0.001015		
8/7/2018	<0.001015	<0.001015					
8/8/2018			<0.001015	<0.001015			
9/5/2018					<0.001015		
9/24/2018					<0.001015		
10/22/2018	<0.001015	<0.001015					
10/23/2018			<0.001015	<0.001015			
10/24/2018					<0.001015	<0.001015	<0.001015
11/14/2018						<0.001015	<0.001015
11/28/2018						<0.001015	<0.001015
12/4/2018	<0.001015	<0.001015	<0.001015				
12/5/2018				<0.001015	<0.001015	<0.001015	<0.001015
12/18/2018						<0.001015	<0.001015
1/3/2019						<0.001015	<0.001015
1/24/2019						0.000922 (J)	<0.001015
2/5/2019	<0.001015				<0.001015	<0.001015	<0.001015
2/6/2019		<0.001015	<0.001015	<0.001015			
6/24/2019						<0.001015	
8/19/2019						<0.001015	<0.001015
8/20/2019					<0.001015		
8/21/2019	<0.001015						
8/22/2019		<0.001015	<0.001015	<0.001015			
4/14/2020			<0.001015	<0.001015			
4/15/2020	<0.001015	<0.001015				<0.001015	
4/16/2020					<0.001015		<0.001015
8/24/2020							<0.001015
8/25/2020	<0.001015				<0.001015	<0.001015	
8/26/2020		<0.001015	<0.001015	<0.001015			
3/16/2021	<0.001015						
3/22/2021					<0.001015	<0.001015	<0.001015
3/23/2021		<0.001015	<0.001015	<0.001015			
10/5/2021	<0.001015			<0.001015			
10/6/2021						<0.001015	<0.001015
10/11/2021		<0.001015					
10/12/2021			<0.001015		<0.001015		
5/9/2022					<0.001015		<0.001015
5/10/2022	<0.001015	<0.001015		<0.001015			
5/17/2022			<0.001015			<0.001015	
10/25/2022						<0.001015	<0.001015
10/26/2022	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015		

# Time Series

Constituent: Antimony (mg/L) Analysis Run 12/27/2022 6:36 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			<0.00102				<0.001015
2/6/2018			<0.00102				<0.001015
4/23/2018			<0.00102				
4/24/2018							<0.001015
6/27/2018			<0.00102				<0.001015
8/7/2018			<0.00102				<0.001015
10/22/2018			<0.00102				<0.001015
12/3/2018							<0.001015
12/4/2018			<0.00102				
2/5/2019			<0.00102				<0.001015
6/18/2019							<0.001015
8/20/2019			<0.00102				<0.001015
4/13/2020							<0.001015
4/14/2020		<0.001015		<0.001015			
4/15/2020	<0.001015		<0.00102		<0.00102		
8/25/2020	<0.001015		<0.00102		<0.00102		
8/26/2020		<0.001015		<0.001015			<0.001015
3/16/2021	<0.001015						
3/22/2021					<0.00102		<0.001015
3/23/2021		<0.001015		<0.001015			
3/24/2021			<0.00102				
3/30/2021						<0.001015	
10/5/2021							<0.001015
10/6/2021					<0.00102		
10/11/2021		<0.001015	<0.00102	<0.001015			
10/12/2021	<0.001015					<0.001015	
5/10/2022	<0.001015						<0.001015
5/16/2022		<0.001015	<0.00102		<0.00102	<0.001015	
5/17/2022				<0.001015			
10/25/2022			0.000538 (J)		0.000539 (J)	<0.001015	
10/26/2022	<0.001015	<0.001015		<0.001015			<0.001015



# Time Series

Constituent: Antimony (mg/L) Analysis Run 12/27/2022 6:36 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<0.001015		<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
2/6/2018	<0.001015		<0.001015				
2/8/2018				<0.001015	<0.001015	<0.001015	<0.001015
4/24/2018	<0.001015						
4/25/2018			<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
6/26/2018	<0.001015			<0.001015	<0.001015	<0.001015	<0.001015
6/27/2018			<0.001015				
8/6/2018	<0.001015						
8/7/2018			<0.001015	<0.001015			
8/8/2018					<0.001015	<0.001015	<0.001015
10/22/2018	<0.001015						
10/23/2018			<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
12/3/2018	<0.001015			<0.001015			
12/4/2018					<0.001015	<0.001015	
12/5/2018			<0.001015				<0.001015
2/5/2019	<0.001015		<0.001015	<0.001015			
2/6/2019					<0.001015	<0.001015	<0.001015
8/20/2019	<0.001015		<0.001015	<0.001015			
8/21/2019					<0.001015	<0.001015	<0.001015
4/13/2020			<0.001015	<0.001015			
4/14/2020						<0.001015	<0.001015
4/15/2020	<0.001015	<0.001015			<0.001015		
8/24/2020			<0.001015				
8/26/2020	<0.001015	<0.001015		<0.001015	<0.001015	<0.001015	<0.001015
3/16/2021			<0.001015				
3/17/2021				<0.001015			
3/23/2021					<0.001015	<0.001015	<0.001015
3/24/2021	<0.001015	<0.001015					
10/5/2021	<0.001015		<0.001015	<0.001015	<0.001015		
10/11/2021		<0.001015					
10/12/2021						<0.001015	<0.001015
5/9/2022			<0.001015				
5/10/2022				<0.001015	<0.001015		
5/11/2022		<0.001015				<0.001015	<0.001015
5/16/2022	<0.001015						
10/26/2022	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015

# Time Series

Constituent: Antimony (mg/L) Analysis Run 12/27/2022 6:36 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.001015		<0.001015	<0.001015		
7/18/2018	<0.001015		<0.001015	<0.001015		
8/7/2018	<0.001015					
8/8/2018			<0.001015	<0.001015		
9/5/2018	<0.001015		<0.001015	<0.001015		
9/24/2018	<0.001015		<0.001015	<0.001015		
10/22/2018	<0.001015					
10/23/2018			<0.001015	<0.001015		
12/3/2018	<0.001015		<0.001015	<0.001015		
2/5/2019	<0.001015					
2/7/2019			0.00114 (J)	0.00181 (J)		
8/20/2019	<0.001015					
8/21/2019			<0.001015	<0.001015		
4/13/2020	<0.001015	<0.001015				
4/15/2020			<0.001015	<0.001015		
8/24/2020	<0.001015	<0.001015	<0.001015	<0.001015		
3/16/2021			<0.001015	<0.001015		
3/17/2021		<0.001015				
3/24/2021	<0.001015					
10/5/2021	<0.001015	<0.001015				
10/6/2021					0.00051 (J)	
10/11/2021						0.00167
10/12/2021			<0.001015	<0.001015		
5/9/2022	<0.001015	<0.001015				
5/10/2022			<0.001015	<0.001015		
5/17/2022					0.00051 (J)	<0.001015
10/26/2022	<0.001015	<0.001015	<0.001015	<0.001015	0.000695 (J)	<0.001015

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 12/27/2022 6:36 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	0.00179 (J)	0.00247 (J)	0.00279 (J)	<0.0002			
2/6/2018	0.00191 (J)						
2/7/2018		0.00192 (J)	0.00252 (J)				
2/8/2018				<0.0002			
4/23/2018	0.0023 (J)						
4/24/2018		0.00218 (J)	0.00283 (J)	<0.0002			
6/26/2018	0.00306 (J)						
6/27/2018		0.00419 (J)	0.00289 (J)	<0.0002	0.00165 (J)		
7/18/2018					0.00117 (J)		
8/6/2018					<0.005		
8/7/2018	0.00336 (J)	0.00365 (J)					
8/8/2018			0.00265 (J)	<0.0002			
9/5/2018					<0.005		
9/24/2018					0.00148 (J)		
10/22/2018	0.00451 (J)	0.00404 (J)					
10/23/2018			0.00287 (J)	<0.0002			
10/24/2018					<0.005	<0.005	<0.005
11/14/2018						<0.005	<0.005
11/28/2018						0.00124 (J)	<0.005
12/4/2018	0.00471 (J)	0.00332 (J)	0.00271 (J)				
12/5/2018				<0.0002	<0.005	0.00113 (J)	<0.005
12/18/2018						0.00113 (J)	<0.005
1/3/2019						0.00175 (J)	<0.005
1/24/2019						0.00257 (J)	<0.005
2/5/2019	0.00365 (J)				0.00119 (J)	0.00355 (J)	<0.005
2/6/2019		0.00333 (J)	0.00272 (J)	<0.0002			
6/24/2019						0.00474 (J)	
8/19/2019						0.00228 (J)	<0.005
8/20/2019					0.00216 (J)		
8/21/2019	0.00444 (J)						
8/22/2019		0.00394 (J)	0.00229 (J)	<0.0002			
4/14/2020			0.00286 (J)	<0.0002			
4/15/2020	0.00309 (J)	0.00236 (J)				0.0034 (J)	
4/16/2020					0.00483 (J)		<0.005
8/24/2020							<0.005
8/25/2020	0.00435 (J)				0.002 (J)	0.00237 (J)	
8/26/2020		0.00422 (J)	0.00246 (J)	<0.0002			
3/16/2021	0.0029						
3/22/2021					0.00188	0.00614	0.00031
3/23/2021		0.00163	0.00275	<0.0002			
10/5/2021	0.00356			<0.0002			
10/6/2021						0.00207	0.00026
10/11/2021		0.0037					
10/12/2021			0.00272		0.00131		
5/9/2022					0.00274		0.00023
5/10/2022	0.00221	0.00361		<0.0002			
5/17/2022			0.00281			0.00457	
10/25/2022						0.00117	0.000572
10/26/2022	0.00223	0.00414	0.00215	0.000102 (J)	0.00107		

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 12/27/2022 6:36 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			0.809				0.00101 (J)
2/6/2018			0.774				<0.005
4/23/2018			0.643				
4/24/2018							<0.005
6/27/2018			1.01				<0.005
8/7/2018			0.988				<0.005
10/22/2018			1.01				<0.005
12/3/2018							<0.005
12/4/2018			0.553				
2/5/2019			0.74				<0.005
6/18/2019							<0.005
8/20/2019			0.825				<0.005
4/13/2020							<0.005
4/14/2020		<0.005		0.00287 (J)			
4/15/2020	<0.005		0.709		<0.005		
8/25/2020	<0.005		0.727		0.00135 (J)		
8/26/2020		<0.005		0.00186 (J)			<0.005
3/16/2021	0.000136 (J)						
3/22/2021					0.00145		0.0002 (J)
3/23/2021		0.000512		0.00226			
3/24/2021			0.489				
3/30/2021						0.000278	
10/5/2021							0.00021
10/6/2021					0.00139		
10/11/2021		0.00085	0.424	0.00191			
10/12/2021	0.00019 (J)					0.00043	
5/10/2022	0.00015 (J)						0.00016 (J)
5/16/2022		0.00018 (J)	0.569		0.00135	0.00039	
5/17/2022				0.002			
10/25/2022			0.555		0.00165	0.000907	
10/26/2022	0.000338	0.000583		0.00151			0.000311

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 12/27/2022 6:36 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	0.0132		<0.005	<0.0002	<0.0002	0.00313 (J)	0.00112 (J)
2/6/2018	0.0105		<0.005				
2/8/2018				<0.0002	<0.0002	0.00247 (J)	<0.005
4/24/2018	0.0124						
4/25/2018			<0.005	<0.0002	<0.0002	0.00291 (J)	<0.005
6/26/2018	0.0132			<0.0002	<0.0002	0.00265 (J)	<0.005
6/27/2018			<0.005				
8/6/2018	0.013						
8/7/2018			<0.005	<0.0002			
8/8/2018					<0.0002	0.00203 (J)	<0.005
10/22/2018	0.0144						
10/23/2018			<0.005	<0.0002	<0.0002	0.00246 (J)	<0.005
12/3/2018	0.0119			<0.0002			
12/4/2018					<0.0002	0.00328 (J)	
12/5/2018			<0.005				0.00111 (J)
2/5/2019	0.0107		<0.005	<0.0002			
2/6/2019					<0.0002	0.00325 (J)	<0.005
8/20/2019	0.0141		<0.005	<0.0002			
8/21/2019					<0.0002	0.00302 (J)	<0.005
4/13/2020			<0.005	<0.0002			
4/14/2020						0.00295 (J)	0.00118 (J)
4/15/2020	0.0121	<0.005			<0.0002		
8/24/2020			<0.005				
8/26/2020	0.0133	<0.005		<0.0002	<0.0002	0.00304 (J)	<0.005
3/16/2021			8.17E-05 (J)				
3/17/2021				<0.0002			
3/23/2021					<0.0002	0.00282	0.00063
3/24/2021	0.011	0.00034					
10/5/2021	0.0147		0.00013 (J)	<0.0002	7E-05 (J)		
10/11/2021		0.00037					
10/12/2021						0.00287	0.00064
5/9/2022			8E-05 (J)				
5/10/2022				<0.0002	<0.0002		
5/11/2022		0.00031				0.00323	0.00055
5/16/2022	0.0132						
10/26/2022	0.0145	0.000446	0.00025	0.000151 (J)	0.000105 (J)	0.0033	0.000618

# Time Series

Constituent: Arsenic (mg/L) Analysis Run 12/27/2022 6:36 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.0002		<0.000203	<0.0002		
7/18/2018	<0.0002		<0.000203	<0.0002		
8/7/2018	<0.0002					
8/8/2018			<0.000203	<0.0002		
9/5/2018	<0.0002		<0.000203	<0.0002		
9/24/2018	<0.0002		<0.000203	<0.0002		
10/22/2018	<0.0002					
10/23/2018			<0.000203	<0.0002		
12/3/2018	<0.0002		<0.000203	<0.0002		
2/5/2019	<0.0002					
2/7/2019			<0.000203	<0.0002		
8/20/2019	<0.0002					
8/21/2019			<0.000203	<0.0002		
4/13/2020	<0.0002	<0.005				
4/15/2020			<0.000203	<0.0002		
8/24/2020	<0.0002	<0.005	<0.000203	<0.0002		
3/16/2021			8.08E-05 (J)	<0.0002		
3/17/2021		8.26E-05 (J)				
3/24/2021	<0.0002					
10/5/2021	<0.0002	9E-05 (J)				
10/6/2021				0.00162		
10/11/2021					0.00408	
10/12/2021			<0.000203	<0.0002		
5/9/2022	<0.0002	0.0001 (J)				
5/10/2022			<0.000203	<0.0002		
5/17/2022					0.0014	0.00303
10/26/2022	0.000164 (J)	0.000188 (J)	<0.000203	0.00015 (J)	0.00122	0.00269

# Time Series

Constituent: Barium (mg/L) Analysis Run 12/27/2022 6:36 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	0.0807	0.308	0.349	0.0501			
2/6/2018	0.0546						
2/7/2018		0.289	0.297				
2/8/2018				0.0375			
4/23/2018	0.0488						
4/24/2018		0.359	0.338	0.0405			
6/26/2018	0.0479						
6/27/2018		0.307	0.338	0.0466	0.0338		
7/18/2018					0.03		
8/6/2018					0.0274		
8/7/2018	0.0402	0.25					
8/8/2018			0.307	0.0448			
9/5/2018					0.0275		
9/24/2018					0.0264		
10/22/2018	0.0427	0.29					
10/23/2018			0.311	0.054			
10/24/2018					0.0276	0.0499	0.218
11/14/2018						0.0458	0.203
11/28/2018						0.0476	0.191
12/4/2018	0.0434	0.305	0.331				
12/5/2018				0.0493	0.0256	0.0475	0.209
12/18/2018						0.0461	0.199
1/3/2019						0.0426	0.176
1/24/2019						0.0485	0.206
2/5/2019	0.0439				0.0314	0.0354	0.168
2/6/2019		0.265	0.286	0.036			
6/24/2019						0.0294	
8/19/2019						0.0314	0.259
8/20/2019					0.0274		
8/21/2019	0.037						
8/22/2019		0.302	0.214	0.0455			
4/14/2020			0.168	0.0279			
4/15/2020	0.0329	0.35				0.028	
4/16/2020					0.0327		0.257
8/24/2020							0.312
8/25/2020	0.0358				0.0291	0.0261	
8/26/2020		0.322	0.165	0.0503			
3/16/2021	0.0331						
3/22/2021					0.0254	0.0278	0.29
3/23/2021		0.395	0.169	0.0315			
10/5/2021	0.0304			0.0417			
10/6/2021						0.0215	0.307
10/11/2021		0.292					
10/12/2021			0.17		0.0268		
5/9/2022					0.0365		0.309
5/10/2022	0.0275	0.318		0.0377			
5/17/2022			0.195			0.0288	
10/25/2022						0.029	0.292
10/26/2022	0.028	0.278	0.117	0.0376	0.0238		

# Time Series

Constituent: Barium (mg/L) Analysis Run 12/27/2022 6:36 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			0.0842				0.126
2/6/2018			0.0716				0.0721
4/23/2018			0.0518				
4/24/2018							0.0492
6/27/2018			0.0578				0.0453
8/7/2018			0.0566				0.0431
10/22/2018			0.0536				0.0541
12/3/2018							0.0545
12/4/2018			0.0589				
2/5/2019			0.0418				0.0363
6/18/2019							0.0369
8/20/2019			0.0685				0.0405
4/13/2020							0.0349
4/14/2020		0.153		0.189			
4/15/2020	0.0389		0.0607		0.2		
8/25/2020	0.0388		0.0812		0.135		
8/26/2020		0.201		0.197			0.0363
3/16/2021	0.0243						
3/22/2021					0.114		0.0354
3/23/2021		0.148		0.217			
3/24/2021			0.0676				
3/30/2021						0.313	
10/5/2021							0.0344
10/6/2021					0.12		
10/11/2021		0.17	0.0807	0.134			
10/12/2021	0.0298					0.242	
5/10/2022	0.0361						0.0287
5/16/2022		0.124	0.0974		0.132	0.322	
5/17/2022				0.115			
10/25/2022			0.0888		0.137	0.346	
10/26/2022	0.0349	0.159		0.0993			0.0306



# Time Series

Constituent: Barium (mg/L) Analysis Run 12/27/2022 6:36 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	0.239		0.279	0.0809	0.083	0.244	0.187
2/6/2018	0.206		0.195				
2/8/2018				0.0566	0.0756	0.135	0.148
4/24/2018	0.217						
4/25/2018			0.26	0.0553	0.0764	0.224	0.158
6/26/2018	0.208			0.0604	0.0799	0.181	0.16
6/27/2018			0.249				
8/6/2018	0.189						
8/7/2018			0.216	0.0542			
8/8/2018					0.0791	0.134	0.161
10/22/2018	0.209						
10/23/2018			0.26	0.0608	0.0898	0.17	0.183
12/3/2018	0.214			0.0633			
12/4/2018					0.0789	0.189	
12/5/2018			0.245				0.186
2/5/2019	0.173		0.215	0.0551			
2/6/2019					0.0685	0.226	0.128
8/20/2019	0.188		0.238	0.0731			
8/21/2019					0.0946	0.194	0.183
4/13/2020			0.241	0.0635			
4/14/2020						0.262	0.186
4/15/2020	0.159	0.457			0.0653		
8/24/2020			0.238				
8/26/2020	0.181	0.534		0.0771	0.0845	0.235	0.202
3/16/2021			0.217				
3/17/2021				0.0656			
3/23/2021					0.0602	0.249	0.157
3/24/2021	0.171	0.477					
10/5/2021	0.202		0.221	0.0741	0.0716		
10/11/2021		0.483					
10/12/2021						0.203	0.147
5/9/2022			0.236				
5/10/2022				0.0762	0.0527		
5/11/2022		0.525				0.32	0.16
5/16/2022	0.23						
10/26/2022	0.239	0.474	0.231	0.0702	0.0852	0.224	0.154

# Time Series

Constituent: Barium (mg/L) Analysis Run 12/27/2022 6:36 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	0.115		0.154	0.0298		
7/18/2018	0.116		0.15	0.0312		
8/7/2018	0.0906					
8/8/2018			0.119	0.0265		
9/5/2018	0.116		0.123	0.0291		
9/24/2018	0.125		0.112	0.029		
10/22/2018	0.102					
10/23/2018			0.125	0.0298		
12/3/2018	0.0784		0.126	0.0307		
2/5/2019	0.0578					
2/7/2019			0.0602	0.028		
8/20/2019	0.097					
8/21/2019			0.085	0.0312		
4/13/2020	0.0529	0.0832				
4/15/2020			0.0535	0.0296		
8/24/2020	0.0733	0.132	0.0565	0.031		
3/16/2021			0.0553	0.0293		
3/17/2021		0.045				
3/24/2021	0.0525					
10/5/2021	0.0811	0.118				
10/6/2021					0.374	
10/11/2021						0.238
10/12/2021			0.0494	0.0303		
5/9/2022	0.057	0.0593				
5/10/2022			0.0497	0.0309		
5/17/2022					0.435	0.276
10/26/2022	0.0682	0.133	0.0474	0.0282	0.431	0.257

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 12/27/2022 6:36 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	<0.001015	<0.001015	<0.001015	<0.001015			
2/6/2018	<0.001015						
2/7/2018		<0.001015	<0.001015				
2/8/2018				<0.001015			
4/23/2018	<0.001015						
4/24/2018		<0.001015	<0.001015	<0.001015			
6/26/2018	<0.001015						
6/27/2018		<0.001015	<0.001015	<0.001015	0.00134 (J)		
7/18/2018					0.00133 (J)		
8/6/2018					0.00129 (J)		
8/7/2018	<0.001015	<0.001015					
8/8/2018			<0.001015	<0.001015			
9/5/2018					0.00106 (J)		
9/24/2018					0.000991 (J)		
10/22/2018	<0.001015	<0.001015					
10/23/2018			<0.001015	<0.001015			
10/24/2018					0.00082 (J)	<0.001015	<0.001015
11/14/2018						<0.001015	<0.001015
11/28/2018						0.00133 (J)	<0.001015
12/4/2018	<0.001015	<0.001015	<0.001015				
12/5/2018				<0.001015	0.00141 (J)	<0.001015	<0.001015
12/18/2018						0.000761 (J)	<0.001015
1/3/2019						0.000677 (J)	<0.001015
1/24/2019						0.000703 (J)	<0.001015
2/5/2019	<0.001015				0.0011 (J)	0.000711 (J)	<0.001015
2/6/2019		<0.001015	<0.001015	<0.001015			
6/24/2019						0.000605 (J)	
8/19/2019						<0.001015	<0.001015
8/20/2019					0.00129 (J)		
8/21/2019	<0.001015						
8/22/2019		<0.001015	<0.001015	<0.001015			
4/14/2020			<0.001015	<0.001015			
4/15/2020	<0.001015	<0.001015				<0.001015	
4/16/2020					0.00157 (J)		<0.001015
8/24/2020							<0.001015
8/25/2020	<0.001015				0.00117 (J)	<0.001015	
8/26/2020		<0.001015	<0.001015	<0.001015			
3/16/2021	<0.001015						
3/22/2021					0.000918 (J)	0.000537 (J)	<0.001015
3/23/2021		<0.001015	<0.001015	<0.001015			
10/5/2021	<0.001015			<0.001015			
10/6/2021						0.00049 (J)	<0.001015
10/11/2021		<0.001015					
10/12/2021			<0.001015		0.00115		
5/9/2022					0.00126		<0.001015
5/10/2022	<0.001015	<0.001015		<0.001015			
5/17/2022			<0.001015			0.00061 (J)	
10/25/2022						<0.001015	<0.001015
10/26/2022	<0.001015	<0.001015	<0.001015	<0.001015	0.000798 (J)		

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 12/27/2022 6:36 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			<0.001015				<0.001015
2/6/2018			<0.001015				<0.001015
4/23/2018			<0.001015				
4/24/2018							<0.001015
6/27/2018			<0.001015				<0.001015
8/7/2018			<0.001015				<0.001015
10/22/2018			<0.001015				<0.001015
12/3/2018							<0.001015
12/4/2018			<0.001015				
2/5/2019			<0.001015				<0.001015
6/18/2019							<0.001015
8/20/2019			<0.001015				<0.001015
4/13/2020							<0.001015
4/14/2020		<0.001015		<0.001015			
4/15/2020	<0.001015		<0.001015		<0.001015		
8/25/2020	<0.001015		<0.001015		<0.001015		
8/26/2020		<0.001015		<0.001015			<0.001015
3/16/2021	<0.001015						
3/22/2021					<0.001015		<0.001015
3/23/2021		<0.001015		<0.001015			
3/24/2021			<0.001015				
3/30/2021						<0.001015	
10/5/2021							<0.001015
10/6/2021					<0.001015		
10/11/2021		<0.001015	<0.001015	<0.001015			
10/12/2021	<0.001015					<0.001015	
5/10/2022	<0.001015						<0.001015
5/16/2022		<0.001015	<0.001015		<0.001015	<0.001015	
5/17/2022				<0.001015			
10/25/2022			<0.001015		<0.001015	<0.001015	
10/26/2022	<0.001015	<0.001015		<0.001015			<0.001015

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 12/27/2022 6:36 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<0.001015		<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
2/6/2018	<0.001015		<0.001015				
2/8/2018				<0.001015	<0.001015	<0.001015	<0.001015
4/24/2018	<0.001015						
4/25/2018			<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
6/26/2018	<0.001015			<0.001015	<0.001015	<0.001015	<0.001015
6/27/2018			<0.001015				
8/6/2018	<0.001015						
8/7/2018			<0.001015	<0.001015			
8/8/2018					<0.001015	<0.001015	<0.001015
10/22/2018	<0.001015						
10/23/2018			<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
12/3/2018	<0.001015			<0.001015			
12/4/2018					<0.001015	<0.001015	
12/5/2018			<0.001015				<0.001015
2/5/2019	<0.001015		<0.001015	<0.001015			
2/6/2019					<0.001015	<0.001015	<0.001015
8/20/2019	<0.001015		<0.001015	<0.001015			
8/21/2019					<0.001015	<0.001015	<0.001015
4/13/2020			<0.001015	<0.001015			
4/14/2020						<0.001015	<0.001015
4/15/2020	<0.001015	<0.001015			<0.001015		
8/24/2020			<0.001015				
8/26/2020	<0.001015	<0.001015		<0.001015	<0.001015	<0.001015	<0.001015
3/16/2021			<0.001015				
3/17/2021				<0.001015			
3/23/2021					<0.001015	<0.001015	<0.001015
3/24/2021	<0.001015	<0.001015					
10/5/2021	<0.001015		<0.001015	<0.001015	<0.001015		
10/11/2021		<0.001015					
10/12/2021						<0.001015	<0.001015
5/9/2022			<0.001015				
5/10/2022				<0.001015	<0.001015		
5/11/2022		<0.001015				<0.001015	<0.001015
5/16/2022	<0.001015						
10/26/2022	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015

# Time Series

Constituent: Beryllium (mg/L) Analysis Run 12/27/2022 6:36 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.001015		<0.001015	<0.001015		
7/18/2018	<0.001015		<0.001015	<0.001015		
8/7/2018	<0.001015					
8/8/2018			<0.001015	<0.001015		
9/5/2018	<0.001015		<0.001015	<0.001015		
9/24/2018	<0.001015		<0.001015	<0.001015		
10/22/2018	<0.001015					
10/23/2018			<0.001015	<0.001015		
12/3/2018	<0.001015		<0.001015	<0.001015		
2/5/2019	<0.001015					
2/7/2019			<0.001015	<0.001015		
8/20/2019	<0.001015					
8/21/2019			<0.001015	<0.001015		
4/13/2020	<0.001015	<0.001015				
4/15/2020			<0.001015	<0.001015		
8/24/2020	<0.001015	<0.001015	<0.001015	<0.001015		
3/16/2021			<0.001015	<0.001015		
3/17/2021		<0.001015				
3/24/2021	<0.001015					
10/5/2021	<0.001015	<0.001015				
10/6/2021					<0.001015	
10/11/2021						<0.001015
10/12/2021			<0.001015	<0.001015		
5/9/2022	<0.001015	<0.001015				
5/10/2022			<0.001015	<0.001015		
5/17/2022					<0.001015	<0.001015
10/26/2022	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015

# Time Series

Constituent: Boron (mg/L) Analysis Run 12/27/2022 6:36 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	1.28	0.135	0.12	0.0605 (J)			
2/6/2018	1.29						
2/7/2018		0.12	0.109				
2/8/2018				0.0527 (J)			
4/23/2018	1.21						
4/24/2018		0.144	0.124	0.0476 (J)			
6/26/2018	1.25						
6/27/2018		0.0903 (J)	0.111	0.0539 (J)	<0.1015		
7/18/2018					<0.1015		
8/6/2018					<0.1015		
8/7/2018	1.21	0.106					
8/8/2018			0.135	0.0637 (J)			
9/5/2018					<0.1015		
9/24/2018					<0.1015		
10/22/2018	1.22	0.107					
10/23/2018			0.114	0.0696 (J)			
10/24/2018					<0.1015	0.0261 (J)	0.0357 (J)
11/14/2018						0.0209 (J)	0.0348 (J)
11/28/2018						0.0239 (J)	0.0313 (J)
12/4/2018	1.08	0.103	0.124				
12/5/2018				0.0652 (J)	<0.1015	<0.1015	0.0363 (J)
12/18/2018						<0.1015	0.033 (J)
1/3/2019						0.0209 (J)	0.036 (J)
1/24/2019						0.0271 (J)	0.0307 (J)
2/5/2019	1.2				<0.1015	0.0245 (J)	0.0306 (J)
2/6/2019		0.105	0.112	0.0511 (J)			
2/26/2019	1.15	0.146					
2/27/2019			0.14	0.0494 (J)			
2/28/2019					<0.1015	<0.1015	0.0206 (J)
6/24/2019						<0.1015	
8/19/2019						<0.1015	0.0341 (J)
8/20/2019					<0.1015		
8/21/2019	1.24						
8/22/2019		0.0951 (J)	0.272	0.0625 (J)			
4/14/2020			0.154	0.0377 (J)			
4/15/2020	1.13	0.164				<0.1015	
4/16/2020					<0.1015		0.0331 (J)
8/24/2020							0.0303 (J)
8/25/2020	1.11				<0.1015	<0.1015	
8/26/2020		0.108	0.257	0.0698 (J)			
3/16/2021	1.08						
3/22/2021					<0.1015	<0.1015	0.0333 (J)
3/23/2021		0.188	0.142	0.0452 (J)			
10/5/2021	1.02			0.0661 (J)			
10/6/2021						<0.1015	0.0305 (J)
10/11/2021		0.09 (J)					
10/12/2021			0.125		<0.1015		
5/9/2022					<0.1015		0.0347 (J)
5/10/2022	0.954	0.097 (J)		0.066 (J)			
5/17/2022			0.139			<0.1015	
10/25/2022						<0.1015	0.0308 (J)
10/26/2022	0.977	0.0868 (J)	0.306	0.0995 (J)	<0.1015		

# Time Series

Constituent: Boron (mg/L) Analysis Run 12/27/2022 6:36 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			0.758				0.959
2/6/2018			0.733				1.04
4/23/2018			0.608				
4/24/2018							0.979
6/27/2018			0.619				0.982
8/7/2018			0.697				1
10/22/2018			0.754				1.08
12/3/2018							1.05
12/4/2018			0.737				
2/5/2019			0.575				1.01
2/25/2019							1.08
2/26/2019			0.566				
6/18/2019							1.09
8/20/2019			0.566				1.06
4/13/2020							1.19
4/14/2020		0.448		0.308			
4/15/2020	0.124		0.461		0.587		
8/25/2020	0.105		0.528		0.552		
8/26/2020		0.39		0.308			1.16
3/16/2021	0.0545 (J)						
3/22/2021					0.537		1.13
3/23/2021		0.41		0.419			
3/24/2021			0.437				
3/30/2021						0.605	
10/5/2021							1.01
10/6/2021					0.54		
10/11/2021		0.328	0.459	0.504			
10/12/2021	0.0717 (J)					0.617	
5/10/2022	0.0883 (J)						0.998
5/16/2022		0.336	0.381		0.556	0.622	
5/17/2022				0.632			
10/25/2022			0.5		0.555	0.628	
10/26/2022	0.0784 (J)	0.327		0.584			0.85



# Time Series

Constituent: Boron (mg/L) Analysis Run 12/27/2022 6:36 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	0.515		0.566	0.063 (J)	0.102	0.0828 (J)	0.0614 (J)
2/6/2018	0.541		0.614				
2/8/2018				0.0508 (J)	0.0787 (J)	0.0691 (J)	0.0531 (J)
4/24/2018	0.475						
4/25/2018			0.498	0.0548 (J)	0.0734 (J)	0.0571 (J)	0.0551 (J)
6/26/2018	0.444			0.0571 (J)	0.094 (J)	0.0634 (J)	0.0568 (J)
6/27/2018			0.446				
8/6/2018	0.474						
8/7/2018			0.442	0.0571 (J)			
8/8/2018					0.103	0.0659 (J)	0.0524 (J)
10/22/2018	0.496						
10/23/2018			0.436	0.0636 (J)	0.106	0.0666 (J)	0.0576 (J)
12/3/2018	0.51			0.0568 (J)			
12/4/2018					0.085 (J)	0.0617 (J)	
12/5/2018			0.456				0.0561 (J)
2/5/2019	0.43		0.453	0.0509 (J)			
2/6/2019					0.0733 (J)	0.0586 (J)	0.0627 (J)
2/26/2019	0.411			0.0527 (J)			
2/27/2019			0.457		0.0548 (J)	0.0428 (J)	0.0474 (J)
8/20/2019	0.399		0.378	0.0608 (J)			
8/21/2019					0.091 (J)	0.0569 (J)	0.0524 (J)
4/13/2020			0.359	0.0561 (J)			
4/14/2020						0.0474 (J)	0.0562 (J)
4/15/2020	0.344	0.0634 (J)			0.0534 (J)		
8/24/2020			0.329				
8/26/2020	0.398	0.0611 (J)		0.0633 (J)	0.0665 (J)	0.0501 (J)	0.0565 (J)
3/16/2021			0.328				
3/17/2021				0.0563 (J)			
3/23/2021					0.0587 (J)	0.0476 (J)	0.0609 (J)
3/24/2021	0.326	0.0618 (J)					
10/5/2021	0.344		0.26	0.0649 (J)	0.0673 (J)		
10/11/2021		0.0596 (J)					
10/12/2021						0.0462 (J)	0.0632 (J)
5/9/2022			0.261				
5/10/2022				0.0681 (J)	0.0465 (J)		
5/11/2022		0.062 (J)				0.037 (J)	0.0636 (J)
5/16/2022	0.342						
10/26/2022	0.371	0.0618 (J)	0.23	0.0788 (J)	0.0839 (J)	0.0526 (J)	0.0595 (J)

# Time Series

Constituent: Boron (mg/L) Analysis Run 12/27/2022 6:36 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.1015		<0.1015	<0.1015		
7/18/2018	<0.1015		<0.1015	<0.1015		
8/7/2018	<0.1015					
8/8/2018			<0.1015	<0.1015		
9/5/2018	<0.1015		<0.1015	<0.1015		
9/24/2018	<0.1015		<0.1015	<0.1015		
10/22/2018	<0.1015					
10/23/2018			<0.1015	<0.1015		
12/3/2018	<0.1015		<0.1015	<0.1015		
2/5/2019	<0.1015					
2/7/2019			<0.1015	<0.1015		
2/25/2019	<0.1015		<0.1015	<0.1015		
8/20/2019	<0.1015					
8/21/2019			<0.1015	<0.1015		
4/13/2020	<0.1015	<0.1015				
4/15/2020			<0.1015	<0.1015		
8/24/2020	<0.1015	<0.1015	<0.1015	<0.1015		
3/16/2021			<0.1015	<0.1015		
3/17/2021		<0.1015				
3/24/2021	<0.1015					
10/5/2021	<0.1015	<0.1015				
10/6/2021					0.532	
10/11/2021						0.378
10/12/2021			<0.1015	<0.1015		
5/9/2022	<0.1015	<0.1015				
5/10/2022			<0.1015	<0.1015		
5/17/2022					0.548	0.385
10/26/2022	<0.1015	<0.1015	<0.1015	<0.1015	0.559	0.4

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 12/27/2022 6:36 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	<0.001	<0.000203	<0.000203	0.000596 (J)			
2/6/2018	<0.001						
2/7/2018		<0.000203	<0.000203				
2/8/2018				0.00064 (J)			
4/23/2018	<0.001						
4/24/2018		<0.000203	<0.000203	0.000702 (J)			
6/26/2018	<0.001						
6/27/2018		<0.000203	<0.000203	0.000732 (J)	0.00064 (J)		
7/18/2018					0.000679 (J)		
8/6/2018					0.000536 (J)		
8/7/2018	<0.001	<0.000203					
8/8/2018			<0.000203	0.000587 (J)			
9/5/2018					0.000479 (J)		
9/24/2018					0.00039 (J)		
10/22/2018	<0.001	<0.000203					
10/23/2018			<0.000203	0.000552 (J)			
10/24/2018					0.000436 (J)	0.000307 (J)	<0.0002
11/14/2018						0.000417 (J)	<0.0002
11/28/2018						0.000387 (J)	<0.0002
12/4/2018	<0.001	<0.000203	<0.000203				
12/5/2018				0.000661 (J)	0.000307 (J)	0.000317 (J)	<0.0002
12/18/2018						0.000438 (J)	<0.0002
1/3/2019						0.000703 (J)	<0.0002
1/24/2019						0.000736 (J)	<0.0002
2/5/2019	<0.001				0.000515 (J)	0.00101	<0.0002
2/6/2019		<0.000203	<0.000203	0.000583 (J)			
6/24/2019						0.000686 (J)	
8/19/2019						0.000499 (J)	<0.0002
8/20/2019					0.000622 (J)		
8/21/2019	<0.001						
8/22/2019		<0.000203	<0.000203	0.000755 (J)			
4/14/2020			<0.000203	0.000425 (J)			
4/15/2020	<0.001	<0.000203				0.000697 (J)	
4/16/2020					0.00101		<0.0002
8/24/2020							<0.0002
8/25/2020	<0.001				0.000584 (J)	0.000507 (J)	
8/26/2020		<0.000203	<0.000203	0.000618 (J)			
3/16/2021	0.000102 (J)						
3/22/2021					0.000407	0.000852	<0.0002
3/23/2021		<0.000203	<0.000203	0.000405			
10/5/2021	0.0001 (J)			0.00037			
10/6/2021						0.00068	<0.0002
10/11/2021		<0.000203					
10/12/2021			<0.000203		0.00059		
5/9/2022					0.00063		<0.0002
5/10/2022	0.00022	<0.000203		0.00033			
5/17/2022			<0.000203			0.00108	
10/25/2022						0.000203 (J)	0.000132 (J)
10/26/2022	0.00013 (J)	<0.000203	<0.000203	0.000299	0.000245		

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 12/27/2022 6:36 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			<0.000203				<0.001
2/6/2018			<0.000203				<0.001
4/23/2018			<0.000203				
4/24/2018							<0.001
6/27/2018			<0.000203				<0.001
8/7/2018			<0.000203				<0.001
10/22/2018			<0.000203				<0.001
12/3/2018							<0.001
12/4/2018			<0.000203				
2/5/2019			<0.000203				<0.001
6/18/2019							<0.001
8/20/2019			<0.000203				<0.001
4/13/2020							0.000438 (J)
4/14/2020		<0.000203		<0.000203			
4/15/2020	<0.000203		<0.000203		<0.000203		
8/25/2020	<0.000203		<0.000203		<0.000203		
8/26/2020		<0.000203		<0.000203			<0.001
3/16/2021	<0.000203						
3/22/2021					<0.000203		0.00039
3/23/2021		<0.000203		<0.000203			
3/24/2021			6.88E-05 (J)				
3/30/2021						<0.000203	
10/5/2021							0.00021
10/6/2021					<0.000203		
10/11/2021		0.00012 (J)	<0.000203	<0.000203			
10/12/2021	<0.000203					<0.000203	
5/10/2022	<0.000203						0.00035
5/16/2022		0.00015 (J)	<0.000203		<0.000203	<0.000203	
5/17/2022				<0.000203			
10/25/2022			<0.000203		<0.000203	<0.000203	
10/26/2022	<0.000203	<0.000203		<0.000203			0.000147 (J)

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 12/27/2022 6:36 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
2/6/2018	<0.000203		<0.000203				
2/8/2018				<0.000203	<0.000203	<0.000203	<0.000203
4/24/2018	<0.000203						
4/25/2018			<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
6/26/2018	<0.000203			<0.000203	<0.000203	<0.000203	<0.000203
6/27/2018			<0.000203				
8/6/2018	<0.000203						
8/7/2018			<0.000203	<0.000203			
8/8/2018					<0.000203	<0.000203	<0.000203
10/22/2018	<0.000203						
10/23/2018			<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
12/3/2018	<0.000203			<0.000203			
12/4/2018					<0.000203	<0.000203	
12/5/2018			<0.000203				<0.000203
2/5/2019	<0.000203		<0.000203	<0.000203			
2/6/2019					<0.000203	<0.000203	<0.000203
8/20/2019	<0.000203		<0.000203	<0.000203			
8/21/2019					<0.000203	<0.000203	<0.000203
4/13/2020			<0.000203	<0.000203			
4/14/2020						<0.000203	<0.000203
4/15/2020	<0.000203	<0.000203			<0.000203		
8/24/2020			<0.000203				
8/26/2020	<0.000203	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203
3/16/2021			<0.000203				
3/17/2021				<0.000203			
3/23/2021					9.7E-05 (J)	8.32E-05 (J)	<0.000203
3/24/2021	<0.000203	<0.000203					
10/5/2021	<0.000203		<0.000203	<0.000203	<0.000203		
10/11/2021		<0.000203					
10/12/2021						<0.000203	<0.000203
5/9/2022			<0.000203				
5/10/2022				<0.000203	<0.000203		
5/11/2022		<0.000203				7E-05 (J)	<0.000203
5/16/2022	<0.000203						
10/26/2022	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203

# Time Series

Constituent: Cadmium (mg/L) Analysis Run 12/27/2022 6:36 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.000203		0.000304 (J)	<0.000203		
7/18/2018	<0.000203		<0.000203	<0.000203		
8/7/2018	<0.000203					
8/8/2018			<0.000203	<0.000203		
9/5/2018	<0.000203		<0.000203	<0.000203		
9/24/2018	<0.000203		<0.000203	<0.000203		
10/22/2018	<0.000203					
10/23/2018			<0.000203	<0.000203		
12/3/2018	<0.000203		<0.000203	<0.000203		
2/5/2019	<0.000203					
2/7/2019			<0.000203	<0.000203		
8/20/2019	<0.000203					
8/21/2019			<0.000203	<0.000203		
4/13/2020	<0.000203	<0.000203				
4/15/2020			<0.000203	<0.000203		
8/24/2020	<0.000203	<0.000203	<0.000203	<0.000203		
3/16/2021			<0.000203	<0.000203		
3/17/2021		<0.000203				
3/24/2021	<0.000203					
10/5/2021	<0.000203	<0.000203				
10/6/2021					<0.000203	
10/11/2021						<0.000203
10/12/2021			8E-05 (J)	<0.000203		
5/9/2022	<0.000203	<0.000203				
5/10/2022			<0.000203	<0.000203		
5/17/2022					<0.000203	<0.000203
10/26/2022	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203

# Time Series

Constituent: Calcium (mg/L) Analysis Run 12/27/2022 6:36 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	271	42	70	49			
2/6/2018	275						
2/7/2018		47.6	72.4				
2/8/2018				50			
4/23/2018	269						
4/24/2018		50.1	72.3	50.5			
6/26/2018	268						
6/27/2018		37.1	73.1	56.3	16.6		
7/18/2018					15.3		
8/6/2018					13.8		
8/7/2018	259	37.4					
8/8/2018			76	65.7			
9/5/2018					12.1		
9/24/2018					11.8		
10/22/2018	240	36.3					
10/23/2018			70.2	68.3			
10/24/2018					10.2	18	28.3
11/14/2018						14.9	27.5
11/28/2018						14.8	20.7
12/4/2018	254	42.1	74				
12/5/2018				64.3	9.14	14.8	25.3
12/18/2018						16.4	20.9
1/3/2019						19.7	18.5
1/24/2019						19.6	17
2/5/2019	292				15.1	20.8	17.1
2/6/2019		41.3	73.1	52.2			
2/26/2019	254	53.3					
2/27/2019			82.2	60.2			
2/28/2019					21.4	21.5	18.6
6/24/2019						18.4	
8/19/2019						12.8	25.3
8/20/2019					14.4		
8/21/2019	272						
8/22/2019		38.5	133	89.4			
4/14/2020			82.4	40			
4/15/2020	231	54.1				13.1	
4/16/2020					20.1		30.7
8/24/2020							30.8
8/25/2020	218				13.1	12.2	
8/26/2020		37.8	111	68.4			
3/16/2021	218						
3/22/2021					12.2	18.4	31
3/23/2021		57	75.9	42			
10/5/2021	198			55.8			
10/6/2021						13.4	31
10/11/2021		38.2					
10/12/2021			78.6		11.8		
5/9/2022					14.5		28.4
5/10/2022	166	42.2		48.2			
5/17/2022			80.6			19.7	
10/25/2022						8.46	30.700001
10/26/2022	200	39.5	129	60.200001	8.97		

# Time Series

Constituent: Calcium (mg/L) Analysis Run 12/27/2022 6:36 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			128				125
2/6/2018			130				110
4/23/2018			95.9				
4/24/2018							88.8
6/27/2018			99.4				80.8
8/7/2018			107				88.5
10/22/2018			107				92.7
12/3/2018							105
12/4/2018			120				
2/5/2019			80.6				68.6
2/25/2019							70.6
2/26/2019			79.6				
6/18/2019							80.5
8/20/2019			92.3				74.1
4/13/2020							69.5
4/14/2020		32.9		51.5			
4/15/2020	19.1		69.2		5		
8/25/2020	14.9		80.5		4.97		
8/26/2020		39.3		47.6			75.7
3/16/2021	5.77						
3/22/2021					5.71		64.9
3/23/2021		31.7		57.6			
3/24/2021			61.5				
3/30/2021						3.71	
10/5/2021							65.9
10/6/2021					5.38		
10/11/2021		40	87.1	63.4			
10/12/2021	10.3					3.96	
5/10/2022	12.4						58.5
5/16/2022		26.9	58.2		5.22	3.81	
5/17/2022				74.7			
10/25/2022			86.900002		5.52	4.99	
10/26/2022	10	51.599998		76.300003			55.299999



# Time Series

Constituent: Calcium (mg/L) Analysis Run 12/27/2022 6:36 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	30.1		48.2	29.8	23.4	66.1	38.7
2/6/2018	30.6		47.8				
2/8/2018				24.3	20.1	58	38.8
4/24/2018	27.8						
4/25/2018			41.8	19.8	17.4	56.3	40.3
6/26/2018	26.2			17.8	21.8	57.7	39.9
6/27/2018			36.9				
8/6/2018	27.5						
8/7/2018			37.6	18.3			
8/8/2018					25.4	51.2	42.3
10/22/2018	27.7						
10/23/2018			35.3	18.1	25.6	50.9	39.8
12/3/2018	32.3			16.6			
12/4/2018					19	51.9	
12/5/2018			36.3				43.8
2/5/2019	25.5		36.6	14.5			
2/6/2019					16.4	55	34.9
2/26/2019	26.4			16			
2/27/2019			39.6		15.6	53.4	42.5
8/20/2019	23.5		33.7	15.1			
8/21/2019					23.5	71.5	50.9
4/13/2020			43	12.5			
4/14/2020						56.2	43.6
4/15/2020	22	23.9			14		
8/24/2020			35.5				
8/26/2020	22.8	23.5		12.9	16.7	55.5	43.2
3/16/2021			38.1				
3/17/2021				11.3			
3/23/2021					12.5	48.9	38.1
3/24/2021	23.1	22.9					
10/5/2021	27.4		36	11.4	15.9		
10/11/2021		23					
10/12/2021						66.3	35.4
5/9/2022			38.4				
5/10/2022				10.8	9.95		
5/11/2022		22.6				61.9	36.9
5/16/2022	30.7						
10/26/2022	33.599998	23	39.599998	12.2	21.4	63.700001	47.700001

# Time Series

Constituent: Calcium (mg/L) Analysis Run 12/27/2022 6:36 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	39.4		4.56	3.89		
7/18/2018	38.4		3.92	3.8		
8/7/2018	36.7					
8/8/2018			3.74	3.89		
9/5/2018	43.6		3.38	3.78		
9/24/2018	44.5		3.25	3.73		
10/22/2018	45					
10/23/2018			3.37	3.79		
12/3/2018	33.7		3.67	3.79		
2/5/2019	30.1					
2/7/2019			2.89	3.75		
2/25/2019	25.6		2.95	3.81		
8/20/2019	38.3					
8/21/2019			3.04	3.71		
4/13/2020	25.9	16.1				
4/15/2020			2.93	3.56		
8/24/2020	29	24.8	2.94	3.45		
3/16/2021			2.9	3.44		
3/17/2021		5.21				
3/24/2021	22.2					
10/5/2021	25.4	17.6				
10/6/2021					3.46	
10/11/2021						9.35
10/12/2021			2.94	3.29		
5/9/2022	18.9	7.02				
5/10/2022			2.87	3.24		
5/17/2022					3.3	9.99
10/26/2022	23.1	27.5	3.09	3.42	3.6	9.75

# Time Series

Constituent: Chloride (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	6.2	6.9	6.3	6.2			
2/6/2018	5.9						
2/7/2018		6.1	5.4				
2/8/2018				6.1			
4/23/2018	5.9						
4/24/2018		6.9	5.7	5.9			
6/26/2018	5.7						
6/27/2018		5.6	5.4	5.5	3.1		
7/18/2018					3.4		
8/6/2018					2.8		
8/7/2018	5.3	5.1					
8/8/2018			5.2	5.3			
9/5/2018					2.8		
9/24/2018					3.1		
10/22/2018	5.6	5.5					
10/23/2018			5.4	5.8			
10/24/2018					2.8	3.3	4
11/14/2018						3.6	3.6
11/28/2018						3.5	3.5
12/4/2018	5.8	5.6	5.3				
12/5/2018				6	2.2	3.3	3.2
12/18/2018						3.6	3.4
1/3/2019						3.4	3.2
1/24/2019						3.91	3.15
2/5/2019	5.8				3.12	3.94	2.98
2/6/2019		6.24	5.89	5.95			
2/26/2019	5.92	8.28					
2/27/2019			6.2	5.88			
2/28/2019					3.45	4.15	3.05
6/24/2019						3.36 (D)	
8/19/2019						3.42	2.8
8/20/2019					3.27		
8/21/2019	5.26						
8/22/2019		5.66	4.64	6.31			
4/14/2020			5.46	5.74			
4/15/2020	5.5	6.49				3.39	
4/16/2020					3.74		2.93
8/24/2020							2.82
8/25/2020	5.59				3.03	2.94	
8/26/2020		5.39	4.74	5.91			
3/16/2021	6.2						
3/22/2021					3.15	3.61	2.94
3/23/2021		7.14	5.54	6.3			
10/5/2021	6.1			6.26			
10/6/2021						3.17	2.98
10/11/2021		5.72					
10/12/2021			5.8		2.87		
5/9/2022					3		3.01
5/10/2022	5.97	5.72		5.64			
5/17/2022			5.92			3.58	
10/25/2022						3.24	2.88
10/26/2022	6.02	5.87	4.98	5.76	2.56		

# Time Series

Constituent: Chloride (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			4.1				7.6
2/6/2018			3.1				7.6
4/23/2018			3.7				
4/24/2018							7.5
6/27/2018			2.2				7.3
8/7/2018			2.6				7.6
10/22/2018			2.8				6.9
12/3/2018							6.8
12/4/2018			4.1				
2/5/2019			2.56				6.95
2/25/2019							6.55
2/26/2019			3.03				
6/18/2019							6.62
8/20/2019			2.24				6.07
4/13/2020							5.95
4/14/2020		7.35		6.64			
4/15/2020	6		2.16		6.47		
8/25/2020	5.79		2		6.4		
8/26/2020		7.03		6.73			5.89
3/16/2021	3.85						
3/22/2021					6.65		5.26
3/23/2021		7.11		6.33			
3/24/2021			2.29				
3/30/2021						32	
10/5/2021							5.09
10/6/2021					6.82		
10/11/2021		7.04	2.43	6.37			
10/12/2021	4.59					38	
5/10/2022	6.38						4.59
5/16/2022		7.23	2.18		6.86	43.4	
5/17/2022				6.22			
10/25/2022			2.45		6.86	49	
10/26/2022	5.44	7.04		5.91			4.38

# Time Series

Constituent: Chloride (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	8.5		8.7	10	7.9	5.2	7
2/6/2018	8.8		8.5				
2/8/2018				9.5	6.7	4.1	
2/12/2018							6.6
4/24/2018	8.4						
4/25/2018			7.6	9.1	7	5.3	7.1
6/26/2018	8.7			9.5	7.4	5	6.4
6/27/2018			7.1				
8/6/2018	11						
8/7/2018			6.9	9			
8/8/2018					7.7	4.8	5.5
10/22/2018	8.6						
10/23/2018			6.7	9.9	8	4.4	6.7
12/3/2018	9.1			8.7			
12/4/2018					6.7	4.2	
12/5/2018			6.7				5.9
2/5/2019	9.81		7.24	8.73			
2/6/2019					6.84	5.84	7.26
2/26/2019	13			8.66			
2/27/2019			7.38		6.21	6.52	6.77
8/20/2019	9.62		6.53	9.55			
8/21/2019					7.35	5.89	6.16
4/13/2020			6.48	8.6			
4/14/2020						5.21	7.27
4/15/2020	9.27	5.16			4.99		
8/24/2020			6.64				
8/26/2020	8.96	5.37		9.21	6.19	5.16	6.57
3/16/2021			7.14				
3/17/2021				8.59			
3/23/2021					4.87	5.3	7.42
3/24/2021	8.61	5.55					
10/5/2021	9.3		6.78	9.09	6.43		
10/11/2021		5.65					
10/12/2021						5.6	7.78
5/9/2022			6.81				
5/10/2022				8.87	3.96		
5/11/2022		5.48				5.13	7.2
5/16/2022	8.07						
10/26/2022	7.88	5.53	6.4	9.4	7.09	5.72	6.99

# Time Series

Constituent: Chloride (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	3.6		4.2	4.1		
7/18/2018	3.8		4.1	4.3		
8/7/2018	3.3					
8/8/2018			3.3	3.8		
9/5/2018	3.4		3.7	3.9		
9/24/2018	3.8		3.9	4.2		
10/22/2018	3.3					
10/23/2018			4	4.1		
12/3/2018	3.2		3.6	3.8		
2/5/2019	3.78					
2/7/2019			3.72	4.15		
2/25/2019	3.66		3.95	4.2		
8/20/2019	3.52					
8/21/2019			3.85	4		
4/13/2020	3.36	5.42				
4/15/2020			3.83	3.71		
8/24/2020	3.35	5.46	3.96	3.59		
3/16/2021			3.98	3.66		
3/17/2021		5.53				
3/24/2021	3.45					
10/5/2021	3.23	5.79				
10/6/2021					166	
10/11/2021						1.72
10/12/2021			4.07	3.68		
5/9/2022	3.46	5.51				
5/10/2022			4.12	3.68		
5/17/2022					188	1.69
10/26/2022	3.39	5.09	4.03	3.5	181	1.56

# Time Series

Constituent: Chromium (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	<0.01	<0.01	<0.01	<0.01			
2/6/2018	<0.01						
2/7/2018		<0.01	<0.01				
2/8/2018				<0.01			
4/23/2018	<0.01						
4/24/2018		<0.01	<0.01	<0.01			
6/26/2018	<0.01						
6/27/2018		<0.01	<0.01	<0.01	<0.01		
7/18/2018					<0.01		
8/6/2018					<0.01		
8/7/2018	<0.01	<0.01					
8/8/2018			<0.01	<0.01			
9/5/2018					<0.01		
9/24/2018					<0.01		
10/22/2018	<0.01	<0.01					
10/23/2018			<0.01	<0.01			
10/24/2018					<0.01	<0.01	<0.01
11/14/2018						<0.01	<0.01
11/28/2018						<0.01	<0.01
12/4/2018	<0.01	<0.01	<0.01				
12/5/2018				<0.01	<0.01	<0.01	<0.01
12/18/2018						<0.01	<0.01
1/3/2019						<0.01	<0.01
1/24/2019						<0.01	<0.01
2/5/2019	<0.01				<0.01	<0.01	<0.01
2/6/2019		<0.01	<0.01	<0.01			
6/24/2019						0.00325 (J)	
8/19/2019						<0.01	<0.01
8/20/2019					<0.01		
8/21/2019	<0.01						
8/22/2019		<0.01	<0.01	<0.01			
4/14/2020			<0.01	<0.01			
4/15/2020	<0.01	<0.01				<0.01	
4/16/2020					<0.01		0.00267 (J)
8/24/2020							<0.01
8/25/2020	<0.01				<0.01	<0.01	
8/26/2020		<0.01	<0.01	<0.01			
3/16/2021	0.000376 (J)						
3/22/2021					0.000771 (J)	0.000546 (J)	0.000509 (J)
3/23/2021		0.00035 (J)	0.000513 (J)	0.000431 (J)			
10/5/2021	0.00023 (J)			0.00034 (J)			
10/6/2021						0.00046 (J)	0.00027 (J)
10/11/2021		0.00028 (J)					
10/12/2021			0.00027 (J)		0.00059 (J)		
5/9/2022					0.00087 (J)		0.00026 (J)
5/10/2022	0.00025 (J)	0.0003 (J)		0.00041 (J)			
5/17/2022			0.00038 (J)			0.00059 (J)	
10/25/2022						0.000275 (J)	0.000357 (J)
10/26/2022	0.000321 (J)	0.000207 (J)	0.000318 (J)	0.000276 (J)	0.000428 (J)		

# Time Series

Constituent: Chromium (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			<0.01				<0.01
2/6/2018			<0.01				<0.01
4/23/2018			<0.01				
4/24/2018							<0.01
6/27/2018			<0.01				<0.01
8/7/2018			<0.01				<0.01
10/22/2018			<0.01				<0.01
12/3/2018							<0.01
12/4/2018			<0.01				
2/5/2019			<0.01				<0.01
6/18/2019							0.00285 (J)
8/20/2019			<0.01				<0.01
4/13/2020							<0.01
4/14/2020		<0.001015		<0.001015			
4/15/2020	<0.001015		<0.01		<0.001015		
8/25/2020	<0.001015		<0.01		<0.001015		
8/26/2020		<0.001015		<0.001015			<0.01
3/16/2021	0.000363 (J)						
3/22/2021					0.000433 (J)		0.000293 (J)
3/23/2021		0.000404 (J)		0.000417 (J)			
3/24/2021			0.00047 (J)				
3/30/2021						0.00112	
10/5/2021							0.00023 (J)
10/6/2021					0.00025 (J)		
10/11/2021		0.00048 (J)	0.00048 (J)	0.00025 (J)			
10/12/2021	0.00021 (J)					0.00035 (J)	
5/10/2022	0.00025 (J)						0.00029 (J)
5/16/2022		0.00028 (J)	0.00034 (J)		0.00029 (J)	0.00026 (J)	
5/17/2022				0.00021 (J)			
10/25/2022			0.00022 (J)		<0.001015	<0.001015	
10/26/2022	<0.001015	<0.001015		<0.001015			0.000276 (J)



# Time Series

Constituent: Chromium (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<0.001015		<0.001015	<0.00102	<0.001015	<0.001015	<0.001015
2/6/2018	<0.001015		<0.001015				
2/8/2018				<0.00102	<0.001015	<0.001015	<0.001015
4/24/2018	<0.001015						
4/25/2018			<0.001015	<0.00102	<0.001015	<0.001015	<0.001015
6/26/2018	<0.001015			<0.00102	<0.001015	<0.001015	<0.001015
6/27/2018			<0.001015				
8/6/2018	<0.001015						
8/7/2018			<0.001015	<0.00102			
8/8/2018					<0.001015	<0.001015	<0.001015
10/22/2018	<0.001015						
10/23/2018			<0.001015	<0.00102	<0.001015	<0.001015	<0.001015
12/3/2018	<0.001015			<0.00102			
12/4/2018					<0.001015	<0.001015	
12/5/2018			<0.001015				<0.001015
2/5/2019	<0.001015		<0.001015	<0.00102			
2/6/2019					<0.001015	<0.001015	<0.001015
8/20/2019	<0.001015		<0.001015	<0.00102			
8/21/2019					<0.001015	<0.001015	<0.001015
4/13/2020			<0.001015	<0.00102			
4/14/2020						<0.001015	<0.001015
4/15/2020	<0.001015	<0.01			<0.001015		
8/24/2020			<0.001015				
8/26/2020	<0.001015	<0.01		<0.00102	<0.001015	<0.001015	<0.001015
3/16/2021			0.000397 (J)				
3/17/2021				0.000338 (J)			
3/23/2021					0.000406 (J)	0.0003 (J)	0.000422 (J)
3/24/2021	0.000323 (J)	0.000402 (J)					
10/5/2021	<0.001015		0.00028 (J)	0.00025 (J)	0.00025 (J)		
10/11/2021		0.00031 (J)					
10/12/2021						<0.001015	0.00031 (J)
5/9/2022			0.00053 (J)				
5/10/2022				<0.00102	0.00025 (J)		
5/11/2022		0.00024 (J)				0.00022 (J)	0.00021 (J)
5/16/2022	0.00023 (J)						
10/26/2022	<0.001015	0.000214 (J)	<0.001015	0.000222 (J)	<0.001015	<0.001015	<0.001015

# Time Series

Constituent: Chromium (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.001015		<0.01	<0.01		
7/18/2018	<0.001015		<0.01	<0.01		
8/7/2018	<0.001015					
8/8/2018			<0.01	<0.01		
9/5/2018	<0.001015		<0.01	<0.01		
9/24/2018	<0.001015		<0.01	<0.01		
10/22/2018	<0.001015					
10/23/2018			<0.01	<0.01		
12/3/2018	<0.001015		<0.01	<0.01		
2/5/2019	<0.001015					
2/7/2019			<0.01	<0.01		
8/20/2019	<0.001015					
8/21/2019			<0.01	<0.01		
4/13/2020	<0.001015	<0.001015				
4/15/2020			<0.01	<0.01		
8/24/2020	<0.001015	<0.001015	<0.01	<0.01		
3/16/2021			0.000534 (J)	0.000534 (J)		
3/17/2021		0.000764 (J)				
3/24/2021	0.000442 (J)					
10/5/2021	0.00035 (J)	0.00035 (J)				
10/6/2021					0.00111	
10/11/2021						0.00041 (J)
10/12/2021			0.00034 (J)	0.00031 (J)		
5/9/2022	0.00027 (J)	0.00062 (J)				
5/10/2022			0.00037 (J)	0.00037 (J)		
5/17/2022					0.00104	0.00032 (J)
10/26/2022	<0.001015	<0.001015	0.000251 (J)	0.000224 (J)	<0.001015	<0.001015

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	0.00818 (J)	<0.005	<0.005	0.00221 (J)			
2/6/2018	0.0123						
2/7/2018		<0.005	<0.005				
2/8/2018				0.00221 (J)			
4/23/2018	0.0204						
4/24/2018		<0.005	<0.005	0.00257 (J)			
6/26/2018	0.0224						
6/27/2018		<0.005	<0.005	0.00266 (J)	0.0382		
7/18/2018					0.0366		
8/6/2018					0.0308		
8/7/2018	0.0193	<0.005					
8/8/2018			<0.005	0.00251 (J)			
9/5/2018					0.0291		
9/24/2018					0.0286		
10/22/2018	0.0243	<0.005					
10/23/2018			<0.005	0.00399 (J)			
10/24/2018					0.0269	0.0129	<0.005
11/14/2018						0.0114	<0.005
11/28/2018						0.0168	<0.005
12/4/2018	0.0166	<0.005	<0.005				
12/5/2018				0.00466 (J)	0.0215	0.0161	<0.005
12/18/2018						0.0234	<0.005
1/3/2019						0.038	<0.005
1/24/2019						0.04	<0.005
2/5/2019	0.0264				0.0359	0.0538	<0.005
2/6/2019		<0.005	<0.005	0.00485 (J)			
6/24/2019						0.041	
8/19/2019						0.0247	<0.005
8/20/2019					0.0391		
8/21/2019	0.0242						
8/22/2019		<0.005	0.00756	0.00658			
4/14/2020			<0.005	0.0035 (J)			
4/15/2020	0.0178	<0.005				0.0373	
4/16/2020					0.056		<0.005
8/24/2020							<0.005
8/25/2020	0.0193				0.0365	0.0294	
8/26/2020		<0.005	0.00599	0.00547			
3/16/2021	0.0184						
3/22/2021					0.0262	0.0469	0.000133 (J)
3/23/2021		0.00037	0.000388	0.00378			
10/5/2021	0.0169			0.00448			
10/6/2021						0.0321	0.00013 (J)
10/11/2021		0.00089					
10/12/2021			0.00027		0.0291		
5/9/2022					0.0416		0.00011 (J)
5/10/2022	0.0136	0.00091		0.0049			
5/17/2022			0.00044			0.0563	
10/25/2022						0.013	0.000311
10/26/2022	0.0152	0.000907	0.009	0.00603	0.0201		

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			0.0246				0.0302
2/6/2018			0.0243				0.0371
4/23/2018			0.0258				
4/24/2018							0.0251
6/27/2018			0.0362				0.0234
8/7/2018			0.0332				0.0223
10/22/2018			0.0438				0.03
12/3/2018							0.0238
12/4/2018			0.0252				
2/5/2019			0.0362				0.0232
6/18/2019							0.0263
8/20/2019			0.0366				0.0257
4/13/2020							0.0209
4/14/2020		0.00886		0.0122			
4/15/2020	<0.005		0.0324		<0.0002		
8/25/2020	<0.005		0.0298		<0.0002		
8/26/2020		0.0101		0.0104			0.0191
3/16/2021	0.000577						
3/22/2021					<0.0002		0.0183
3/23/2021		0.00674		0.0125			
3/24/2021			0.0316				
3/30/2021						0.000116 (J)	
10/5/2021							0.016
10/6/2021					<0.0002		
10/11/2021		0.00579	0.0165	0.00995			
10/12/2021	0.00062					<0.0002	
5/10/2022	0.0003						0.0147
5/16/2022		0.00485	0.0366		<0.0002	<0.0002	
5/17/2022				0.0102			
10/25/2022			0.0302		<0.0002	<0.0002	
10/26/2022	0.000452	0.00294		0.00924			0.0132

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 12/27/2022 6:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	0.0252		0.00331 (J)	0.00592 (J)	<0.005	0.00212 (J)	<0.005
2/6/2018	0.0243		0.00323 (J)				
2/8/2018				0.00297 (J)	<0.005	<0.005	<0.005
4/24/2018	0.027						
4/25/2018			0.00258 (J)	<0.005	<0.005	0.00204 (J)	<0.005
6/26/2018	0.0242			<0.005	<0.005	<0.005	<0.005
6/27/2018			0.00218 (J)				
8/6/2018	0.0205						
8/7/2018			<0.005	<0.005			
8/8/2018					<0.005	<0.005	<0.005
10/22/2018	0.0259						
10/23/2018			0.0023 (J)	<0.005	<0.005	<0.005	<0.005
12/3/2018	0.0228			<0.005			
12/4/2018					<0.005	<0.005	
12/5/2018			0.00233 (J)				<0.005
2/5/2019	0.0263		0.0021 (J)	<0.005			
2/6/2019					<0.005	0.00232 (J)	<0.005
8/20/2019	0.0293		0.00223 (J)	<0.005			
8/21/2019					<0.005	0.00303 (J)	<0.005
4/13/2020			<0.005	<0.005			
4/14/2020						0.00385 (J)	<0.005
4/15/2020	0.0252	<0.0002			<0.005		
8/24/2020			0.00222 (J)				
8/26/2020	0.0231	<0.0002		<0.005	<0.005	0.00388 (J)	<0.005
3/16/2021			0.00136				
3/17/2021				0.00102			
3/23/2021					0.00102	0.003	0.00103
3/24/2021	0.0268	8.16E-05 (J)					
10/5/2021	0.0238		0.00116	0.00104	0.00018 (J)		
10/11/2021		<0.0002					
10/12/2021						0.00298	0.00113
5/9/2022			0.00101				
5/10/2022				0.00114	0.0004		
5/11/2022		<0.0002				0.00461	0.00091
5/16/2022	0.0289						
10/26/2022	0.0289	<0.0002	0.000936	0.0012	0.00016 (J)	0.00266	0.000812

# Time Series

Constituent: Cobalt (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.0002		0.00341 (J)	<0.005		
7/18/2018	<0.0002		0.00341 (J)	<0.005		
8/7/2018	<0.0002					
8/8/2018			0.00221 (J)	<0.005		
9/5/2018	<0.0002		0.00202 (J)	<0.005		
9/24/2018	<0.0002		<0.0002	<0.005		
10/22/2018	<0.0002					
10/23/2018			<0.0002	<0.005		
12/3/2018	<0.0002		0.00227 (J)	<0.005		
2/5/2019	<0.0002					
2/7/2019			<0.0002	<0.005		
8/20/2019	<0.0002					
8/21/2019			0.00225 (J)	<0.005		
4/13/2020	<0.0002	0.00489 (J)				
4/15/2020			<0.0002	<0.005		
8/24/2020	<0.0002	0.00237 (J)	<0.0002	<0.005		
3/16/2021			0.000384	0.000108 (J)		
3/17/2021		0.00616				
3/24/2021	<0.0002					
10/5/2021	0.00044	0.00287				
10/6/2021				0.00021		
10/11/2021						<0.0002
10/12/2021			8E-05 (J)	0.00014 (J)		
5/9/2022	0.00014 (J)	0.00691				
5/10/2022			0.00015 (J)	0.00012 (J)		
5/17/2022					0.00019 (J)	8E-05 (J)
10/26/2022	<0.0002	0.0021	<0.0002	7.8E-05 (J)	<0.0002	<0.0002

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 12/27/2022 6:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	0.694	0.585	0.891	0.435 (U)			
2/6/2018	0.641						
2/7/2018		0.474	0.786				
2/8/2018				0.477			
4/23/2018	-0.0527 (U)						
4/24/2018		0.463 (U)	0.935	0.695			
6/26/2018	0.162 (U)						
6/27/2018		0.678	0.537	0.183 (U)	0.616		
7/18/2018					0.859		
8/6/2018					0.654		
8/7/2018	0.87	0.495 (U)					
8/8/2018			1.28	0.817			
9/5/2018					0.855		
9/24/2018					0.787		
10/22/2018	0.691	0.36 (U)					
10/23/2018			1.3	0.796			
10/24/2018					1.14	0.564	0.694
11/14/2018						-0.0027 (U)	0.398 (U)
11/28/2018						0.222 (U)	0.428 (U)
12/4/2018	0.213 (U)	0.407 (U)	1.05				
12/5/2018				0.498 (U)	0.64	0.288 (U)	0.302 (U)
2/5/2019	0.637				0.873	0.431 (U)	0.307 (U)
2/6/2019		0.537	0.779	-0.0241 (U)			
8/19/2019						0.377 (U)	0.683
8/20/2019					0.774		
8/21/2019	0.643 (U)						
8/22/2019		-0.021 (U)	1.34 (U)	0.145 (U)			
4/14/2020			0.922 (U)	0.643 (U)			
4/15/2020	0.538 (U)	0.64 (U)				0.449 (U)	
4/16/2020					0.865		0.603
8/24/2020							0.404 (U)
8/25/2020	0.502 (U)				0.976	0.851	
8/26/2020		0.221 (U)	1.28	1.31			
3/16/2021	0.722 (U)						
3/22/2021					1.04	0.942 (U)	0.497 (U)
3/23/2021		0.83 (U)	0.592 (U)	0.565 (U)			
10/5/2021	1.21			1.48			
10/6/2021						1.16 (U)	2.01
10/11/2021		6.52					
10/12/2021			1.02 (U)		1.61		
5/9/2022					1.31		0.56 (U)
5/10/2022	0.761 (U)	0.421 (U)		0.531 (U)			
5/17/2022			1.01 (U)			1.01	
10/25/2022						0.406 (U)	0.776 (U)
10/26/2022	0.38 (U)	0.42 (U)	0.505 (U)	0.446 (U)	0.457 (U)		

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 12/27/2022 6:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			0.772				0.643
2/6/2018			0.679				0.209 (U)
4/23/2018			0.447 (U)				
4/24/2018							0.596
6/27/2018			0.117 (U)				0.363 (U)
8/7/2018			1.22				0.788
10/22/2018			0.996				0.749
12/3/2018							0.749
12/4/2018			0.739				
2/5/2019			1.09				0.299 (U)
8/20/2019			0.553 (U)				0.709 (U)
4/13/2020							0.942 (U)
4/14/2020		42.6		0.0962 (U)			
4/15/2020	0.419 (U)		0.182 (U)		0.231 (U)		
6/1/2020		0.215 (U)					
8/25/2020	1.45		0.43 (U)		0.807		
8/26/2020		0.265 (U)		0.413 (U)			0.177 (U)
3/16/2021	0.405 (U)						
3/22/2021					0.58 (U)		0.263 (U)
3/23/2021		0.562 (U)		0.847 (U)			
3/24/2021			0.769 (U)				
3/30/2021						0.185 (U)	
10/5/2021							3.21
10/6/2021					0.746 (U)		
10/11/2021		0.202 (U)	2.38	1.09 (U)			
10/12/2021	0.383 (U)					0.323 (U)	
5/10/2022	0.576 (U)						0.189 (U)
5/16/2022		0.471 (U)	1.06		0.285 (U)	0.253 (U)	
5/17/2022				0.551 (U)			
10/25/2022			0.683 (U)		0.849	0.529 (U)	
10/26/2022	0.165 (U)	0.401 (U)		0.958 (U)			0.551 (U)



# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 12/27/2022 6:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	1.04		0.885	0.394 (U)	0.895	7.45 (o)	0.226 (U)
2/6/2018	0.989		0.524				
2/8/2018				0.489	0.322 (U)	0.549	0.071 (U)
4/24/2018	0.405 (U)						
4/25/2018			0.341 (U)	-0.0902 (U)	0.0097 (U)	0.65	0.569
6/26/2018	1.03			0.245 (U)	0.587	0.436 (U)	0.43 (U)
6/27/2018			0.546				
8/6/2018	0.622						
8/7/2018			1.09	0.439 (U)			
8/8/2018					0.364 (U)	0.486 (U)	0.656
10/22/2018	1.06						
10/23/2018			1.01	0.243 (U)	0.703	0.319 (U)	0.395 (U)
12/3/2018	0.697			0.304 (U)			
12/4/2018					0.325 (U)	0.875	
12/5/2018			0.876				0.52 (U)
2/5/2019	0.467 (U)		0.551 (U)	0.196 (U)			
2/6/2019					0.0774 (U)	0.378 (U)	0.244 (U)
8/20/2019	0.814		0.206 (U)	-0.086 (U)			
8/21/2019					-0.0134 (U)	0.552 (U)	1.53 (U)
4/13/2020			1.19	0.0901 (U)			
4/14/2020						0.641 (U)	0.119 (U)
4/15/2020	-0.0841 (U)	0.329 (U)			0.526 (U)		
8/24/2020			0.482 (U)				
8/26/2020	0.26 (U)	0.839		0.416 (U)	0.691 (U)	0.339 (U)	1.18
3/16/2021			0.709 (U)				
3/17/2021				0.539 (U)			
3/23/2021					0.45 (U)	0.662 (U)	0.694 (U)
3/24/2021	0.664 (U)	0.725 (U)					
10/5/2021	1.75		1.44	1.36	1.27		
10/11/2021		1.58					
10/12/2021						0.291 (U)	0.311 (U)
5/9/2022			1.16				
5/10/2022				0.0979 (U)	0.599 (U)		
5/11/2022		0.576 (U)				0.475 (U)	0.605 (U)
5/16/2022	0.978						
10/26/2022	0.609 (U)	0.725 (U)	0.643 (U)	0.432 (U)	0.559 (U)	0.528 (U)	0.572 (U)

# Time Series

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 12/27/2022 6:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	0.188 (U)		0.259 (U)	0.231 (U)		
7/18/2018	0.314 (U)		0.434	0.676		
8/7/2018	0.279 (U)					
8/8/2018			0.763	0.496		
9/5/2018	0.589		0.631	0.62		
9/24/2018	0.772		0.588	-0.12 (U)		
10/22/2018	0.621					
10/23/2018			0.383 (U)	0.352 (U)		
12/3/2018	0.188 (U)		0.736	0.238 (U)		
2/5/2019	0.274 (U)					
2/7/2019			0.0202 (U)	0.395 (U)		
8/20/2019	0.663					
8/21/2019			0.442 (U)	-0.00256 (U)		
4/13/2020	-0.129 (U)	0.472 (U)				
4/15/2020			0.432 (U)	0.000738 (U)		
8/24/2020	0.177 (U)	-0.00312 (U)	0.454 (U)	0.404 (U)		
3/16/2021			0.32 (U)	0.589 (U)		
3/17/2021		0.756 (U)				
3/24/2021	0.245 (U)					
10/5/2021	2.07	1.13				
10/6/2021				1.78		
10/11/2021					1.29	
10/12/2021			0.963 (U)	1.57		
5/9/2022	0.784 (U)	0.352 (U)				
5/10/2022			0.659 (U)	0.468 (U)		
5/17/2022					0.4 (U)	0.306 (U)
10/26/2022	0.561 (U)	0.391 (U)	1.08	0.283 (U)	0.755 (U)	0.426 (U)

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	0.1						
2/6/2018	0.08 (J)						
2/7/2018		0.08 (J)	0.05 (J)				
2/8/2018					<0.125		
4/23/2018	0.07 (J)						
4/24/2018		0.08 (J)	0.05 (J)		<0.125		
6/26/2018	0.08 (J)						
6/27/2018		0.09 (J)	0.06 (J)		<0.125	0.18	
7/18/2018						0.23	
8/6/2018						0.23	
8/7/2018	0.07 (J)	0.04 (J)					
8/8/2018			0.06 (J)		<0.125		
9/5/2018						0.22	
9/24/2018						0.2	
10/22/2018	0.07 (J)	0.1					
10/23/2018			0.06 (J)	0.04 (J)			
10/24/2018					0.14	0.11	0.23
11/14/2018						0.1	0.2
11/28/2018						0.1	0.19
12/4/2018	0.04 (J)	0.07 (J)	<0.125				
12/5/2018				<0.125	0.07 (J)	0.11	0.19
12/18/2018						0.14	0.15
1/3/2019						0.16	0.19
1/24/2019						<0.125	0.168
2/5/2019	0.0525 (J)				<0.125	<0.125	0.192
2/6/2019		0.107	0.0678 (J)	<0.125			
2/26/2019	<0.125	0.0813 (J)					
2/27/2019			0.0985 (J)	<0.125			
2/28/2019					<0.125	<0.125	0.182
6/24/2019						<0.125 (D)	
8/19/2019						<0.125	0.187
8/20/2019					<0.125		
8/21/2019	<0.125						
8/22/2019		0.084 (J)	<0.125	<0.125			
4/14/2020			0.0878 (J)	<0.125			
4/15/2020	<0.125	0.112				<0.125	
4/16/2020					<0.125		0.166
8/24/2020							0.163
8/25/2020	<0.125				<0.125	0.0863 (J)	
8/26/2020		0.0997 (J)	<0.125	<0.125			
3/16/2021	<0.125						
3/22/2021					<0.125	<0.125	0.18
3/23/2021		0.101	0.0819 (J)	<0.125			
10/5/2021	0.0601 (J)			<0.125			
10/6/2021						<0.125	0.175
10/11/2021		0.201					
10/12/2021			0.134		<0.125		
5/9/2022					<0.125		0.191
5/10/2022	<0.125	0.0918 (J)		<0.125			
5/17/2022			<0.125			<0.125	
10/25/2022						<0.125	0.15
10/26/2022	<0.125	0.0929 (J)	0.069 (J)	<0.125	<0.125		

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			0.3				0.13
2/6/2018			0.27				0.08 (J)
4/23/2018			0.19				
4/24/2018							0.05 (J)
6/27/2018			0.28				0.07 (J)
8/7/2018			0.24				0.09 (J)
10/22/2018			0.24				0.11
12/3/2018							0.08 (J)
12/4/2018			0.15				
2/5/2019			0.207				0.064 (J)
2/25/2019							<0.125
2/26/2019			0.264				
6/18/2019							0.0664 (J)
8/20/2019			0.252				0.0592 (J)
4/13/2020							<0.125
4/14/2020		<0.125		0.125			
4/15/2020	<0.125		0.21		2.51		
8/25/2020	<0.125		0.273		2.4		
8/26/2020		<0.125		0.103			<0.125
3/16/2021	<0.125						
3/22/2021					2.33		<0.125
3/23/2021		<0.125		0.108			
3/24/2021			0.194				
3/30/2021						6.09	
10/5/2021							<0.125
10/6/2021					2.56		
10/11/2021		0.0779 (J)	0.283	0.127			
10/12/2021	<0.125					5.97	
5/10/2022	<0.125						0.0714 (J)
5/16/2022		<0.125	0.264		2.59	6.14	
5/17/2022				<0.125			
10/25/2022			0.271		2.41	5.77	
10/26/2022	<0.125	<0.125		0.121 (J)			<0.125

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	0.25		0.06 (J)	0.06 (J)	0.09 (J)	0.14	0.12
2/6/2018	0.24		0.05 (J)				
2/8/2018				0.04 (J)	0.07 (J)	0.11	
2/12/2018							0.11
4/24/2018	0.2						
4/25/2018			0.05 (J)	0.04 (J)	0.07 (J)	0.09 (J)	0.12
6/26/2018	0.22			0.05 (J)	0.09 (J)	0.1	0.13
6/27/2018			0.06 (J)				
8/6/2018	0.22						
8/7/2018			0.06 (J)	0.05 (J)			
8/8/2018					0.1	0.1	0.12
10/22/2018	0.24						
10/23/2018			0.07 (J)	0.06 (J)	0.1	0.11	0.13
12/3/2018	0.22			<0.125			
12/4/2018					0.06 (J)	0.08 (J)	
12/5/2018			0.04 (J)				0.04 (J)
2/5/2019	0.259		0.0651 (J)	0.0581 (J)			
2/6/2019					<0.1	<0.1	<0.1
2/26/2019	0.246			0.0816 (J)			
2/27/2019			0.0578 (J)		0.0824 (J)	0.108	0.147
8/20/2019	0.197		0.0567 (J)	<0.125			
8/21/2019					0.068 (J)	0.0648 (J)	0.0984 (J)
4/13/2020			0.0688 (J)	<0.125			
4/14/2020						0.0845 (J)	0.133
4/15/2020	0.238	0.218			0.0775 (J)		
8/24/2020			0.0607 (J)				
8/26/2020	0.251	0.217		<0.125	<0.1	0.0732 (J)	0.13
3/16/2021			0.065 (J)				
3/17/2021				<0.125			
3/23/2021					<0.1	0.0802 (J)	0.132
3/24/2021	0.227	0.212					
10/5/2021	0.214		0.122	<0.125	0.0933 (J)		
10/11/2021		0.23					
10/12/2021						0.123	0.147
5/9/2022			0.0682 (J)				
5/10/2022				<0.125	0.0627 (J)		
5/11/2022		0.175				0.0695 (J)	0.108 (J)
5/16/2022	0.17						
10/26/2022	0.283	0.164	0.0845 (J)	<0.125	0.128	0.0911 (J)	0.119 (J)

# Time Series

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	0.13		0.05 (J)	0.04 (J)		
7/18/2018	0.11		0.04 (J)	0.04 (J)		
8/7/2018	0.11					
8/8/2018			0.04 (J)	0.04 (J)		
9/5/2018	0.13		0.04 (J)	0.04 (J)		
9/24/2018	0.13		0.04 (J)	0.04 (J)		
10/22/2018	0.13					
10/23/2018			0.04 (J)	0.04 (J)		
12/3/2018	0.08 (J)		<0.125	<0.125		
2/5/2019	0.0934 (J)					
2/7/2019			<0.125	<0.125		
2/25/2019	<0.125		<0.125	<0.125		
8/20/2019	0.0889 (J)					
8/21/2019			<0.125	<0.125		
4/13/2020	0.103	<0.125				
4/15/2020			<0.125	<0.125		
8/24/2020	0.114	<0.125	<0.125	<0.125		
3/16/2021			<0.125	<0.125		
3/17/2021		<0.125				
3/24/2021	0.0725 (J)					
10/5/2021	<0.125	<0.125				
10/6/2021					8.34	
10/11/2021						1.43
10/12/2021			<0.125	<0.125		
5/9/2022	0.0824 (J)	<0.125				
5/10/2022			<0.125	<0.125		
5/17/2022					8.22	1.27
10/26/2022	<0.125	<0.125	<0.125	<0.125	7.57	1.36

# Time Series

Constituent: Lead (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	<0.000203	<0.000203	<0.000203	<0.000203			
2/6/2018	<0.000203						
2/7/2018		<0.000203	<0.000203				
2/8/2018				<0.000203			
4/23/2018	<0.000203						
4/24/2018		<0.000203	<0.000203	<0.000203			
6/26/2018	<0.000203						
6/27/2018		<0.000203	<0.000203	<0.000203	0.00158 (J)		
7/18/2018					0.00152 (J)		
8/6/2018					0.00143 (J)		
8/7/2018	<0.000203	<0.000203					
8/8/2018			<0.000203	<0.000203			
9/5/2018					0.00118 (J)		
9/24/2018					0.00156 (J)		
10/22/2018	<0.000203	<0.000203					
10/23/2018			<0.000203	<0.000203			
10/24/2018					0.00121 (J)	<0.005	<0.0002
11/14/2018						<0.005	<0.0002
11/28/2018						<0.005	<0.0002
12/4/2018	<0.000203	<0.000203	<0.000203				
12/5/2018				<0.000203	0.00117 (J)	<0.005	<0.0002
12/18/2018						<0.005	<0.0002
1/3/2019						0.001 (J)	<0.0002
1/24/2019						0.00114 (J)	<0.0002
2/5/2019	<0.000203				0.00156 (J)	0.00135 (J)	<0.0002
2/6/2019		<0.000203	<0.000203	<0.000203			
6/24/2019						0.00125 (J)	
8/19/2019						<0.005	<0.0002
8/20/2019					0.00176 (J)		
8/21/2019	<0.000203						
8/22/2019		<0.000203	<0.000203	<0.000203			
4/14/2020			<0.000203	<0.000203			
4/15/2020	<0.000203	<0.000203				<0.005	
4/16/2020					0.00258 (J)		<0.0002
8/24/2020							<0.0002
8/25/2020	<0.000203				0.0018 (J)	0.0011 (J)	
8/26/2020		<0.000203	<0.000203	<0.000203			
3/16/2021	<0.000203						
3/22/2021					0.00143	0.0016	<0.0002
3/23/2021		<0.000203	<0.000203	<0.000203			
10/5/2021	<0.000203			<0.000203			
10/6/2021						0.00116	<0.0002
10/11/2021		<0.000203					
10/12/2021			<0.000203		0.00156		
5/9/2022					0.00194		<0.0002
5/10/2022	<0.000203	<0.000203		<0.000203			
5/17/2022			<0.000203			0.00178	
10/25/2022						0.000634	0.000196 (J)
10/26/2022	<0.000203	<0.000203	<0.000203	<0.000203	0.00134		

# Time Series

Constituent: Lead (mg/L) Analysis Run 12/27/2022 6:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			<0.000203				<0.000203
2/6/2018			<0.000203				<0.000203
4/23/2018			<0.000203				
4/24/2018							<0.000203
6/27/2018			<0.000203				<0.000203
8/7/2018			<0.000203				<0.000203
10/22/2018			<0.000203				<0.000203
12/3/2018							<0.000203
12/4/2018			<0.000203				
2/5/2019			<0.000203				<0.000203
6/18/2019							<0.000203
8/20/2019			<0.000203				<0.000203
4/13/2020							<0.000203
4/14/2020		<0.000203		<0.000203			
4/15/2020	<0.000203		<0.000203		<0.000203		
8/25/2020	<0.000203		<0.000203		<0.000203		
8/26/2020		<0.000203		<0.000203			<0.000203
3/16/2021	<0.000203						
3/22/2021					<0.000203		<0.000203
3/23/2021		0.000201 (J)		<0.000203			
3/24/2021			<0.000203				
3/30/2021						<0.000203	
10/5/2021							<0.000203
10/6/2021					<0.000203		
10/11/2021		0.00016 (J)	9E-05 (J)	8E-05 (J)			
10/12/2021	<0.000203					<0.000203	
5/10/2022	<0.000203						<0.000203
5/16/2022		0.00015 (J)	<0.000203		<0.000203	<0.000203	
5/17/2022				<0.000203			
10/25/2022			<0.000203		<0.000203	<0.000203	
10/26/2022	<0.000203	<0.000203		<0.000203			<0.000203



# Time Series

Constituent: Lead (mg/L) Analysis Run 12/27/2022 6:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
2/6/2018	<0.000203		<0.000203				
2/8/2018				<0.000203	<0.000203	<0.000203	<0.000203
4/24/2018	<0.000203						
4/25/2018			<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
6/26/2018	<0.000203			<0.000203	<0.000203	<0.000203	<0.000203
6/27/2018			<0.000203				
8/6/2018	<0.000203						
8/7/2018			<0.000203	<0.000203			
8/8/2018					<0.000203	<0.000203	<0.000203
10/22/2018	<0.000203						
10/23/2018			<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
12/3/2018	<0.000203			<0.000203			
12/4/2018					<0.000203	<0.000203	
12/5/2018			<0.000203				<0.000203
2/5/2019	<0.000203		<0.000203	<0.000203			
2/6/2019					<0.000203	<0.000203	<0.000203
8/20/2019	<0.000203		<0.000203	<0.000203			
8/21/2019					<0.000203	<0.000203	<0.000203
4/13/2020			<0.000203	<0.000203			
4/14/2020						<0.000203	<0.000203
4/15/2020	<0.000203	<0.000203			<0.000203		
8/24/2020			<0.000203				
8/26/2020	<0.000203	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203
3/16/2021			<0.000203				
3/17/2021				<0.000203			
3/23/2021					<0.000203	<0.000203	<0.000203
3/24/2021	<0.000203	<0.000203					
10/5/2021	<0.000203		<0.000203	<0.000203	<0.000203		
10/11/2021		<0.000203					
10/12/2021						<0.000203	<0.000203
5/9/2022			<0.000203				
5/10/2022				<0.000203	<0.000203		
5/11/2022		<0.000203				<0.000203	<0.000203
5/16/2022	<0.000203						
10/26/2022	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203

# Time Series

Constituent: Lead (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.000203		<0.000203	<0.000203		
7/18/2018	<0.000203		<0.000203	<0.000203		
8/7/2018	<0.000203					
8/8/2018			<0.000203	<0.000203		
9/5/2018	<0.000203		<0.000203	<0.000203		
9/24/2018	<0.000203		<0.000203	<0.000203		
10/22/2018	<0.000203					
10/23/2018			<0.000203	<0.000203		
12/3/2018	<0.000203		<0.000203	<0.000203		
2/5/2019	<0.000203					
2/7/2019			<0.000203	<0.000203		
8/20/2019	<0.000203					
8/21/2019			<0.000203	<0.000203		
4/13/2020	<0.000203	<0.000203				
4/15/2020			<0.000203	<0.000203		
8/24/2020	<0.000203	<0.000203	<0.000203	<0.000203		
3/16/2021			0.00013 (J)	8.35E-05 (J)		
3/17/2021		0.000191 (J)				
3/24/2021	<0.000203					
10/5/2021	<0.000203	0.00012 (J)				
10/6/2021				0.00022		
10/11/2021						<0.000203
10/12/2021			<0.000203	0.00012 (J)		
5/9/2022	<0.000203	0.00018 (J)				
5/10/2022			<0.000203	0.00012 (J)		
5/17/2022					0.00022	<0.000203
10/26/2022	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203

# Time Series

Constituent: Lithium (mg/L) Analysis Run 12/27/2022 6:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	<0.02	<0.02	<0.02	<0.02			
2/6/2018	<0.02						
2/7/2018		<0.02	<0.02				
2/8/2018				<0.02			
4/23/2018	<0.02						
4/24/2018		<0.02	<0.02	<0.02			
6/26/2018	<0.02						
6/27/2018		<0.02	<0.02	<0.02	<0.02		
7/18/2018					<0.02		
8/6/2018					<0.02		
8/7/2018	<0.02	<0.02					
8/8/2018			<0.02	<0.02			
9/5/2018					<0.02		
9/24/2018					<0.02		
10/22/2018	<0.02	<0.02					
10/23/2018			<0.02	<0.02			
10/24/2018					<0.02	<0.02	<0.02
11/14/2018						<0.02	<0.02
11/28/2018						<0.02	0.0111 (J)
12/4/2018	<0.02	<0.02	<0.02				
12/5/2018				<0.02	<0.02	<0.02	0.0124 (J)
12/18/2018						<0.02	0.0121 (J)
1/3/2019						<0.02	0.0137 (J)
1/24/2019						<0.02	0.0134 (J)
2/5/2019	<0.02				<0.02	<0.02	0.0126 (J)
2/6/2019		<0.02	<0.02	<0.02			
6/24/2019						<0.02	
8/19/2019						<0.02	<0.02
8/20/2019					<0.02		
8/21/2019	<0.02						
8/22/2019		<0.02	<0.02	<0.02			
4/14/2020			<0.02	<0.02			
4/15/2020	<0.02	<0.02				<0.02	
4/16/2020					<0.02		0.0127 (J)
8/24/2020							<0.02
8/25/2020	<0.02				<0.02	<0.02	
8/26/2020		<0.02	<0.02	<0.02			
3/16/2021	<0.02						
3/22/2021					<0.02	<0.02	0.0083 (J)
3/23/2021		<0.02	<0.02	<0.02			
10/5/2021	<0.02			<0.02			
10/6/2021						<0.02	0.00881 (J)
10/11/2021		<0.02					
10/12/2021			<0.02		<0.02		
5/9/2022					<0.02		0.00859 (J)
5/10/2022	<0.02	<0.02		<0.02			
5/17/2022			<0.02			<0.02	
10/25/2022						<0.02	0.00897 (J)
10/26/2022	<0.02	<0.02	<0.02	<0.02	<0.02		

# Time Series

Constituent: Lithium (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			0.092				<0.02
2/6/2018			0.0817				<0.02
4/23/2018			0.051				
4/24/2018							<0.02
6/27/2018			0.0734				<0.02
8/7/2018			0.0764				<0.02
10/22/2018			0.0804				<0.02
12/3/2018							<0.02
12/4/2018			0.0474				
2/5/2019			0.0545				<0.02
6/18/2019							<0.02
8/20/2019			0.0583				<0.02
4/13/2020							<0.02
4/14/2020		<0.02		<0.02			
4/15/2020	<0.02		0.0406		0.0783		
7/1/2020					0.069		
8/25/2020	<0.02		0.041		0.0666		
8/26/2020		<0.02		<0.02			<0.02
3/16/2021	<0.02						
3/22/2021					0.0666		<0.02
3/23/2021		<0.02		<0.02			
3/24/2021			0.0318				
3/30/2021						0.13	
10/5/2021							<0.02
10/6/2021					0.0685		
10/11/2021		<0.02	0.0225	<0.02			
10/12/2021	<0.02					0.129	
5/10/2022	<0.02						<0.02
5/16/2022		<0.02	0.0271		0.0612	0.111	
5/17/2022				<0.02			
10/25/2022			0.0304		0.0748	0.141	
10/26/2022	<0.02	<0.02		<0.02			<0.02

# Time Series

Constituent: Lithium (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<0.02		<0.02	<0.02	<0.02	<0.02	<0.02
2/6/2018	<0.02		<0.02				
2/8/2018				<0.02	<0.02	<0.02	<0.02
4/24/2018	<0.02						
4/25/2018			<0.02	<0.02	<0.02	<0.02	<0.02
6/26/2018	<0.02			<0.02	<0.02	<0.02	<0.02
6/27/2018			<0.02				
8/6/2018	<0.02						
8/7/2018			<0.02	<0.02			
8/8/2018					<0.02	<0.02	<0.02
10/22/2018	<0.02						
10/23/2018			<0.02	<0.02	<0.02	<0.02	<0.02
12/3/2018	<0.02			<0.02			
12/4/2018					<0.02	<0.02	
12/5/2018			<0.02				<0.02
2/5/2019	<0.02		<0.02	<0.02			
2/6/2019					<0.02	<0.02	<0.02
8/20/2019	<0.02		<0.02	<0.02			
8/21/2019					<0.02	<0.02	<0.02
4/13/2020			<0.02	<0.02			
4/14/2020						<0.02	<0.02
4/15/2020	<0.02	0.0219			<0.02		
8/24/2020			<0.02				
8/26/2020	<0.02	0.0203		<0.02	<0.02	<0.02	<0.02
3/16/2021			<0.02				
3/17/2021				<0.02			
3/23/2021					<0.02	<0.02	<0.02
3/24/2021	<0.02	0.0203					
10/5/2021	<0.02		<0.02	<0.02	<0.02		
10/11/2021		0.0198 (J)					
10/12/2021						<0.02	<0.02
5/9/2022			<0.02				
5/10/2022				<0.02	<0.02		
5/11/2022		0.0187 (J)				<0.02	<0.02
5/16/2022	<0.02						
10/26/2022	<0.02	0.0226	<0.02	<0.02	<0.02	<0.02	<0.02

# Time Series

Constituent: Lithium (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.02		<0.02	<0.02		
7/18/2018	<0.02		<0.02	<0.02		
8/7/2018	<0.02					
8/8/2018			<0.02	<0.02		
9/5/2018	<0.02		<0.02	<0.02		
9/24/2018	<0.02		<0.02	<0.02		
10/22/2018	<0.02					
10/23/2018			<0.02	<0.02		
12/3/2018	<0.02		<0.02	<0.02		
2/5/2019	<0.02					
2/7/2019			<0.02	<0.02		
8/20/2019	<0.02					
8/21/2019			<0.02	<0.02		
4/13/2020	<0.02	<0.02				
4/15/2020			<0.02	<0.02		
8/24/2020	<0.02	<0.02	<0.02	<0.02		
3/16/2021			<0.02	<0.02		
3/17/2021		<0.02				
3/24/2021	<0.02					
10/5/2021	<0.02	<0.02				
10/6/2021					0.227	
10/11/2021						0.0544
10/12/2021			<0.02	<0.02		
5/9/2022	<0.02	<0.02				
5/10/2022			<0.02	<0.02		
5/17/2022					0.196	0.0499
10/26/2022	<0.02	<0.02	<0.02	<0.02	0.262	0.0616

# Time Series

Constituent: Mercury (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	<0.0005	<0.0005	<0.0005	<0.0005			
2/6/2018	<0.0005						
2/7/2018		<0.0005	<0.0005				
2/8/2018				<0.0005			
4/23/2018	<0.0005						
4/24/2018		<0.0005	<0.0005	<0.0005			
6/26/2018	<0.0005						
6/27/2018		<0.0005	<0.0005	<0.0005	0.000661		
7/18/2018					0.000398 (J)		
8/6/2018					0.00042 (J)		
8/7/2018	<0.0005	<0.0005					
8/8/2018			<0.0005	<0.0005			
9/5/2018					0.00037 (J)		
9/24/2018					0.000329 (J)		
10/22/2018	<0.0005	<0.0005					
10/23/2018			<0.0005	<0.0005			
10/24/2018					<0.0005	<0.0005	<0.0005
11/14/2018						<0.0005	<0.0005
11/28/2018						<0.0005	<0.0005
12/4/2018	<0.0005	0.000302 (J)	<0.0005				
12/5/2018				<0.0005	0.000253 (J)	<0.0005	<0.0005
12/18/2018						<0.0005	<0.0005
1/3/2019						<0.0005	<0.0005
1/24/2019						0.000411 (J)	<0.0005
2/5/2019	<0.0005				0.000664	0.000473 (J)	<0.0005
2/6/2019		<0.0005	<0.0005	<0.0005			
8/19/2019						<0.0005	<0.0005
8/20/2019					0.000301 (J)		
8/21/2019	<0.0005						
8/22/2019		<0.0005	<0.0005	<0.0005			
4/14/2020			<0.0005	<0.0005			
4/15/2020	<0.0005	<0.0005				<0.0005	
4/16/2020					0.000558		<0.0005
8/24/2020							<0.0005
8/25/2020	<0.0005				<0.0005	<0.0005	
8/26/2020		<0.0005	<0.0005	<0.0005			
3/16/2021	<0.0005						
3/22/2021					0.000363 (J)	0.000775	<0.0005
3/23/2021		<0.0005	<0.0005	<0.0005			
10/5/2021	<0.0005			<0.0005			
10/6/2021						<0.0005	<0.0005
10/11/2021		<0.0005					
10/12/2021			<0.0005		<0.0005		
5/9/2022					0.00039 (J)		<0.0005
5/10/2022	<0.0005	<0.0005		<0.0005			
5/17/2022			<0.0005			<0.0005	
10/25/2022						<0.0005	<0.0005
10/26/2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005		

# Time Series

Constituent: Mercury (mg/L) Analysis Run 12/27/2022 6:37 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			<0.0005				<0.0005
2/6/2018			<0.0005				<0.0005
4/23/2018			<0.0005				
4/24/2018							<0.0005
6/27/2018			<0.0005				<0.0005
8/7/2018			<0.0005				<0.0005
10/22/2018			<0.0005				<0.0005
12/3/2018							<0.0005
12/4/2018			<0.0005				
2/5/2019			<0.0005				<0.0005
8/20/2019			<0.0005				<0.0005
4/13/2020							<0.0005
4/14/2020		<0.0005		<0.0005			
4/15/2020	<0.0005		<0.0005		<0.0005		
8/25/2020	<0.0005		<0.0005		<0.0005		
8/26/2020		<0.0005		<0.0005			<0.0005
3/16/2021	<0.0005						
3/22/2021					<0.0005		<0.0005
3/23/2021		<0.0005		<0.0005			
3/24/2021			<0.0005				
3/30/2021						<0.0005	
10/5/2021							<0.0005
10/6/2021					<0.0005		
10/11/2021		<0.0005	<0.0005	<0.0005			
10/12/2021	<0.0005					<0.0005	
5/10/2022	<0.0005						<0.0005
5/16/2022		<0.0005	<0.0005		<0.0005	<0.0005	
5/17/2022				<0.0005			
10/25/2022			<0.0005		<0.0005	<0.0005	
10/26/2022	<0.0005	<0.0005		<0.0005			<0.0005



# Time Series

Constituent: Mercury (mg/L) Analysis Run 12/27/2022 6:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
2/6/2018	<0.0005		<0.0005				
2/8/2018				<0.0005	<0.0005	<0.0005	<0.0005
4/24/2018	<0.0005						
4/25/2018			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
6/26/2018	<0.0005			<0.0005	<0.0005	<0.0005	<0.0005
6/27/2018			<0.0005				
8/6/2018	<0.0005						
8/7/2018			<0.0005	<0.0005			
8/8/2018					<0.0005	<0.0005	<0.0005
10/22/2018	<0.0005						
10/23/2018			<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
12/3/2018	<0.0005			<0.0005			
12/4/2018					0.00034 (J)	0.000284 (J)	
12/5/2018			<0.0005				<0.0005
2/5/2019	<0.0005		<0.0005	<0.0005			
2/6/2019					<0.0005	<0.0005	<0.0005
8/20/2019	<0.0005		<0.0005	<0.0005			
8/21/2019					<0.0005	<0.0005	<0.0005
4/13/2020			<0.0005	<0.0005			
4/14/2020						<0.0005	<0.0005
4/15/2020	<0.0005	<0.0005			<0.0005		
8/24/2020			<0.0005				
8/26/2020	<0.0005	<0.0005		<0.0005	<0.0005	<0.0005	<0.0005
3/16/2021			<0.0005				
3/17/2021				<0.0005			
3/23/2021					<0.0005	<0.0005	<0.0005
3/24/2021	<0.0005	<0.0005					
10/5/2021	<0.0005		<0.0005	<0.0005	<0.0005		
10/11/2021		<0.0005					
10/12/2021						<0.0005	<0.0005
5/9/2022			<0.0005				
5/10/2022				<0.0005	<0.0005		
5/11/2022		<0.0005				<0.0005	<0.0005
5/16/2022	<0.0005						
10/26/2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

# Time Series

Constituent: Mercury (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.0005		<0.0005	<0.0005		
7/18/2018	<0.0005		<0.0005	<0.0005		
8/7/2018	<0.0005					
8/8/2018			<0.0005	<0.0005		
9/5/2018	<0.0005		<0.0005	<0.0005		
9/24/2018	<0.0005		<0.0005	<0.0005		
10/22/2018	<0.0005					
10/23/2018			<0.0005	<0.0005		
12/3/2018	<0.0005		<0.0005	<0.0005		
2/5/2019	<0.0005					
2/7/2019			<0.0005	<0.0005		
8/20/2019	<0.0005					
8/21/2019			<0.0005	<0.0005		
4/13/2020	<0.0005	<0.0005				
4/15/2020			<0.0005	<0.0005		
8/24/2020	<0.0005	<0.0005	<0.0005	<0.0005		
3/16/2021			<0.0005	<0.0005		
3/17/2021		<0.0005				
3/24/2021	<0.0005					
10/5/2021	<0.0005	<0.0005				
10/6/2021					<0.0005	
10/11/2021						<0.0005
10/12/2021			<0.0005	<0.0005		
5/9/2022	<0.0005	<0.0005				
5/10/2022			<0.0005	0.00286		
5/17/2022					<0.0005	<0.0005
10/26/2022	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	<0.0002	<0.01	<0.000203	<0.000203			
2/6/2018	<0.0002						
2/7/2018		<0.01	<0.000203				
2/8/2018				<0.000203			
4/23/2018	<0.0002						
4/24/2018		<0.01	<0.000203	<0.000203			
6/26/2018	<0.0002						
6/27/2018		<0.01	<0.000203	<0.000203	<0.000203		
7/18/2018					<0.000203		
8/6/2018					<0.000203		
8/7/2018	<0.0002	<0.01					
8/8/2018			<0.000203	<0.000203			
9/5/2018					<0.000203		
9/24/2018					<0.000203		
10/22/2018	<0.0002	<0.01					
10/23/2018			<0.000203	<0.000203			
10/24/2018					<0.000203	<0.000203	0.00507 (J)
11/14/2018						<0.000203	0.00358 (J)
11/28/2018						<0.000203	0.00322 (J)
12/4/2018	<0.0002	<0.01	<0.000203				
12/5/2018				<0.000203	<0.000203	<0.000203	0.00256 (J)
12/18/2018						<0.000203	0.00215 (J)
1/3/2019						<0.000203	0.00257 (J)
1/24/2019						<0.000203	0.00211 (J)
2/5/2019	<0.0002				<0.000203	<0.000203	0.00205 (J)
2/6/2019		<0.01	<0.000203	<0.000203			
6/24/2019						<0.000203	
8/19/2019						<0.000203	<0.01
8/20/2019					<0.000203		
8/21/2019	<0.0002						
8/22/2019		<0.01	<0.000203	<0.000203			
4/14/2020			<0.000203	<0.000203			
4/15/2020	<0.0002	<0.01				<0.000203	
4/16/2020					<0.000203		<0.01
8/24/2020							<0.01
8/25/2020	<0.0002				<0.000203	<0.000203	
8/26/2020		<0.01	<0.000203	<0.000203			
3/16/2021	<0.0002						
3/22/2021					<0.000203	<0.000203	0.000723
3/23/2021		0.000204	0.000124 (J)	<0.000203			
10/5/2021	<0.0002			<0.000203			
10/6/2021						<0.000203	0.00045
10/11/2021		0.00045					
10/12/2021			0.00015 (J)		<0.000203		
5/9/2022					<0.000203		0.00046
5/10/2022	<0.0002	0.00047		<0.000203			
5/17/2022			0.00012 (J)			<0.000203	
10/25/2022						<0.000203	0.000466
10/26/2022	0.000198 (J)	0.000438	<0.000203	<0.000203	<0.000203		

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			0.0254				<0.000203
2/6/2018			0.0239				<0.000203
4/23/2018			0.0165				
4/24/2018							<0.000203
6/27/2018			0.0302				<0.000203
8/7/2018			0.0209				<0.000203
10/22/2018			0.0198				<0.000203
12/3/2018							<0.000203
12/4/2018			0.0118				
2/5/2019			0.0196				<0.000203
6/18/2019							<0.000203
8/20/2019			0.027				<0.000203
4/13/2020							<0.000203
4/14/2020		<0.0002		<0.01			
4/15/2020	<0.000203		0.0202		<0.01		
8/25/2020	<0.000203		0.0269		0.00323 (J)		
8/26/2020		<0.0002		<0.01			<0.000203
3/16/2021	<0.000203						
3/22/2021					0.00386		<0.000203
3/23/2021		<0.0002		0.000481			
3/24/2021			0.0164				
3/30/2021						0.000673	
10/5/2021							<0.000203
10/6/2021					0.00363		
10/11/2021		0.00012 (J)	0.0204	0.00031			
10/12/2021	<0.000203					0.00156	
5/10/2022	<0.000203						<0.000203
5/16/2022		<0.0002	0.0201		0.00357	0.00095	
5/17/2022				0.0004			
10/25/2022			0.0202		0.00361	0.00135	
10/26/2022	<0.000203	0.000136 (J)		0.00033			<0.000203

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<0.01		<0.000203	<0.000203	<0.0002	<0.01	<0.01
2/6/2018	<0.01		<0.000203				
2/8/2018				<0.000203	<0.0002	<0.01	<0.01
4/24/2018	<0.01						
4/25/2018			<0.000203	<0.000203	<0.0002	<0.01	<0.01
6/26/2018	<0.01			<0.000203	<0.0002	<0.01	<0.01
6/27/2018			<0.000203				
8/6/2018	<0.01						
8/7/2018			<0.000203	<0.000203			
8/8/2018					<0.0002	<0.01	<0.01
10/22/2018	<0.01						
10/23/2018			<0.000203	<0.000203	<0.0002	<0.01	<0.01
12/3/2018	<0.01			<0.000203			
12/4/2018					<0.0002	<0.01	
12/5/2018			<0.000203				<0.01
2/5/2019	<0.01		<0.000203	<0.000203			
2/6/2019					<0.0002	<0.01	<0.01
8/20/2019	<0.01		<0.000203	<0.000203			
8/21/2019					<0.0002	<0.01	<0.01
4/13/2020			<0.000203	<0.000203			
4/14/2020						<0.01	<0.01
4/15/2020	<0.01	<0.01			<0.0002		
8/24/2020			<0.000203				
8/26/2020	<0.01	<0.01		<0.000203	<0.0002	<0.01	<0.01
3/16/2021			<0.000203				
3/17/2021				<0.000203			
3/23/2021					<0.0002	0.000357	0.00027
3/24/2021	0.00118	0.00188					
10/5/2021	0.00111		0.00015 (J)	<0.000203	0.0001 (J)		
10/11/2021		0.00173					
10/12/2021						0.00032	0.00018 (J)
5/9/2022			0.00011 (J)				
5/10/2022				<0.000203	<0.0002		
5/11/2022		0.00135				0.0004	0.00024
5/16/2022	0.00122						
10/26/2022	0.00106	0.00135	0.000371	<0.000203	0.000169 (J)	0.000422	0.000276

# Time Series

Constituent: Molybdenum (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.000203		<0.000203	<0.000203		
7/18/2018	<0.000203		<0.000203	<0.000203		
8/7/2018	<0.000203					
8/8/2018			<0.000203	<0.000203		
9/5/2018	<0.000203		<0.000203	<0.000203		
9/24/2018	<0.000203		<0.000203	<0.000203		
10/22/2018	<0.000203					
10/23/2018			<0.000203	<0.000203		
12/3/2018	<0.000203		<0.000203	<0.000203		
2/5/2019	<0.000203					
2/7/2019			<0.000203	<0.000203		
8/20/2019	<0.000203					
8/21/2019			<0.000203	<0.000203		
4/13/2020	<0.000203	<0.0002				
4/15/2020			<0.000203	<0.000203		
8/24/2020	<0.000203	<0.0002	<0.000203	<0.000203		
3/16/2021			<0.000203	<0.000203		
3/17/2021		<0.0002				
3/24/2021	9.88E-05 (J)					
10/5/2021	7E-05 (J)	0.00028				
10/6/2021				0.00107		
10/11/2021					0.00538	
10/12/2021			<0.000203	<0.000203		
5/9/2022	<0.000203	<0.0002				
5/10/2022			<0.000203	<0.000203		
5/17/2022					0.00194	0.0028
10/26/2022	<0.000203	0.00022	<0.000203	<0.000203	0.00238	0.0019

# Time Series

Constituent: pH (pH) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	6.5	6.83	6.81	5.6			
2/6/2018	6.48						
2/7/2018		6.82	6.74				
2/8/2018				5.44			
4/23/2018	6.36						
4/24/2018		6.74	6.62	5.41			
6/26/2018	6.32						
6/27/2018		6.67	6.69	5.45	3.95		
7/18/2018					4.02		
8/6/2018					4.07		
8/7/2018	6.32	6.72					
8/8/2018			6.67	5.46			
9/5/2018					4.07		
9/24/2018					4.07		
10/22/2018	6.2	6.73					
10/23/2018			6.73	5.47			
10/24/2018					4.1	5.27	7.92
11/14/2018						4.99	8.23
11/28/2018						4.74	8.95
12/4/2018	6.31	6.77	6.67				
12/5/2018				5.45	4.1	4.76	8.77
12/18/2018						4.57	8.99
1/3/2019						4.56	9.35
1/24/2019						4.45	9.42
2/5/2019	6.1				4.02	4.3	9.23
2/6/2019		6.67	6.58	5.31			
2/26/2019	6.11	6.77					
2/27/2019			6.56	5.4			
2/28/2019					3.94 (E)	4.35	9.48
8/19/2019						4.57	7.93
8/20/2019					4		
8/21/2019	6.01						
8/22/2019		6.37	6.26	5.35			
4/14/2020			6.63	5.39			
4/15/2020	5.65	6.85				4.49	
4/16/2020					3.93		8.1
8/24/2020							8.17
8/25/2020	6				4.03	4.2	
8/26/2020		6.73	6.38	5.63			
3/16/2021	5.87						
3/22/2021					3.25	3.45	7.85
3/23/2021		6.87	6.58	5.5			
10/5/2021	5.79			5.19			
10/6/2021						4.16	7.92
10/11/2021		6.72					
10/12/2021			6.66		4.04		
5/9/2022					3.6		7.29
5/10/2022	5.77	6.39		4.78			
5/17/2022			6.44			4.34	
10/25/2022						4.64	7.97
10/26/2022	5.86	6.84	6.2	5.52	4.07		

# Time Series

Constituent: pH (pH) Analysis Run 12/27/2022 6:37 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			6.61				6.54
2/6/2018			6.66				6.39
4/23/2018			6.54				
4/24/2018							6.02
6/27/2018			6.63				6.07
8/7/2018			6.57				6.28
10/22/2018			6.55				6.3
12/3/2018							6.38
12/4/2018			6.52				
2/5/2019			6.47				5.83
2/25/2019							5.93
2/26/2019			6.54				
8/20/2019			6.3				5.73
4/13/2020							5.83
4/14/2020		5.79		6.02			
4/15/2020	5.1		6.45		8.6		
7/1/2020					8.36		
8/25/2020	5.13		6.65		8.43		
8/26/2020		6.33		6.36			5.87
3/16/2021	5.08						
3/22/2021					8.34		5.51
3/23/2021		5.88		6.38			
3/24/2021			6.49				
3/30/2021						8.52	
10/5/2021							5.76
10/6/2021					8.36		
10/11/2021		6.08	6.59	6.36			
10/12/2021	5.12					8.62	
5/10/2022	4.87						5.95
5/16/2022		5.24	6.16		8.1	8.48	
5/17/2022				5.74			
10/25/2022			6.64		8.33	8.33	
10/26/2022	4.81	6.25		6.36			5.97



# Time Series

Constituent: pH (pH) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	6.73		6.32	6.38	6.62	6.81	6.93
2/6/2018	6.76		6.27				
2/8/2018				6.29	6.39	6.73	6.96
2/12/2018							6.88
4/24/2018	6.66						
4/25/2018			6.14	6.15	6.17	6.61	6.89
6/26/2018	6.61			6.09	6.38	6.59	6.85
6/27/2018			6.15				
8/6/2018	6.68						
8/7/2018			6.18	6.16			
8/8/2018					6.56	6.6	6.94
10/22/2018	6.63						
10/23/2018			6.15	6.1	6.54	6.64	6.93
12/3/2018	6.67			6.09			
12/4/2018					6.33	6.68	
12/5/2018			6.15				6.94
2/5/2019	6.63		6.08	6.04			
2/6/2019					6.13	6.62	6.73
2/26/2019	6.64			6.17			
2/27/2019			6.11		6.12	6.56	6.85
8/20/2019	6.33		6.11	5.4			
8/21/2019					5.97	6.16	6.61
4/13/2020			6.18	5.82			
4/14/2020						6.49	7.02
4/15/2020	6.77	7.93			6.16		
8/24/2020			6.11				
8/26/2020	6.68	7.83		5.96	6.11	6.29	6.75
3/16/2021			6.22				
3/17/2021				5.92			
3/23/2021					6.04	6.47	6.85
3/24/2021	6.86	8.01					
10/5/2021	6.58		6.24	5.74	6.06		
10/11/2021		7.82					
10/12/2021						6.61	6.9
5/9/2022			5.43				
5/10/2022				5.51	5.08		
5/11/2022		7.91				6.25	6.7
5/16/2022	6.61						
10/26/2022	6.67	7.92	6.44	5.98	6.44	6.68	7.07

# Time Series

Constituent: pH (pH) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	6.79		5.81	5.44		
7/18/2018	6.8		5.74	5.58		
8/7/2018	6.73					
8/8/2018			5.7	5.55		
9/5/2018	6.75		5.61	5.56		
9/24/2018	6.83		5.59	5.57		
10/22/2018	6.76					
10/23/2018			5.6	5.55		
12/3/2018	6.6		5.73	5.6		
2/5/2019	6.66					
2/7/2019			5.44	5.51		
2/25/2019	6.6		5.46	5.54		
8/20/2019	6.3					
8/21/2019			5.13	5.44		
4/13/2020	6.66	5.84				
4/15/2020			5.31	5.52		
8/24/2020	6.64	6	4.65	5.38		
3/16/2021			5.47	5.56		
3/17/2021		5.34				
3/24/2021	5.85					
10/5/2021	6.46	5.72				
10/6/2021					8.53	
10/11/2021						8.13
10/12/2021			5.33	5.41		
5/9/2022	6.03	4.35				
5/10/2022			5.38	5.57		
5/17/2022					8.31	8.29
10/26/2022	6.66	6.16	5.31	5.43	8.31	8.11

# Time Series

Constituent: Selenium (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	<0.001015	<0.001015	<0.001015	<0.001015			
2/6/2018	<0.001015						
2/7/2018		<0.001015	<0.001015				
2/8/2018				<0.001015			
4/23/2018	<0.001015						
4/24/2018		<0.001015	<0.001015	<0.001015			
6/26/2018	<0.001015						
6/27/2018		<0.001015	<0.001015	<0.001015	<0.01		
7/18/2018					<0.01		
8/6/2018					<0.01		
8/7/2018	<0.001015	<0.001015					
8/8/2018			<0.001015	<0.001015			
9/5/2018					<0.01		
9/24/2018					<0.01		
10/22/2018	<0.001015	<0.001015					
10/23/2018			<0.001015	<0.001015			
10/24/2018					<0.01	<0.01	<0.001015
11/14/2018						<0.01	<0.001015
11/28/2018						<0.01	<0.001015
12/4/2018	<0.001015	<0.001015	<0.001015				
12/5/2018				<0.001015	0.00208 (J)	0.00349 (J)	<0.001015
12/18/2018						0.00395 (J)	<0.001015
1/3/2019						0.00488 (J)	<0.001015
1/24/2019						0.00707 (J)	<0.001015
2/5/2019	<0.001015				0.00387 (J)	0.00938 (J)	<0.001015
2/6/2019		<0.001015	<0.001015	<0.001015			
6/24/2019						0.00563 (J)	
8/19/2019						0.00316 (J)	<0.001015
8/20/2019					0.00328 (J)		
8/21/2019	<0.001015						
8/22/2019		<0.001015	<0.001015	<0.001015			
4/14/2020			<0.001015	<0.001015			
4/15/2020	<0.001015	<0.001015				0.00434 (J)	
4/16/2020					0.00608 (J)		<0.001015
8/24/2020							<0.001015
8/25/2020	<0.001015				0.00247 (J)	0.00262 (J)	
8/26/2020		<0.001015	<0.001015	<0.001015			
3/16/2021	<0.001015						
3/22/2021					0.00488	0.0134	<0.001015
3/23/2021		<0.001015	<0.001015	<0.001015			
10/5/2021	<0.001015			<0.001015			
10/6/2021						0.00262	<0.001015
10/11/2021		<0.001015					
10/12/2021			<0.001015		0.00287		
5/9/2022					0.00394		<0.001015
5/10/2022	<0.001015	<0.001015		<0.001015			
5/17/2022			<0.001015			0.00609	
10/25/2022						0.00118	<0.001015
10/26/2022	<0.001015	<0.001015	<0.001015	<0.001015	0.00151		

# Time Series

Constituent: Selenium (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			<0.001015				<0.001015
2/6/2018			<0.001015				<0.001015
4/23/2018			<0.001015				
4/24/2018							<0.001015
6/27/2018			<0.001015				<0.001015
8/7/2018			<0.001015				<0.001015
10/22/2018			<0.001015				<0.001015
12/3/2018							<0.001015
12/4/2018			<0.001015				
2/5/2019			<0.001015				<0.001015
6/18/2019							<0.001015
8/20/2019			<0.001015				<0.001015
4/13/2020							<0.001015
4/14/2020		<0.001015		<0.001015			
4/15/2020	<0.01		<0.001015		<0.001015		
8/25/2020	<0.01		<0.001015		<0.001015		
8/26/2020		<0.001015		<0.001015			<0.001015
3/16/2021	0.000935 (J)						
3/22/2021					<0.001015		<0.001015
3/23/2021		<0.001015		<0.001015			
3/24/2021			<0.001015				
3/30/2021						<0.001015	
10/5/2021							<0.001015
10/6/2021					<0.001015		
10/11/2021		<0.001015	<0.001015	<0.001015			
10/12/2021	0.00068 (J)					<0.001015	
5/10/2022	0.00125						<0.001015
5/16/2022		<0.001015	<0.001015		<0.001015	<0.001015	
5/17/2022				<0.001015			
10/25/2022			<0.001015		<0.001015	<0.001015	
10/26/2022	0.00117	<0.001015		<0.001015			<0.001015

# Time Series

Constituent: Selenium (mg/L) Analysis Run 12/27/2022 6:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<0.001015		<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
2/6/2018	<0.001015		<0.001015				
2/8/2018				<0.001015	<0.001015	<0.001015	<0.001015
4/24/2018	<0.001015						
4/25/2018			<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
6/26/2018	<0.001015			<0.001015	<0.001015	<0.001015	<0.001015
6/27/2018			<0.001015				
8/6/2018	<0.001015						
8/7/2018			<0.001015	<0.001015			
8/8/2018					<0.001015	<0.001015	<0.001015
10/22/2018	<0.001015						
10/23/2018			<0.001015	<0.001015	<0.001015	<0.001015	<0.001015
12/3/2018	<0.001015			<0.001015			
12/4/2018					<0.001015	<0.001015	
12/5/2018			<0.001015				<0.001015
2/5/2019	<0.001015		<0.001015	<0.001015			
2/6/2019					<0.001015	<0.001015	<0.001015
8/20/2019	<0.001015		<0.001015	<0.001015			
8/21/2019					<0.001015	<0.001015	<0.001015
4/13/2020			<0.001015	<0.001015			
4/14/2020						<0.001015	<0.001015
4/15/2020	<0.001015	<0.001015			<0.001015		
8/24/2020			<0.001015				
8/26/2020	<0.001015	<0.001015		<0.001015	<0.001015	<0.001015	<0.001015
3/16/2021			<0.001015				
3/17/2021				<0.001015			
3/23/2021					<0.001015	<0.001015	<0.001015
3/24/2021	<0.001015	<0.001015					
10/5/2021	<0.001015		<0.001015	<0.001015	<0.001015		
10/11/2021		<0.001015					
10/12/2021						<0.001015	<0.001015
5/9/2022			<0.001015				
5/10/2022				<0.001015	<0.001015		
5/11/2022		<0.001015				<0.001015	<0.001015
5/16/2022	<0.001015						
10/26/2022	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015

# Time Series

Constituent: Selenium (mg/L) Analysis Run 12/27/2022 6:37 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.001015		<0.001015	<0.001015		
7/18/2018	<0.001015		<0.001015	<0.001015		
8/7/2018	<0.001015					
8/8/2018			<0.001015	<0.001015		
9/5/2018	<0.001015		<0.001015	<0.001015		
9/24/2018	<0.001015		<0.001015	<0.001015		
10/22/2018	<0.001015					
10/23/2018			<0.001015	<0.001015		
12/3/2018	<0.001015		<0.001015	<0.001015		
2/5/2019	<0.001015					
2/7/2019			<0.001015	<0.001015		
8/20/2019	<0.001015					
8/21/2019			<0.001015	<0.001015		
4/13/2020	<0.001015	<0.001015				
4/15/2020			<0.001015	<0.001015		
8/24/2020	<0.001015	<0.001015	<0.001015	<0.001015		
3/16/2021			<0.001015	<0.001015		
3/17/2021		<0.001015				
3/24/2021	<0.001015					
10/5/2021	<0.001015	<0.001015				
10/6/2021					<0.001015	
10/11/2021						<0.001015
10/12/2021			<0.001015	<0.001015		
5/9/2022	<0.001015	<0.001015				
5/10/2022			<0.001015	<0.001015		
5/17/2022					<0.001015	<0.001015
10/26/2022	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015	<0.001015

# Time Series

Constituent: Sulfate (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	650	11	83	200			
2/6/2018	560						
2/7/2018		19	84				
2/8/2018				200			
4/23/2018	640						
4/24/2018		27	98	210			
6/26/2018	670						
6/27/2018		<5	95	240	120		
7/18/2018					120		
8/6/2018					110		
8/7/2018	660	<5					
8/8/2018			110	260			
9/5/2018					86		
9/24/2018					80		
10/22/2018	580	<5					
10/23/2018			78	280			
10/24/2018					68	44	16
11/14/2018						44	13
11/28/2018						46	11
12/4/2018	580	11	97				
12/5/2018				280	54	51	12
12/18/2018						76	11
1/3/2019						94	10
1/24/2019						135	10.2
2/5/2019	702				126	183	10.4
2/6/2019		16.8	113	239			
2/26/2019	748	38.4					
2/27/2019			135	257			
2/28/2019					207	192	9.86
6/24/2019						129 (D)	
8/19/2019						66.6	8.74
8/20/2019					106		
8/21/2019	708						
8/22/2019		6.74	305	339			
4/14/2020			146	155			
4/15/2020	647	50.7				92.8	
4/16/2020					191		11.5
8/24/2020							10
8/25/2020	642				98.4	74.1	
8/26/2020		10.5	280	282			
3/16/2021	593						
3/22/2021					83.8	128	10.6
3/23/2021		60.1	135	160			
10/5/2021	567			195			
10/6/2021						93.5	10.2
10/11/2021		7.75					
10/12/2021			142	95.7			
5/9/2022				125			10
5/10/2022	508	11.6		193			
5/17/2022			145			139	
10/25/2022						37.099998	9.25
10/26/2022	512	4.42	278	230	50.700001		

# Time Series

Constituent: Sulfate (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			210				250
2/6/2018			190				230
4/23/2018			140				
4/24/2018							260
6/27/2018			130				230
8/7/2018			150				200
10/22/2018			160				190
12/3/2018							200
12/4/2018			170				
2/5/2019			145				263
2/25/2019							246
2/26/2019			148				
6/18/2019							245
8/20/2019			110				222
4/13/2020							256
4/14/2020		75.3		135			
4/15/2020	67.1		116		4.18		
8/25/2020	52.6		114		4.83		
8/26/2020		72.9		112			246
3/16/2021	18.5						
3/22/2021					2.04		254
3/23/2021		71.8		168			
3/24/2021			101				
3/30/2021						10.3	
10/5/2021							228
10/6/2021					2.44		
10/11/2021		61.7	112	174			
10/12/2021	36.7					15.2	
5/10/2022	42.1						215
5/16/2022		60.2	93.1		1.15 (J)	10	
5/17/2022				187			
10/25/2022			111		2.13	18	
10/26/2022	37.299999	55.099998		158			206



# Time Series

Constituent: Sulfate (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<5		19	10	14	6.5	9
2/6/2018	<5		20				
2/8/2018				11	10	8.9	
2/12/2018							8.3
4/24/2018	<5						
4/25/2018			22	13	11	7.9	12
6/26/2018	<5			11	11	7.5	8.5
6/27/2018			18				
8/6/2018	<5						
8/7/2018			20	12			
8/8/2018					13	7.3	6.7
10/22/2018	<5						
10/23/2018			18	11	13	7.8	9.4
12/3/2018	<5			12			
12/4/2018					9.8	8.2	
12/5/2018			20				7.8
2/5/2019	5.38		24.3	13.9			
2/6/2019					10.8	9.53	17
2/26/2019	5.1			14.1			
2/27/2019			24.7		8.98	8.25	12.4
8/20/2019	7.34		21.3	12.3			
8/21/2019					11.8	10.8	11.3
4/13/2020			21.9	13.9			
4/14/2020						12.5	15.9
4/15/2020	17.2	1.25			7.95		
8/24/2020			21.2				
8/26/2020	15.5	1.21		13.1	9.19	16.1	12.9
3/16/2021			18.8				
3/17/2021				13.7			
3/23/2021					8.08	9.21	15.7
3/24/2021	19.9	1.39					
10/5/2021	37.8		14.4	14.2	9.19		
10/11/2021		1.7					
10/12/2021						16	18
5/9/2022			15.5				
5/10/2022				14.8	7.13		
5/11/2022		1.73 (J)				11.8	17.7
5/16/2022	51.8						
10/26/2022	61.799999	2.36	16.1	12.2	11.4	10.1	13.8

# Time Series

Constituent: Sulfate (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	2.2 (J)		<1	<5		
7/18/2018	2.5 (J)		<1	<5		
8/7/2018	<5					
8/8/2018			<1	<5		
9/5/2018	1.4 (J)		<1	<5		
9/24/2018	<5		<1	<5		
10/22/2018	1.7 (J)					
10/23/2018			<1	<5		
12/3/2018	2.1 (J)		<1	<5		
2/5/2019	3.99					
2/7/2019			0.639 (J)	1.69		
2/25/2019	4.01		<1	1.53		
8/20/2019	3.73					
8/21/2019			1.21	1.62		
4/13/2020	3.83	1.48				
4/15/2020			0.554 (J)	1.68		
8/24/2020	4.16	3.88	<1	1.31		
3/16/2021			1.02	1.7		
3/17/2021		1.64				
3/24/2021	2.88					
10/5/2021	2.17	5.29				
10/6/2021					8.35	
10/11/2021						13.8
10/12/2021			0.895 (J)	1.34		
5/9/2022	2.51	1.15 (J)				
5/10/2022			1.02 (J)	1.28 (J)		
5/17/2022					19.1	6.55
10/26/2022	3.43	3.32	0.992 (J)	1.7 (J)	23.9	3.55

# Time Series

Constituent: Thallium (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	<0.000203	<0.000203	<0.000203	<0.000203			
2/6/2018	<0.000203						
2/7/2018		<0.000203	<0.000203				
2/8/2018				<0.000203			
4/23/2018	<0.000203						
4/24/2018		<0.000203	<0.000203	<0.000203			
6/26/2018	<0.000203						
6/27/2018		<0.000203	<0.000203	<0.000203	<0.000203		
7/18/2018					<0.000203		
8/6/2018					<0.000203		
8/7/2018	<0.000203	<0.000203					
8/8/2018			<0.000203	<0.000203			
9/5/2018					<0.000203		
9/24/2018					<0.000203		
10/22/2018	<0.000203	<0.000203					
10/23/2018			<0.000203	<0.000203			
10/24/2018					<0.000203	<0.000203	<0.0002
11/14/2018						<0.000203	<0.0002
11/28/2018						<0.000203	<0.0002
12/4/2018	<0.000203	<0.000203	<0.000203				
12/5/2018				<0.000203	<0.000203	<0.000203	<0.0002
12/18/2018						<0.000203	<0.0002
1/3/2019						<0.000203	<0.0002
1/24/2019						<0.000203	<0.0002
2/5/2019	<0.000203				<0.000203	<0.000203	<0.0002
2/6/2019		<0.000203	<0.000203	<0.000203			
6/24/2019						<0.000203	
8/19/2019						<0.000203	<0.0002
8/20/2019					<0.000203		
8/21/2019	<0.000203						
8/22/2019		<0.000203	<0.000203	<0.000203			
4/14/2020			<0.000203	<0.000203			
4/15/2020	<0.000203	<0.000203				<0.000203	
4/16/2020					<0.000203		<0.0002
8/24/2020							<0.0002
8/25/2020	<0.000203				<0.000203	<0.000203	
8/26/2020		<0.000203	<0.000203	<0.000203			
3/16/2021	0.000112 (J)						
3/22/2021					<0.000203	<0.000203	<0.0002
3/23/2021		<0.000203	<0.000203	<0.000203			
10/5/2021	<0.000203			<0.000203			
10/6/2021						<0.000203	<0.0002
10/11/2021		<0.000203					
10/12/2021			<0.000203		<0.000203		
5/9/2022					<0.000203		<0.0002
5/10/2022	0.00013 (J)	<0.000203		<0.000203			
5/17/2022			<0.000203			<0.000203	
10/25/2022						<0.000203	7E-05 (J)
10/26/2022	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203		

# Time Series

Constituent: Thallium (mg/L) Analysis Run 12/27/2022 6:37 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			<0.001				<0.001
2/6/2018			<0.001				<0.001
4/23/2018			<0.001				
4/24/2018							<0.001
6/27/2018			<0.001				<0.001
8/7/2018			<0.001				<0.001
10/22/2018			0.000213 (J)				<0.001
12/3/2018							<0.001
12/4/2018			<0.001				
2/5/2019			0.000256 (J)				<0.001
6/18/2019							<0.001
8/20/2019			0.000322 (J)				<0.001
4/13/2020							<0.001
4/14/2020		<0.000203		<0.001			
4/15/2020	<0.000203		0.000318 (J)		<0.000203		
8/25/2020	<0.000203		0.000347 (J)		<0.000203		
8/26/2020		<0.000203		<0.001			<0.001
3/16/2021	<0.000203						
3/22/2021					<0.000203		0.000121 (J)
3/23/2021		<0.000203		0.000145 (J)			
3/24/2021			0.00037				
3/30/2021						<0.000203	
10/5/2021							0.00014 (J)
10/6/2021					<0.000203		
10/11/2021		<0.000203	0.00029	0.00013 (J)			
10/12/2021	<0.000203					<0.000203	
5/10/2022	<0.000203						0.00011 (J)
5/16/2022		<0.000203	0.00041		<0.000203	<0.000203	
5/17/2022				0.00013 (J)			
10/25/2022			0.000361		<0.000203	<0.000203	
10/26/2022	<0.000203	<0.000203		0.000149 (J)			0.00011 (J)

# Time Series

Constituent: Thallium (mg/L) Analysis Run 12/27/2022 6:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
2/6/2018	<0.000203		<0.000203				
2/8/2018				<0.000203	<0.000203	<0.000203	<0.000203
4/24/2018	<0.000203						
4/25/2018			<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
6/26/2018	<0.000203			<0.000203	<0.000203	<0.000203	<0.000203
6/27/2018			<0.000203				
8/6/2018	<0.000203						
8/7/2018			<0.000203	<0.000203			
8/8/2018					<0.000203	<0.000203	<0.000203
10/22/2018	<0.000203						
10/23/2018			<0.000203	<0.000203	<0.000203	<0.000203	<0.000203
12/3/2018	<0.000203			<0.000203			
12/4/2018					<0.000203	<0.000203	
12/5/2018			<0.000203				<0.000203
2/5/2019	<0.000203		<0.000203	<0.000203			
2/6/2019					<0.000203	<0.000203	<0.000203
8/20/2019	<0.000203		<0.000203	<0.000203			
8/21/2019					<0.000203	<0.000203	<0.000203
4/13/2020			<0.000203	<0.000203			
4/14/2020						<0.000203	<0.000203
4/15/2020	<0.000203	<0.000203			<0.000203		
8/24/2020			<0.000203				
8/26/2020	<0.000203	<0.000203		<0.000203	<0.000203	<0.000203	<0.000203
3/16/2021			<0.000203				
3/17/2021				<0.000203			
3/23/2021					<0.000203	<0.000203	<0.000203
3/24/2021	<0.000203	<0.000203					
10/5/2021	<0.000203		<0.000203	<0.000203	<0.000203		
10/11/2021		<0.000203					
10/12/2021						<0.000203	<0.000203
5/9/2022			<0.000203				
5/10/2022				<0.000203	<0.000203		
5/11/2022		<0.000203				<0.000203	<0.000203
5/16/2022	<0.000203						
10/26/2022	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203

# Time Series

Constituent: Thallium (mg/L) Analysis Run 12/27/2022 6:37 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	<0.000203		<0.000203	<0.000203		
7/18/2018	<0.000203		<0.000203	<0.000203		
8/7/2018	<0.000203					
8/8/2018			<0.000203	<0.000203		
9/5/2018	<0.000203		<0.000203	<0.000203		
9/24/2018	<0.000203		<0.000203	<0.000203		
10/22/2018	<0.000203					
10/23/2018			<0.000203	<0.000203		
12/3/2018	<0.000203		<0.000203	<0.000203		
2/5/2019	<0.000203					
2/7/2019			<0.000203	<0.000203		
8/20/2019	<0.000203					
8/21/2019			<0.000203	<0.000203		
4/13/2020	<0.000203	<0.000203				
4/15/2020			<0.000203	<0.000203		
8/24/2020	<0.000203	<0.000203	<0.000203	<0.000203		
3/16/2021			<0.000203	<0.000203		
3/17/2021		<0.000203				
3/24/2021	<0.000203					
10/5/2021	<0.000203	<0.000203				
10/6/2021					<0.000203	
10/11/2021						<0.000203
10/12/2021			<0.000203	<0.000203		
5/9/2022	<0.000203	<0.000203				
5/10/2022			<0.000203	<0.000203		
5/17/2022					<0.000203	<0.000203
10/26/2022	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203	<0.000203

# Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/27/2022 6:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-14 ...	GSD-AP-MW-16 ...	GSD-AP-MW-17 ...
12/6/2017	1300	215	312	371			
2/6/2018	1310						
2/7/2018		237	323				
2/8/2018				367			
4/23/2018	1210						
4/24/2018		242	324	365			
6/26/2018	1250						
6/27/2018		194	333	421	219		
7/18/2018					195		
8/6/2018					175		
8/7/2018	1220	195					
8/8/2018			346	479			
9/5/2018					153		
9/24/2018					127		
10/22/2018	1150	184					
10/23/2018			311	507			
10/24/2018					125	107	184
11/14/2018						96.7	170
11/28/2018						102	167
12/4/2018	1090	215	343				
12/5/2018				479	101	103	185
12/18/2018						126	164
1/3/2019						191	167
1/24/2019						212	137
2/5/2019	1200				180	269	138
2/6/2019		208	317	399			
2/26/2019	1210	252					
2/27/2019			360	422			
2/28/2019					287	261	140
6/24/2019						203.5 (D)	
8/19/2019						121	240
8/20/2019					265		
8/21/2019	1200						
8/22/2019		194	555	501			
4/14/2020			372	278			
4/15/2020	1060	262				155	
4/16/2020					280		166
8/24/2020							162
8/25/2020	1060				160	131	
8/26/2020		186	517	472			
3/16/2021	1040						
3/22/2021					126	204	157
3/23/2021		273	361	286			
10/5/2021	964			378			
10/6/2021						136	182
10/11/2021		190					
10/12/2021			352		142		
5/9/2022					185		152
5/10/2022	780	199		319			
5/17/2022			367			226	
10/25/2022						72.699997	159
10/26/2022	840	202	545	402	98		

# Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/27/2022 6:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-18H	GSD-AP-MW-19H	GSD-AP-MW-2	GSD-AP-MW-20H	GSD-AP-MW-2VA	GSD-AP-MW-2VB	GSD-AP-MW-3
12/6/2017			574				628
2/6/2018			572				556
4/23/2018			414				
4/24/2018							510
6/27/2018			440				486
8/7/2018			485				487
10/22/2018			484				450
12/3/2018							492
12/4/2018			504				
2/5/2019			366				428
2/25/2019							441
2/26/2019			372				
6/18/2019							422
8/20/2019			369				416
4/13/2020							433
4/14/2020		190		323			
4/15/2020	126		300		324		
8/25/2020	107		339		321		
8/26/2020		202		310			455
3/16/2021	52						
3/22/2021					314		427
3/23/2021		174		385			
3/24/2021			287				
3/30/2021						528	
10/5/2021							389
10/6/2021					317		
10/11/2021		202	337	384			
10/12/2021	78.7					536	
5/10/2022	90						362
5/16/2022		138	244		316	508	
5/17/2022				401			
10/25/2022			337		330	588	
10/26/2022	82.699997	207		364			328



# Time Series

Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/27/2022 6:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-4V	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
12/7/2017	189		215	136	137	253	183
2/6/2018	206		204				
2/8/2018				122	124	229	
2/12/2018							201
4/24/2018	193						
4/25/2018			192	102	106	223	180
6/26/2018	180			106	129	232	191
6/27/2018			180				
8/6/2018	182						
8/7/2018			183	71.3			
8/8/2018					142	208	192
10/22/2018	204						
10/23/2018			169	105	142	209	185
12/3/2018	168			102			
12/4/2018					121	213	
12/5/2018			177				200
2/5/2019	158		198	107			
2/6/2019					108	212	151
2/26/2019	191			99.3			
2/27/2019			185		103	211	186
8/20/2019	164		174	98.7			
8/21/2019					133	226	200
4/13/2020			192	90.7			
4/14/2020						222	187
4/15/2020	170	218			102		
8/24/2020			175				
8/26/2020	168	239		91.3	109	215	192
3/16/2021			184				
3/17/2021				80			
3/23/2021					92.7	200	178
3/24/2021	180	222					
10/5/2021	200		168	96.7	113		
10/11/2021		220					
10/12/2021						245	169
5/9/2022			174				
5/10/2022				73.3	82.7		
5/11/2022		220				216	181
5/16/2022	218						
10/26/2022	247	221	178	91.300003	121	226	194

# Time Series

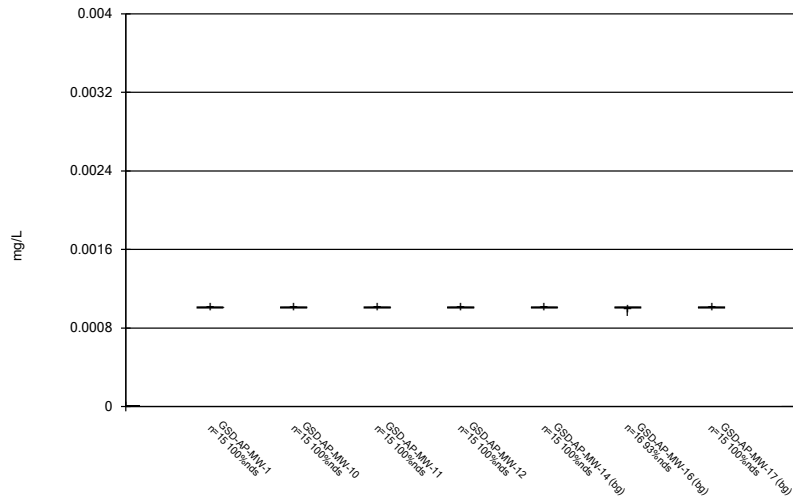
Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/27/2022 6:37 PM

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6	GSD-AP-MW-21VC	GSD-AP-MW-22VB
6/27/2018	144		48.7	44		
7/18/2018	156		46	42.7		
8/7/2018	140					
8/8/2018			48	46		
9/5/2018	154		47.3	67.3		
9/24/2018	165		44.7	49.3		
10/22/2018	148					
10/23/2018			35.3	31.3		
12/3/2018	127		48.7	46		
2/5/2019	113					
2/7/2019			42.7	32.7		
2/25/2019	106		40.7	31.3		
8/20/2019	141					
8/21/2019			46	42.7		
4/13/2020	104	88				
4/15/2020			41.3	37.3		
8/24/2020	114	115	42.7	37.3		
3/16/2021			42	41.3		
3/17/2021		53.3				
3/24/2021	94					
10/5/2021	108	101				
10/6/2021					864	
10/11/2021						230
10/12/2021			38.7	35.3		
5/9/2022	85.3	53.3				
5/10/2022			33.3	33.3		
5/17/2022					921	238
10/26/2022	96	119	45.299999	38	952	239

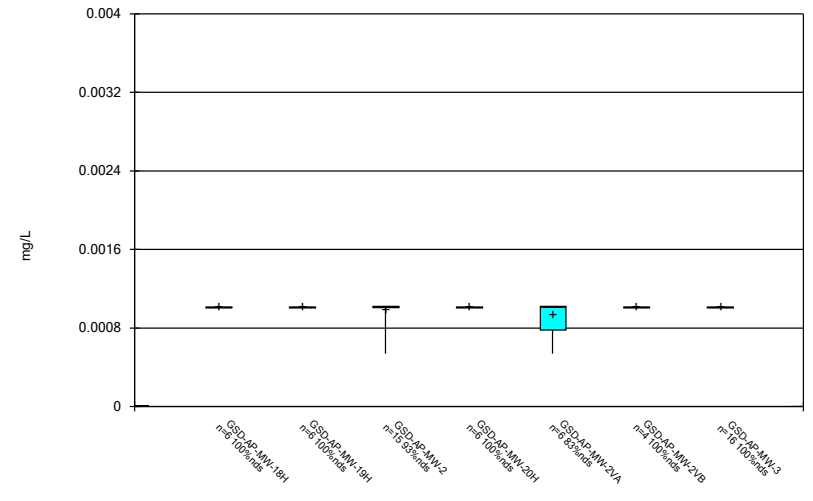
FIGURE B.

Box & Whiskers Plot



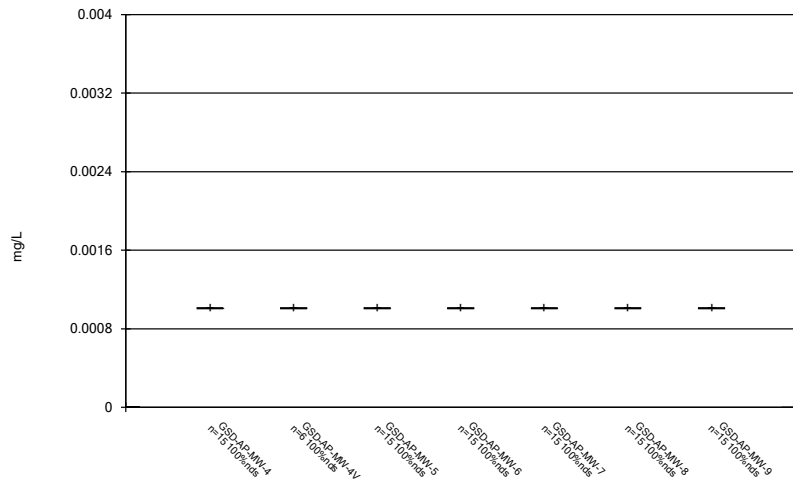
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



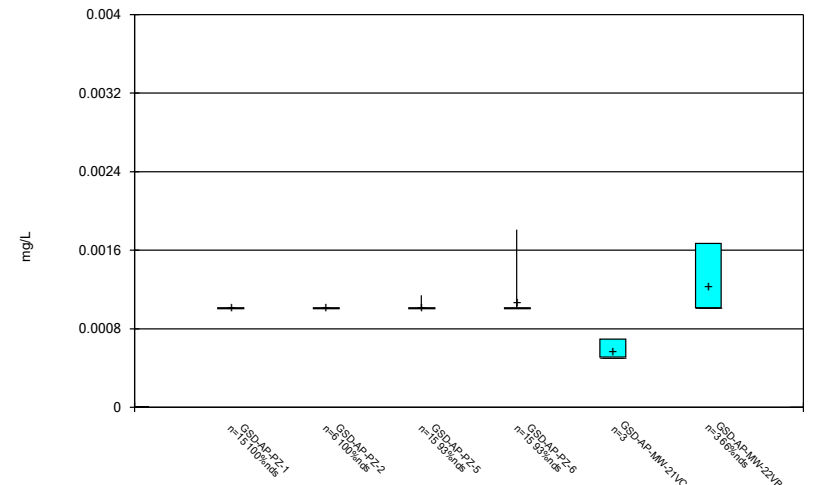
Constituent: Antimony Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



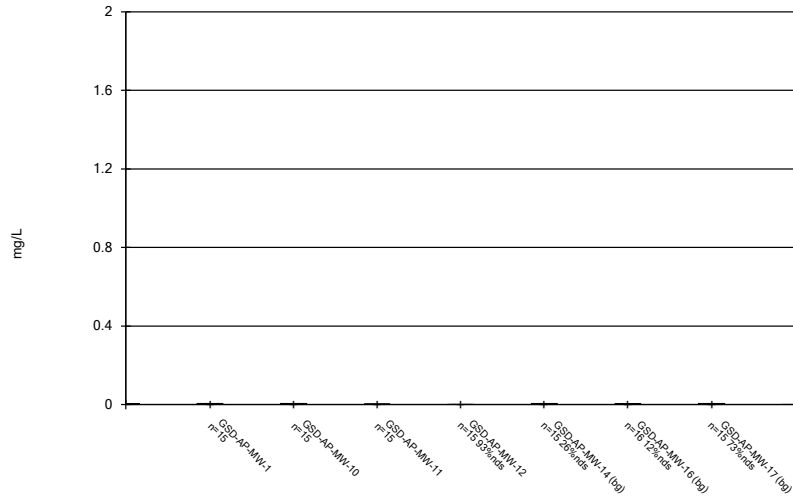
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



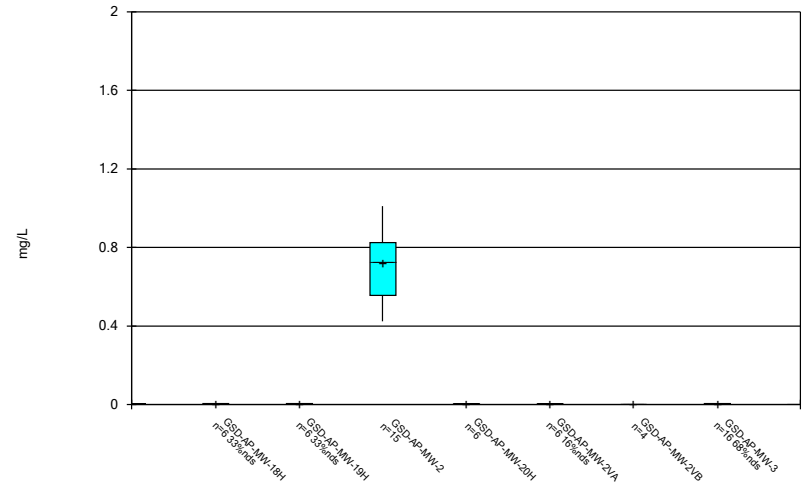
Constituent: Antimony Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



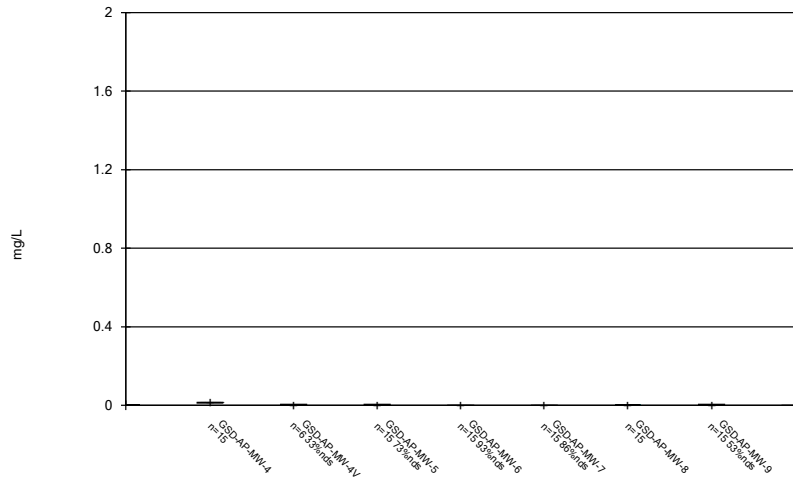
Constituent: Arsenic Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



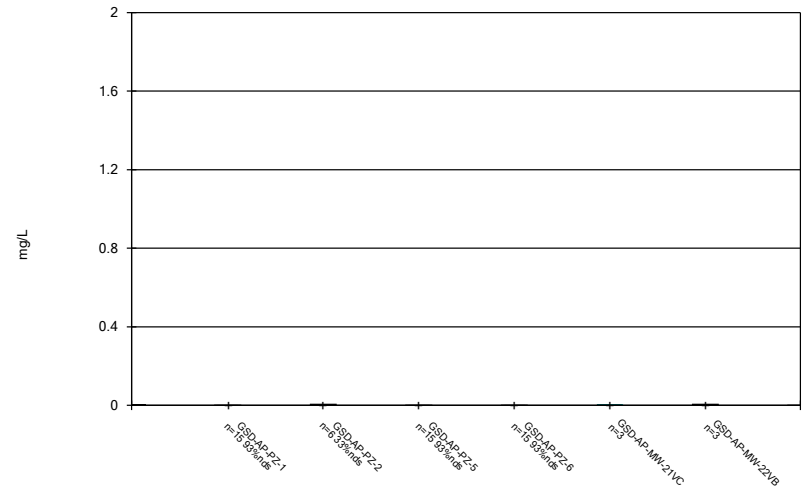
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



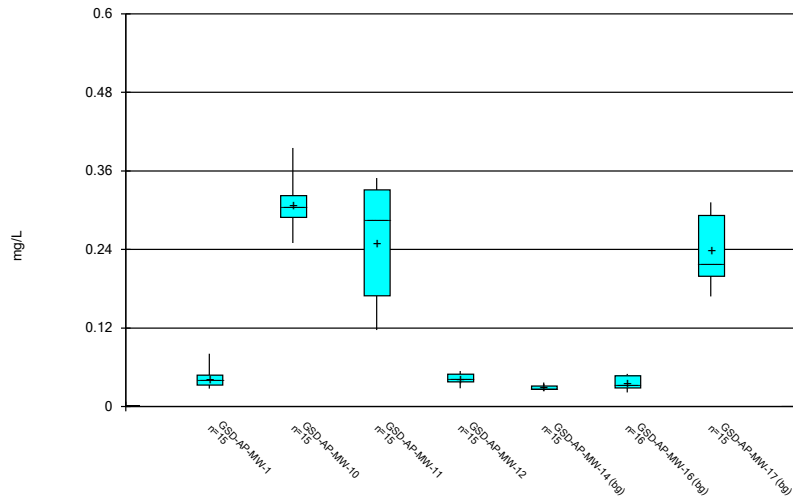
Constituent: Arsenic Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



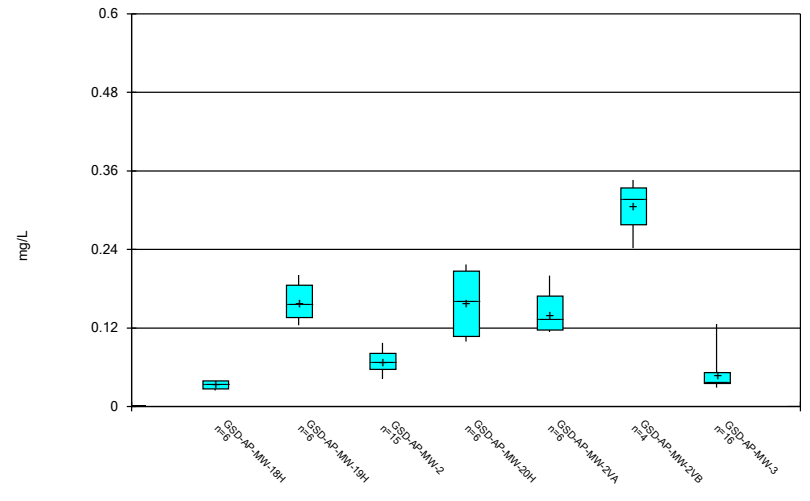
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



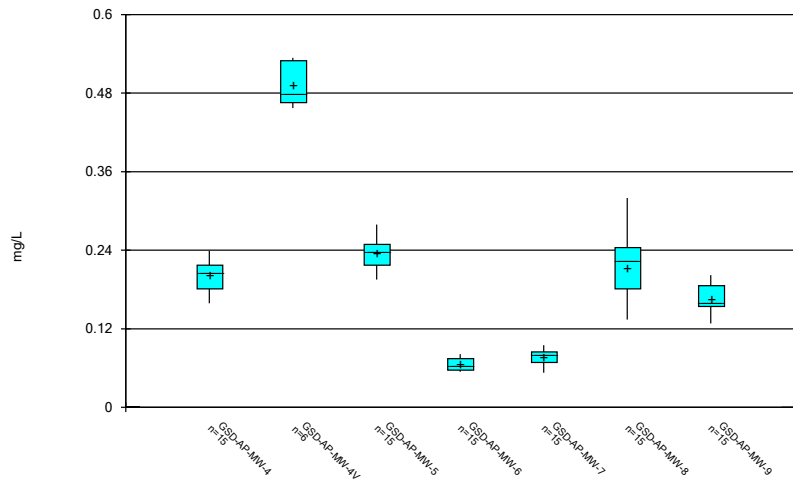
Constituent: Barium Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



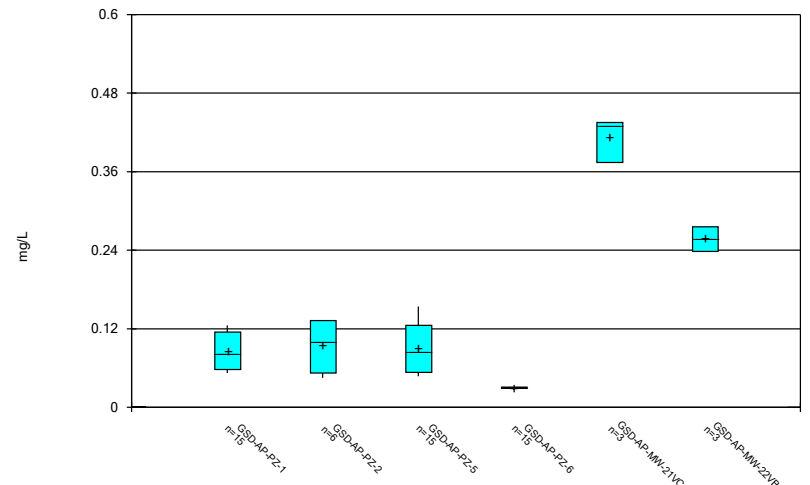
Constituent: Barium Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



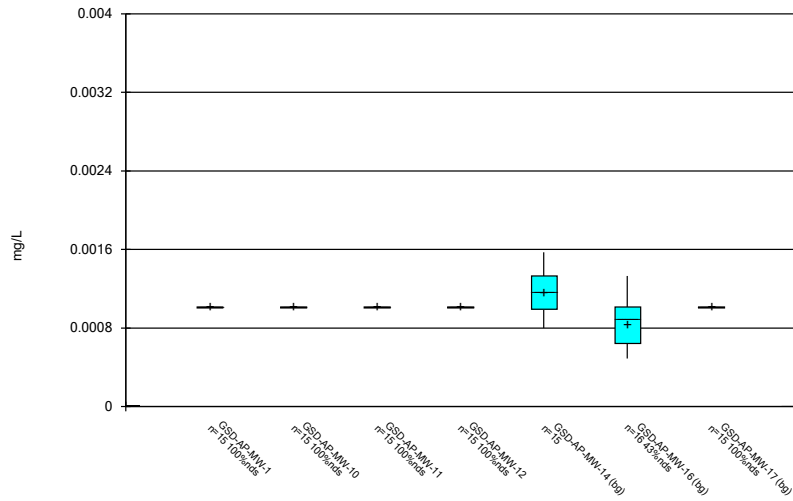
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



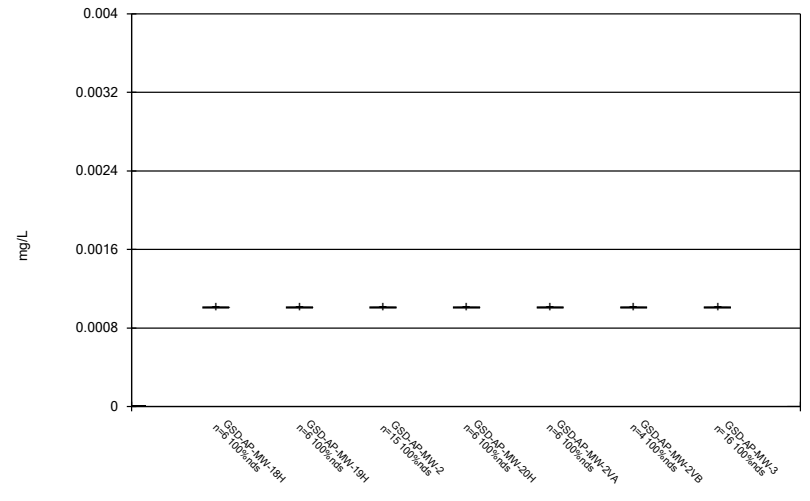
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



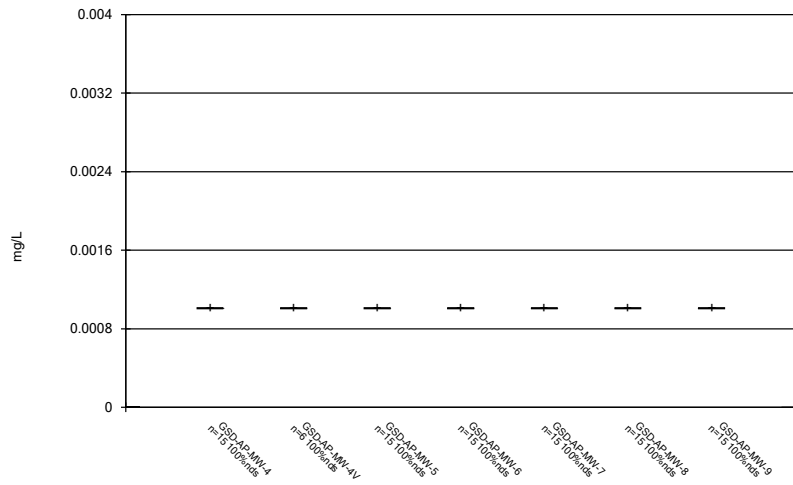
Constituent: Beryllium Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



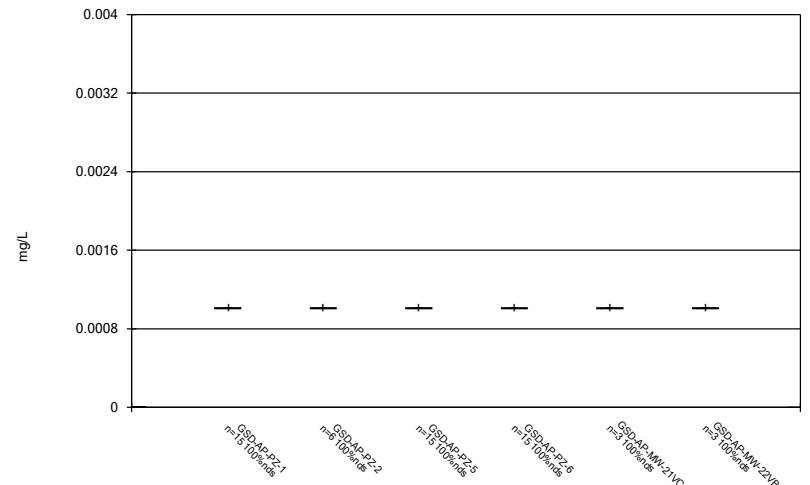
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



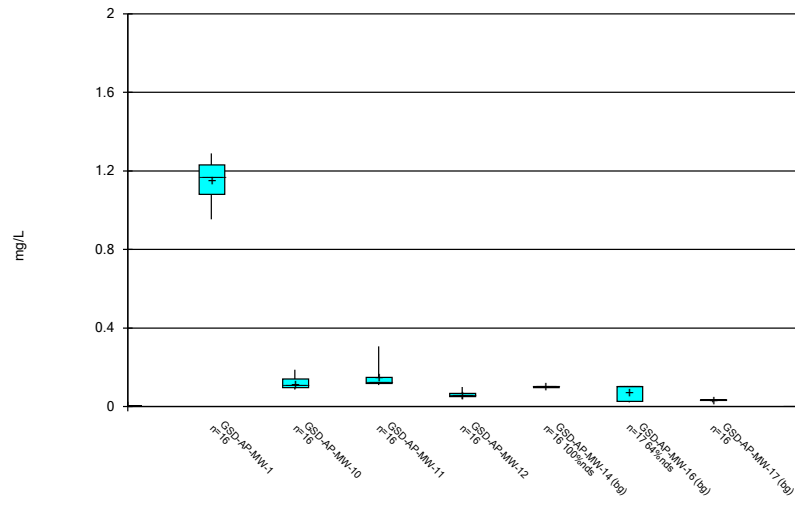
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



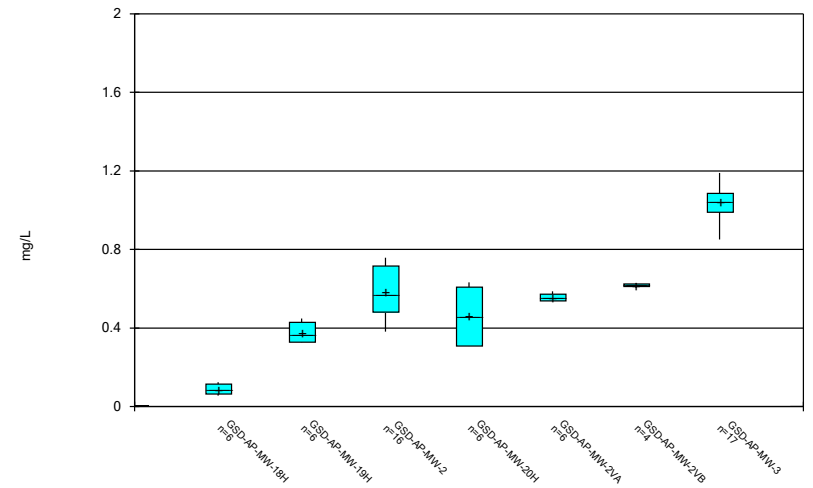
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



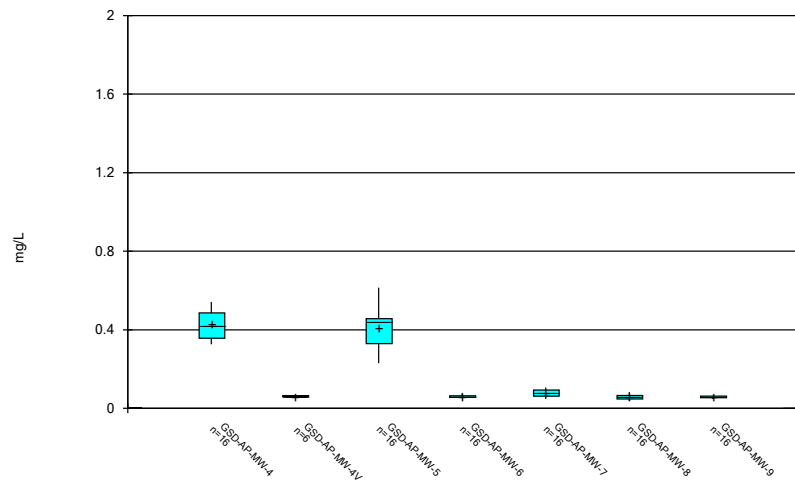
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



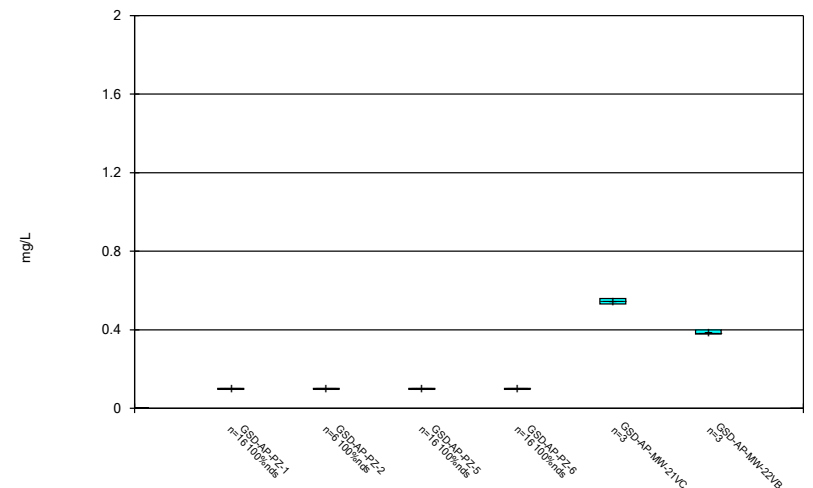
Constituent: Boron Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



Constituent: Boron Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

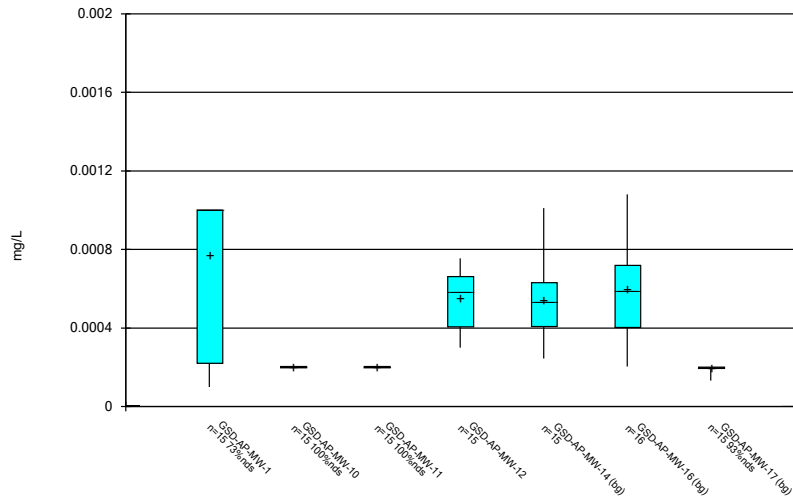
Box & Whiskers Plot



Constituent: Boron Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

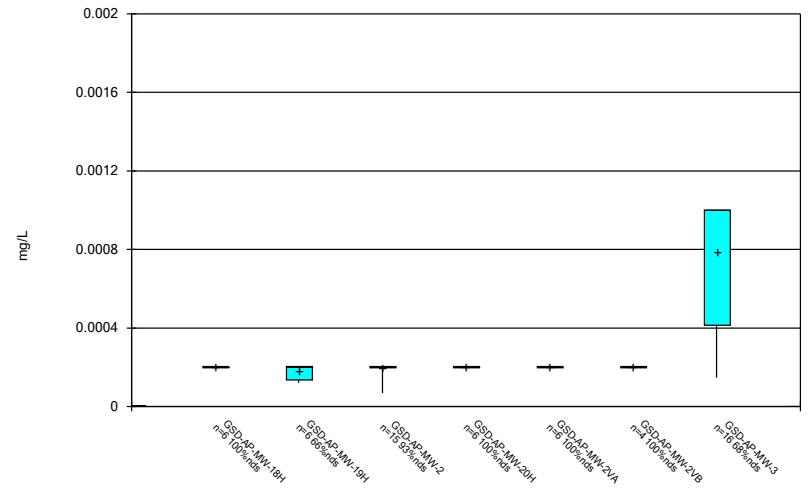


### Box & Whiskers Plot



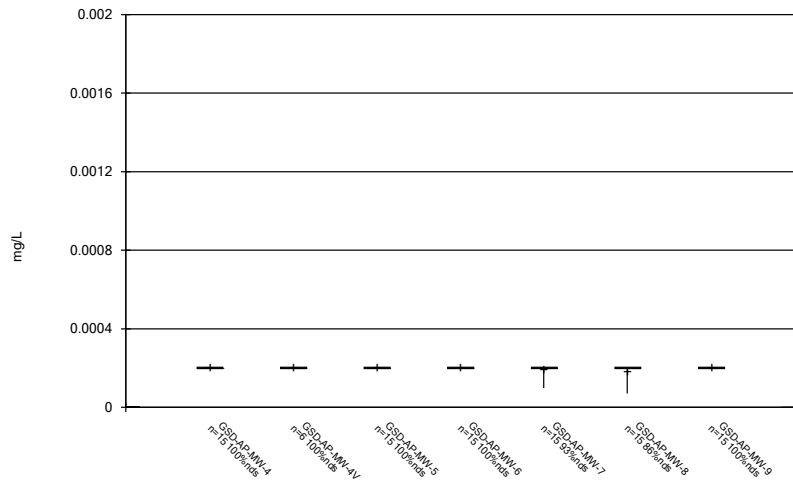
Constituent: Cadmium Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



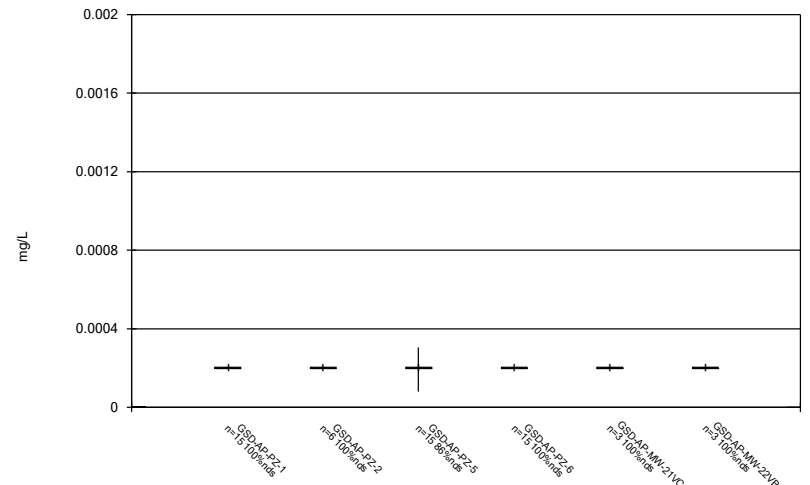
Constituent: Cadmium Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



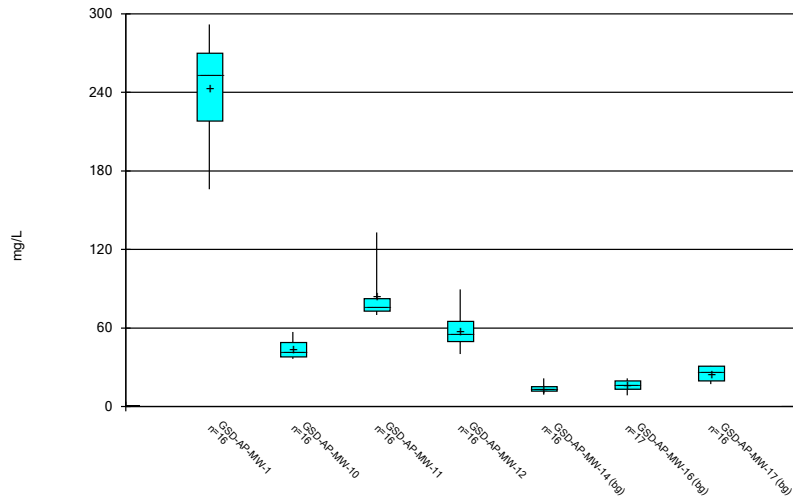
Constituent: Cadmium Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



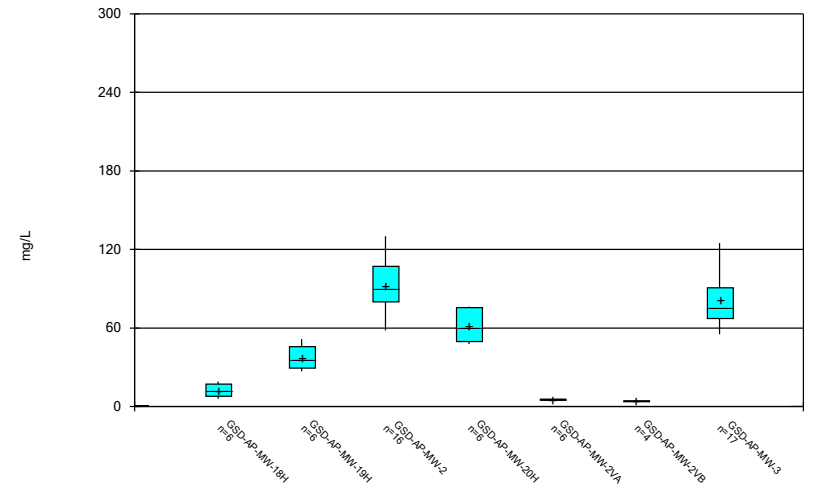
Constituent: Cadmium Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



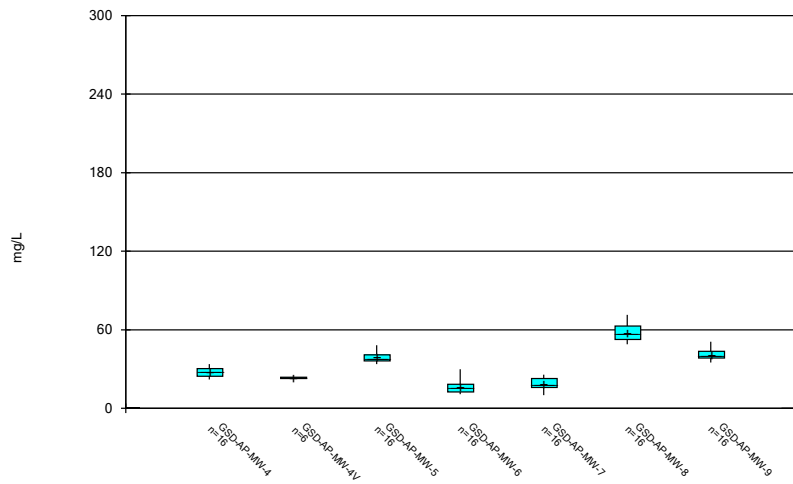
Constituent: Calcium Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



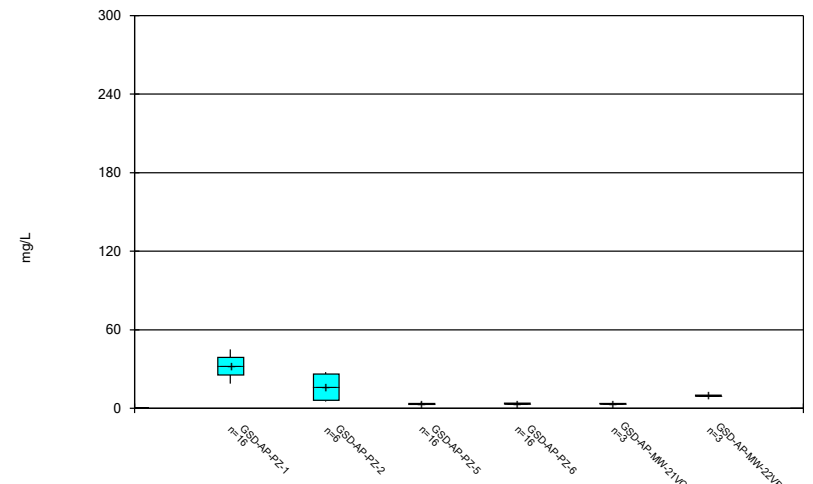
Constituent: Calcium Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



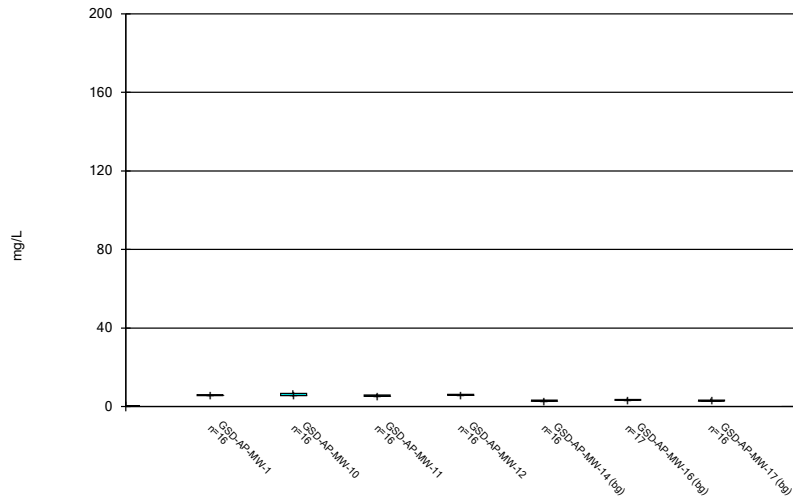
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



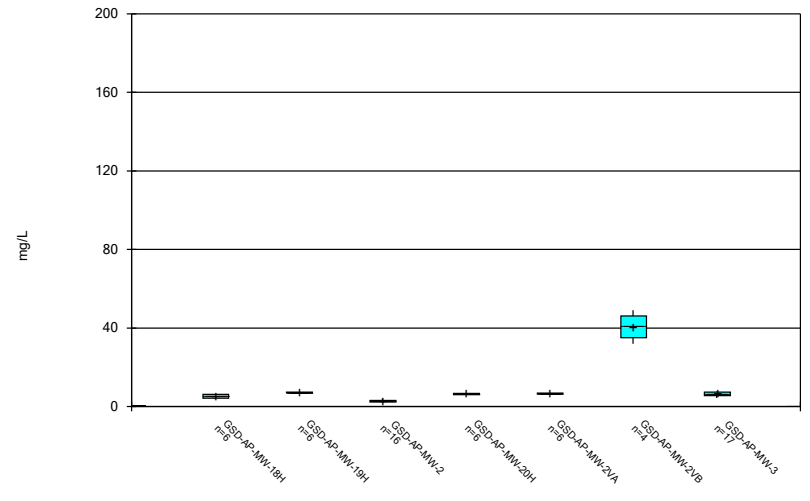
Constituent: Calcium Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



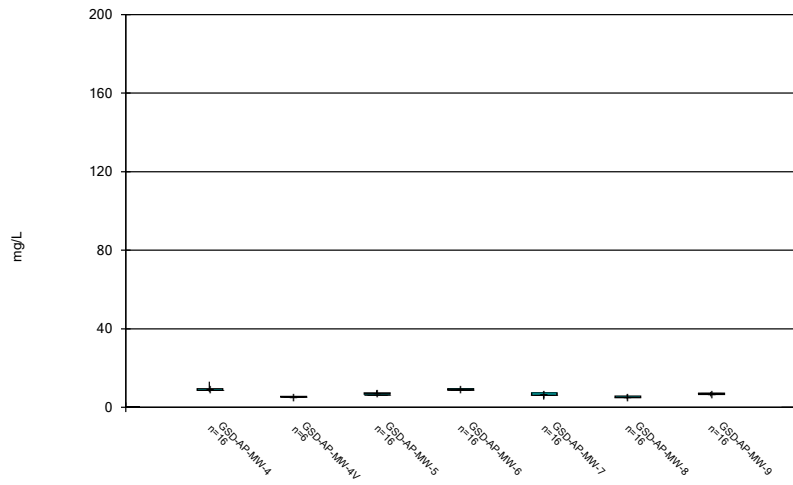
Constituent: Chloride Analysis Run 12/27/2022 6:38 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



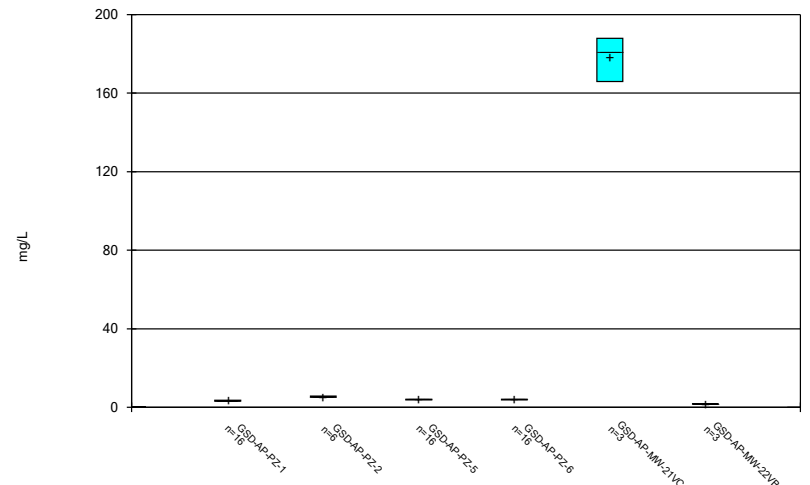
Constituent: Chloride Analysis Run 12/27/2022 6:38 PM  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



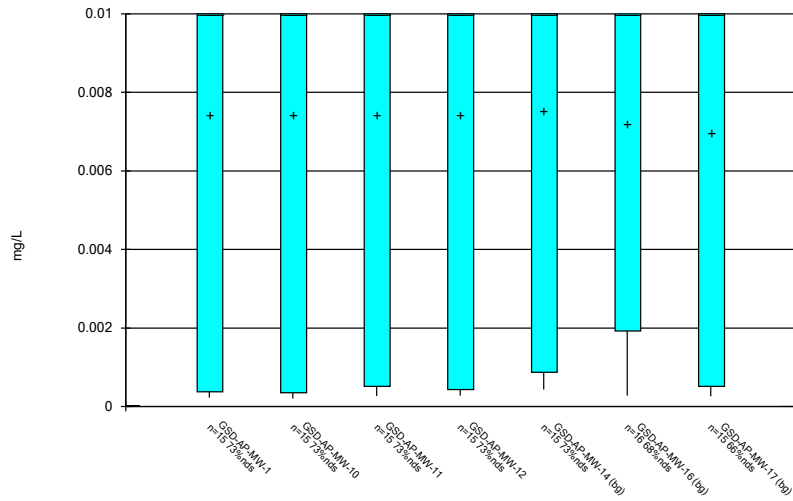
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



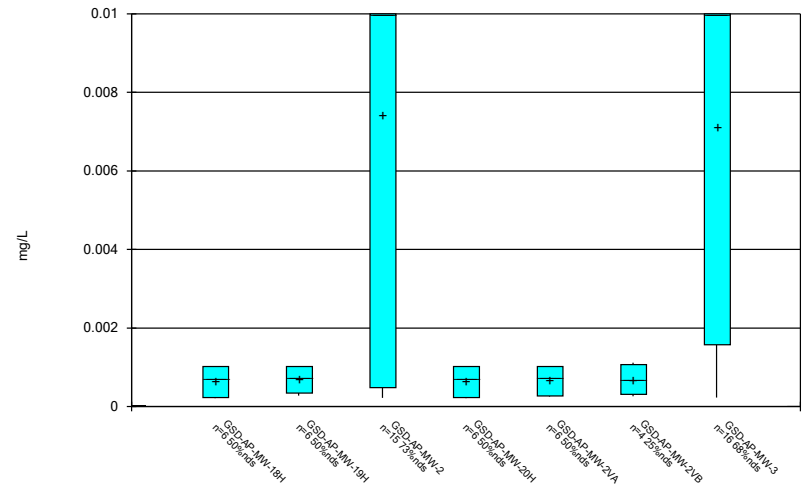
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



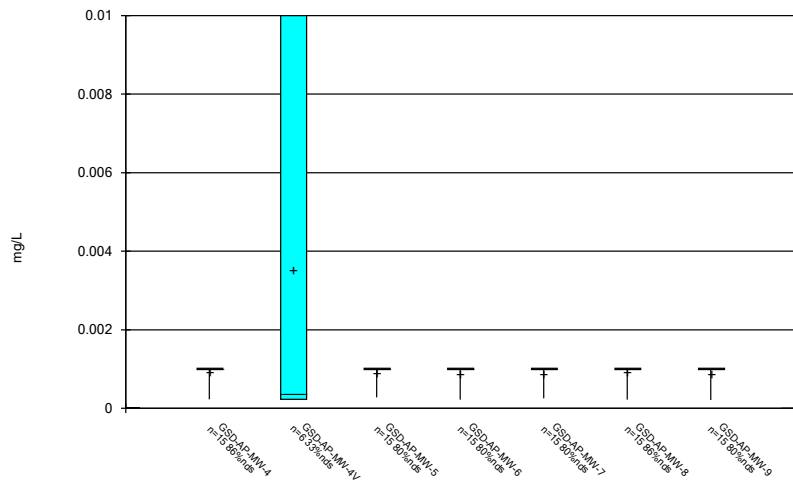
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



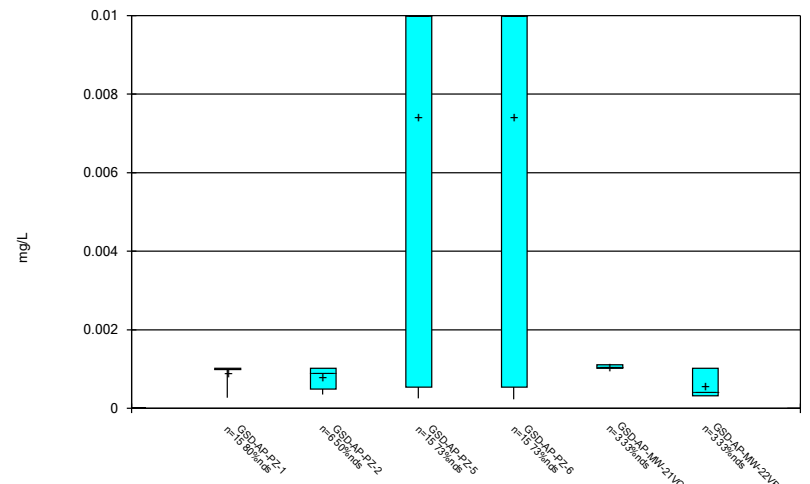
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



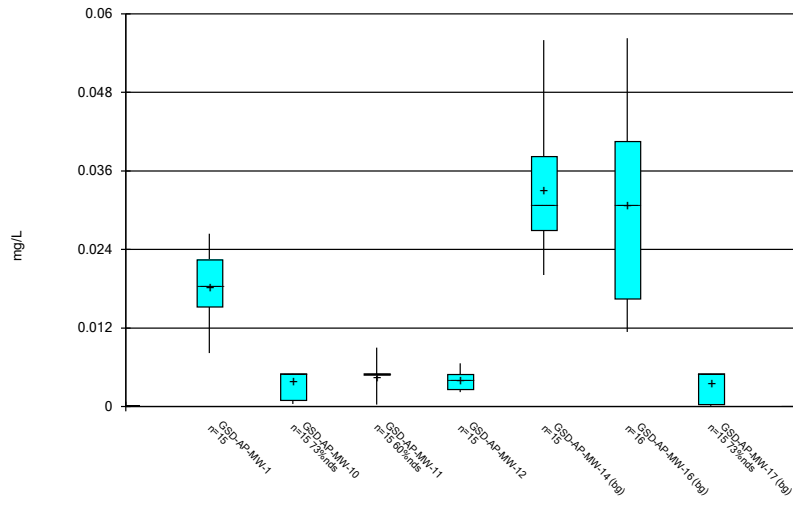
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



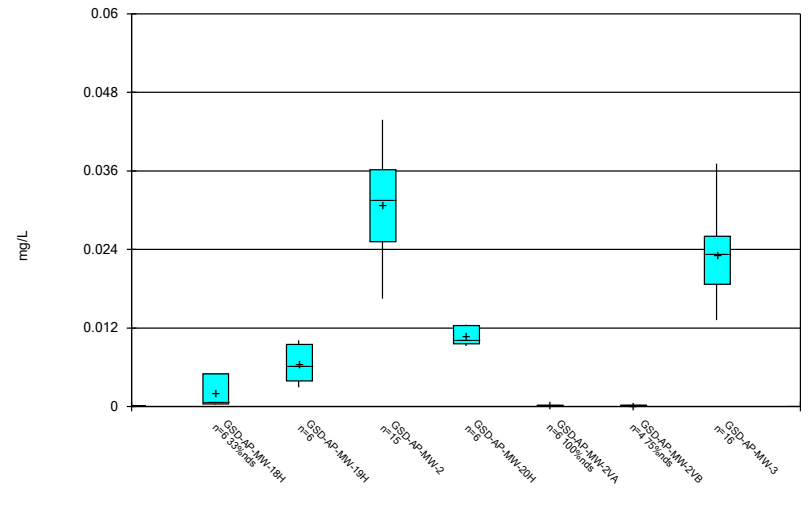
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



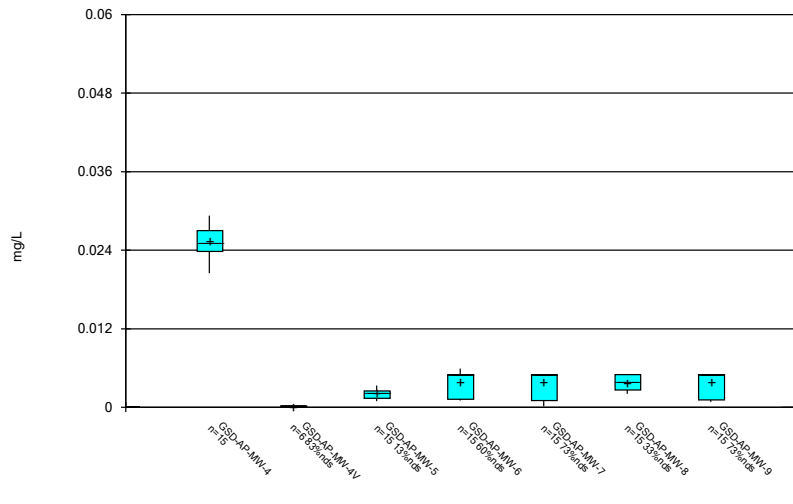
Constituent: Cobalt Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



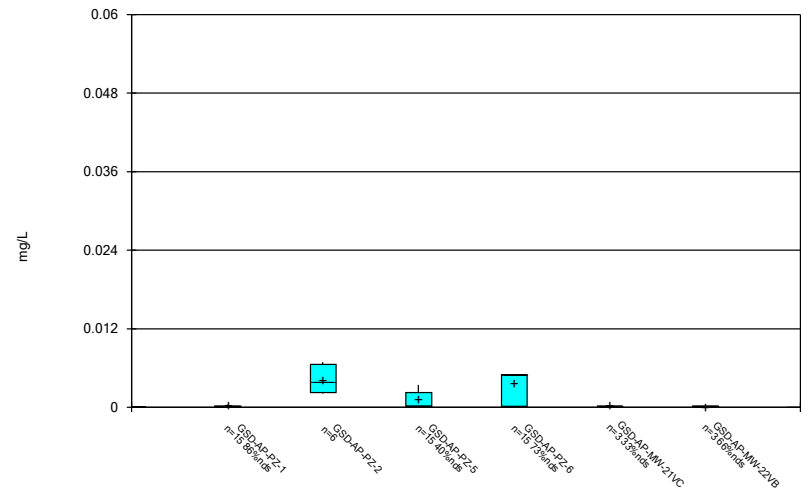
Constituent: Cobalt Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



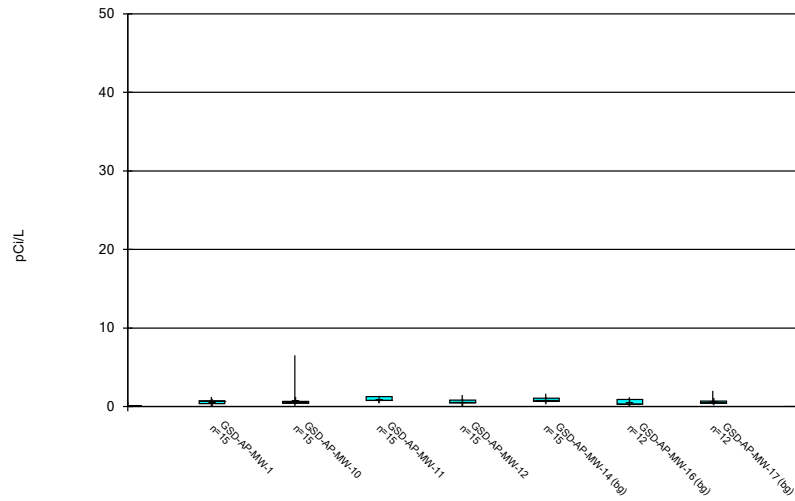
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



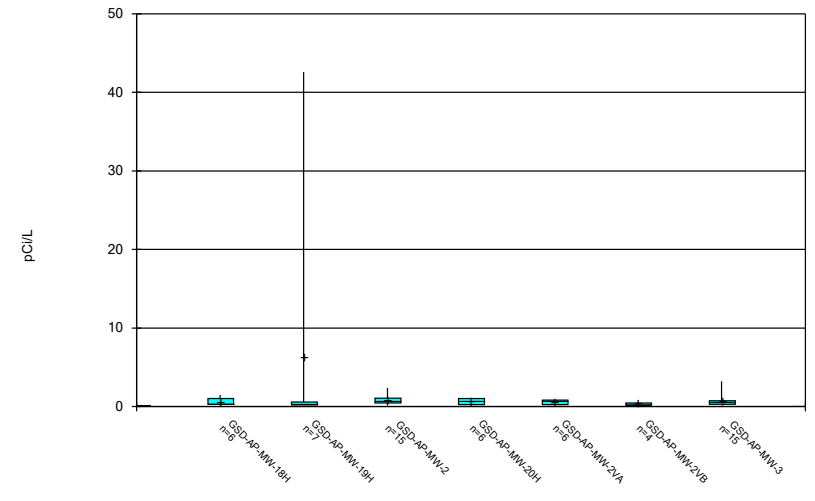
Constituent: Cobalt Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



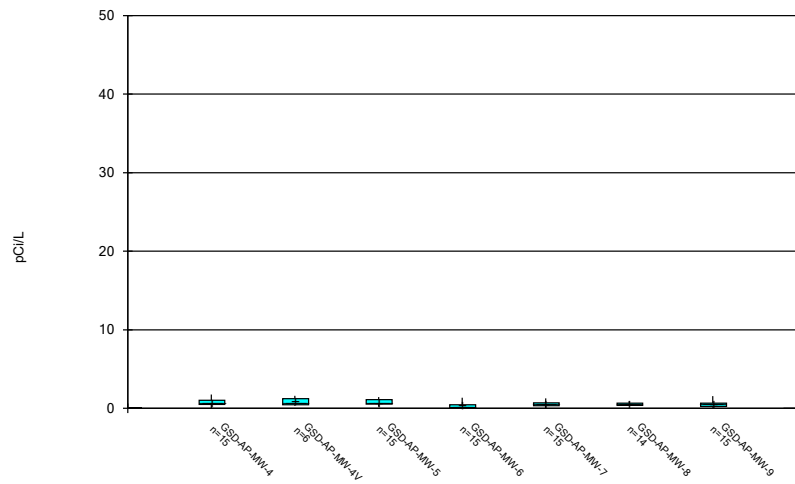
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



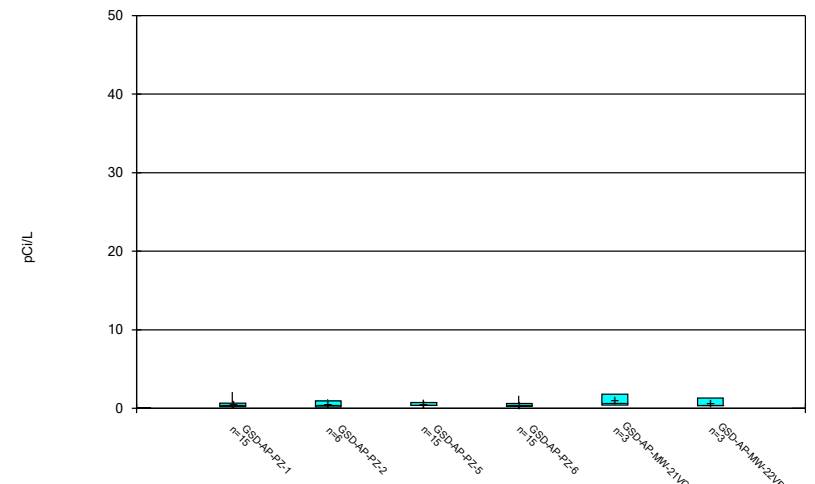
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



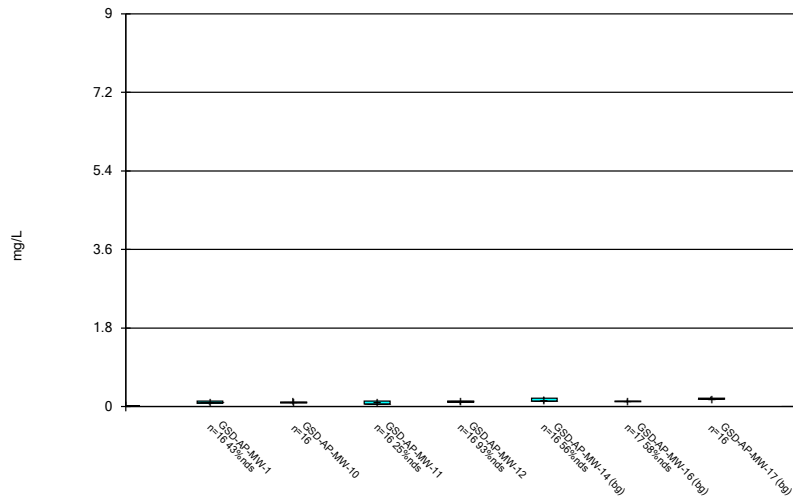
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



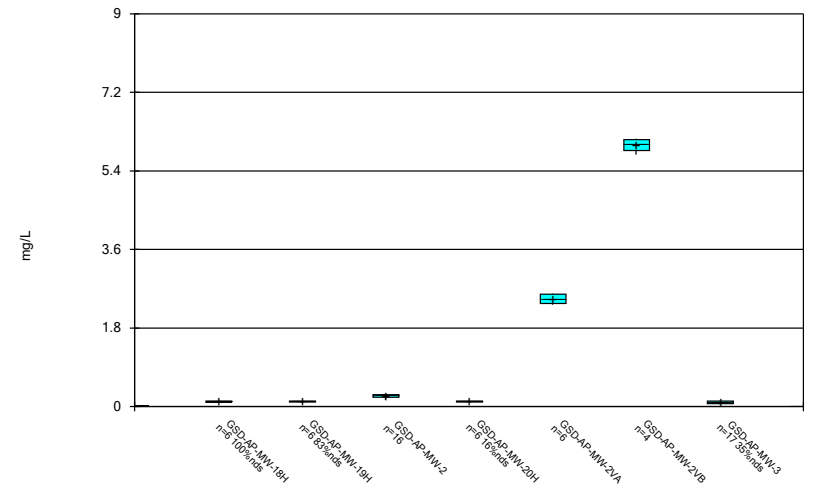
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



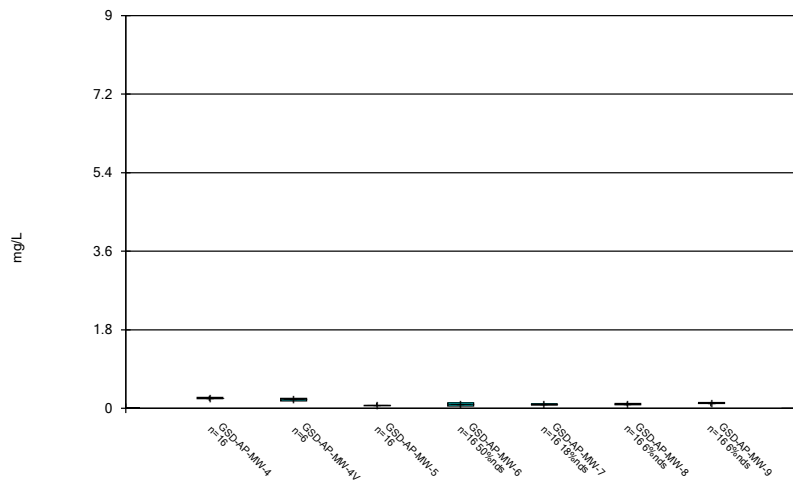
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### Box & Whiskers Plot



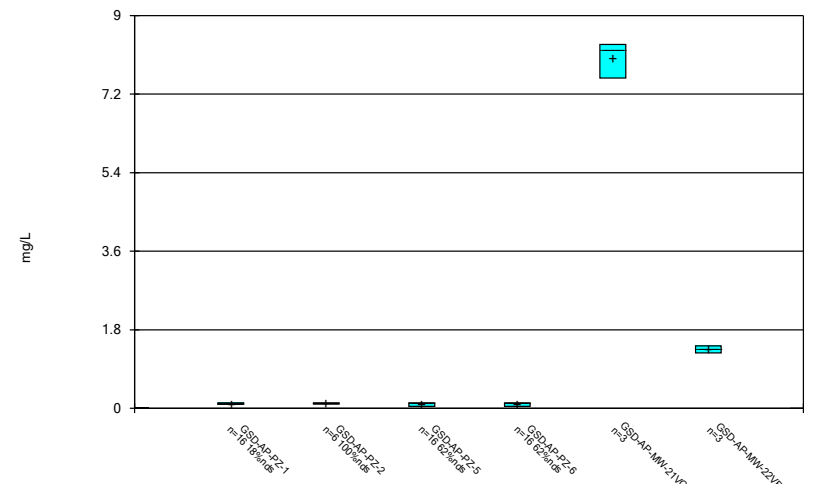
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



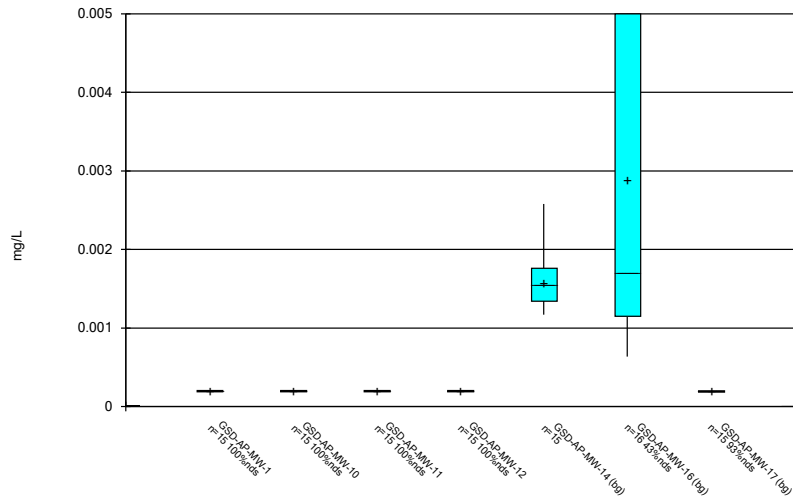
Constituent: Fluoride Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



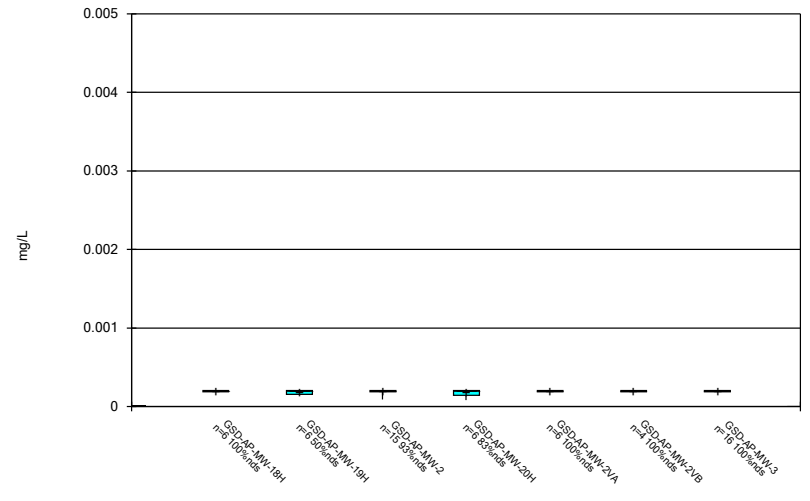
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



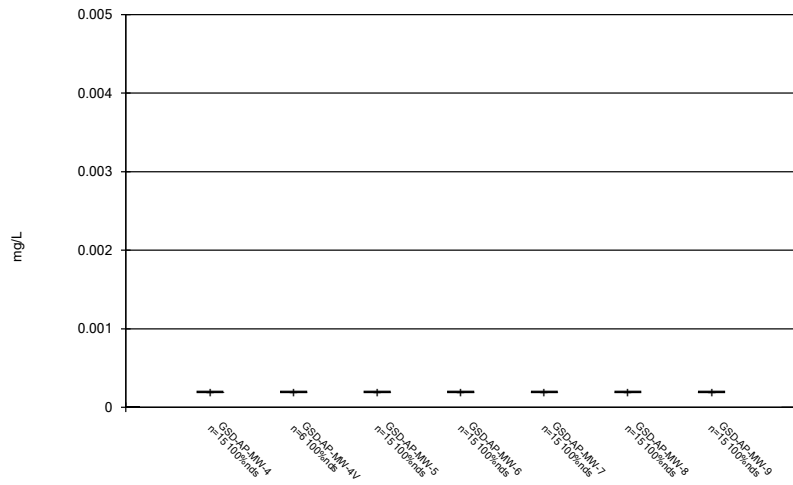
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### Box & Whiskers Plot



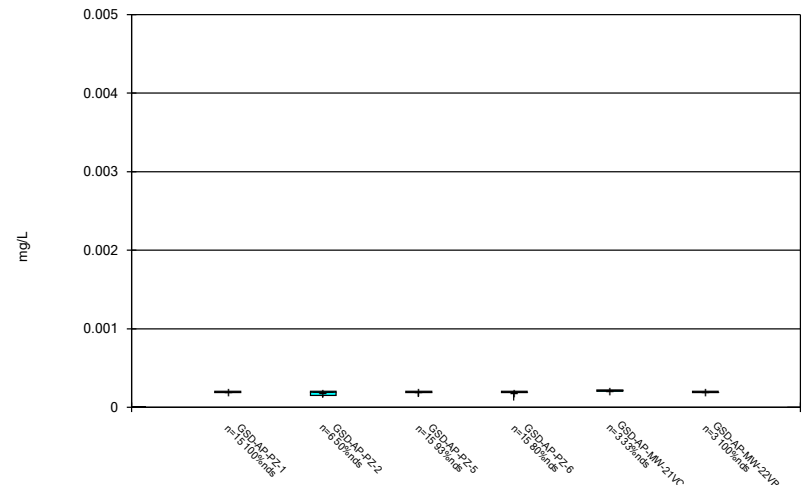
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



Constituent: Lead Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

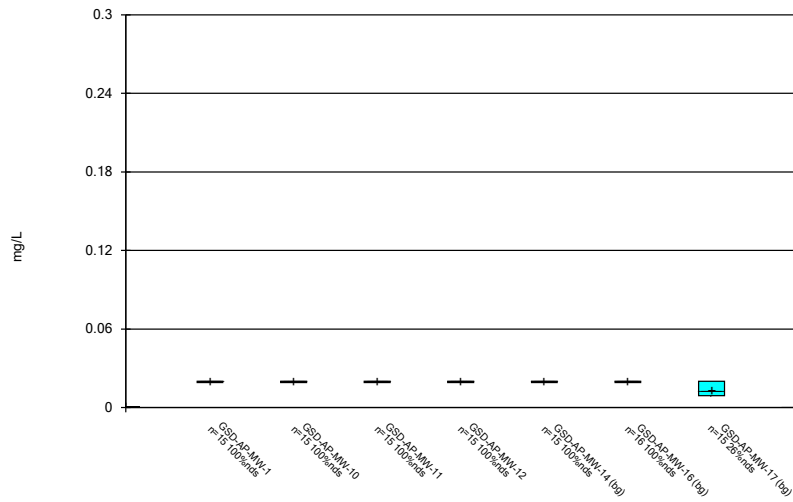
### Box & Whiskers Plot



Constituent: Lead Analysis Run 12/27/2022 6:38 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

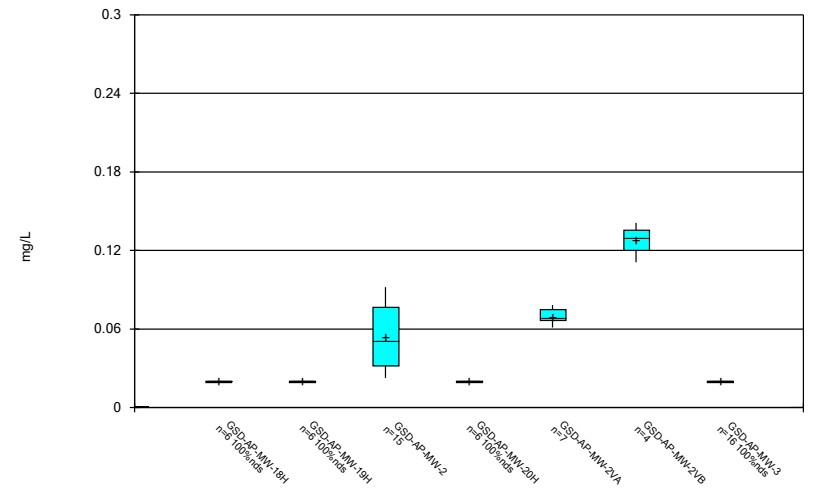


### Box & Whiskers Plot



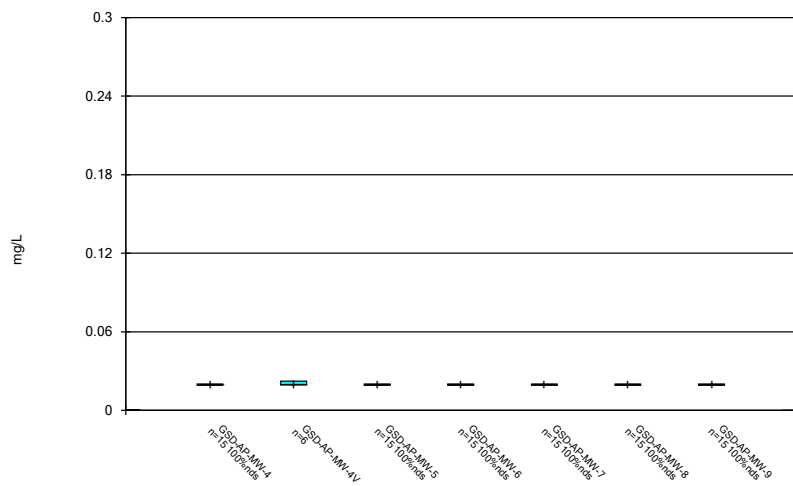
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### Box & Whiskers Plot



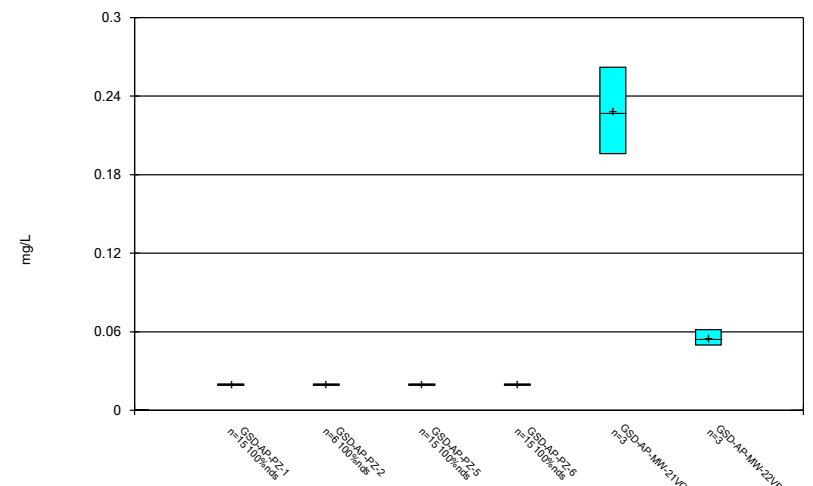
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### Box & Whiskers Plot



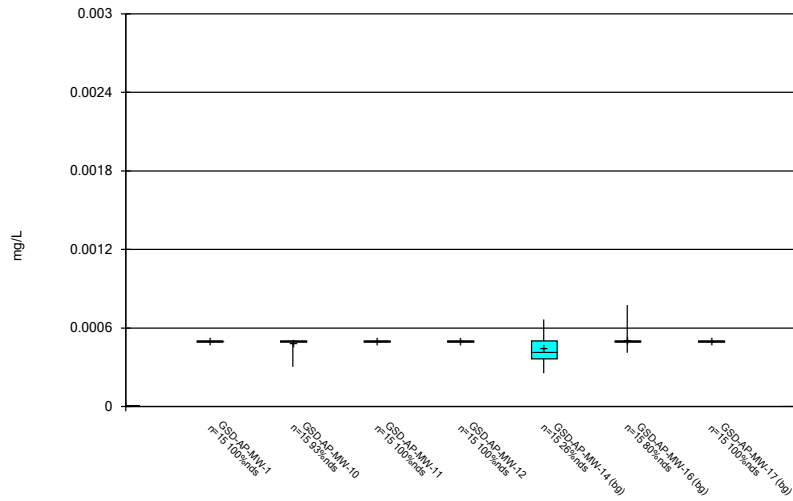
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### Box & Whiskers Plot



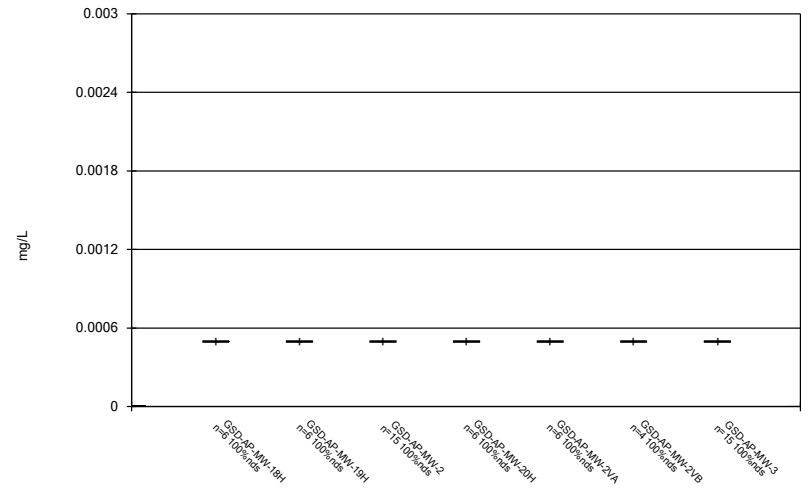
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### Box & Whiskers Plot



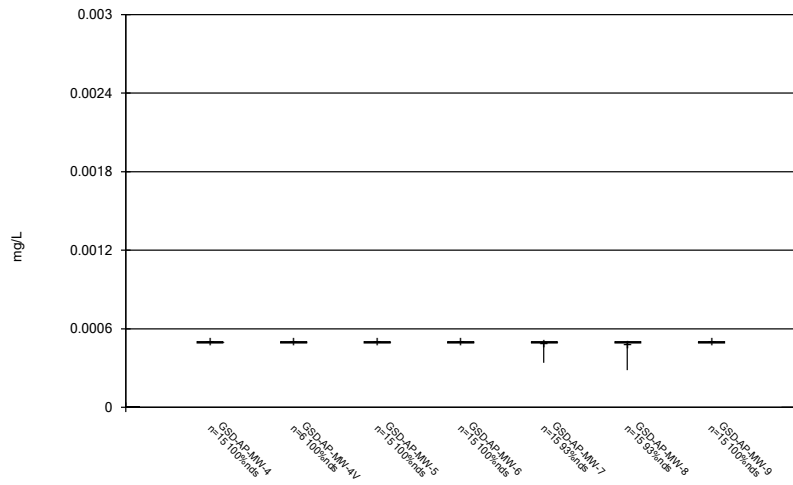
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



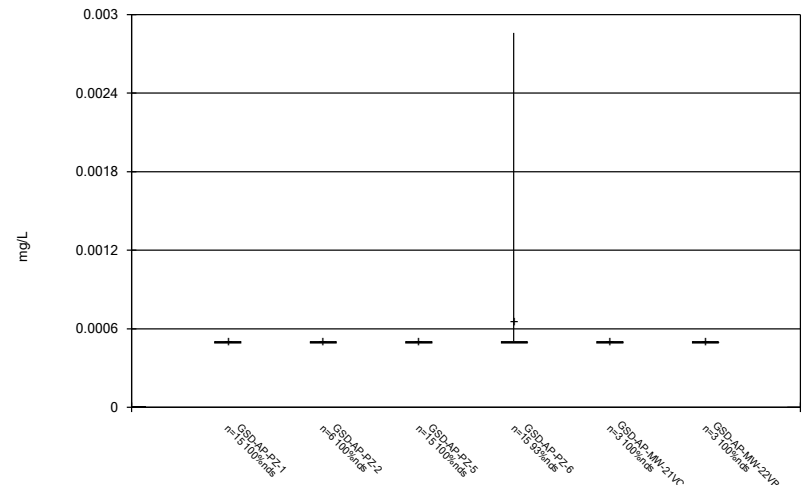
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### Box & Whiskers Plot



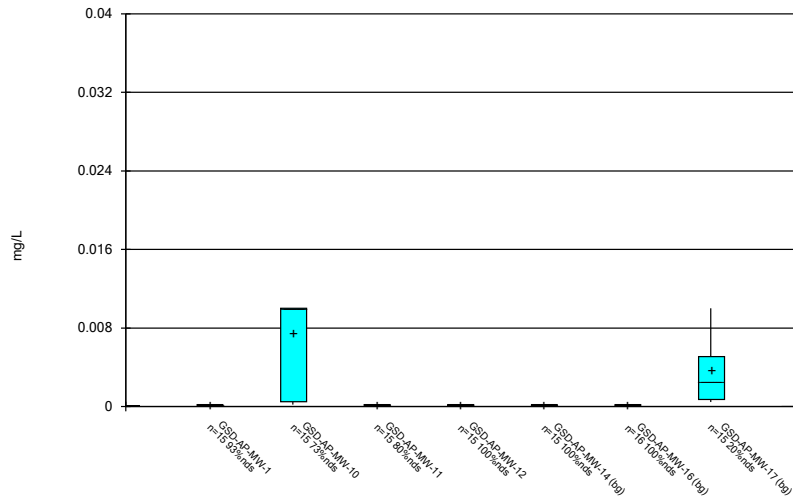
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### Box & Whiskers Plot



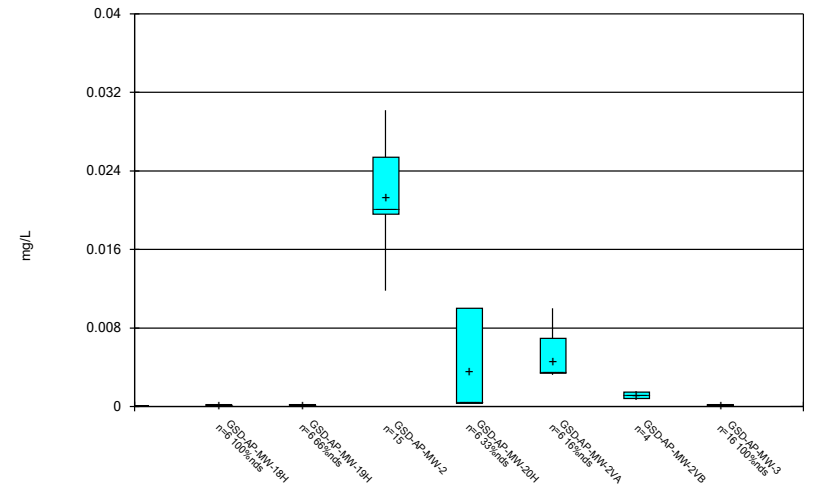
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### Box & Whiskers Plot



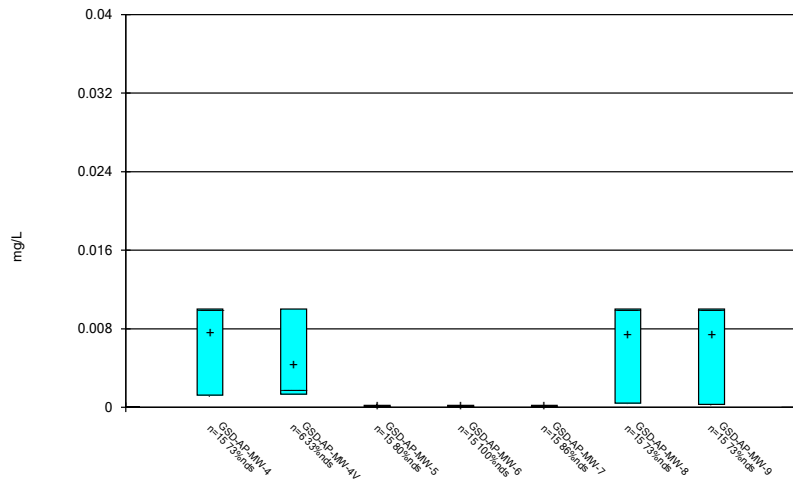
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### Box & Whiskers Plot



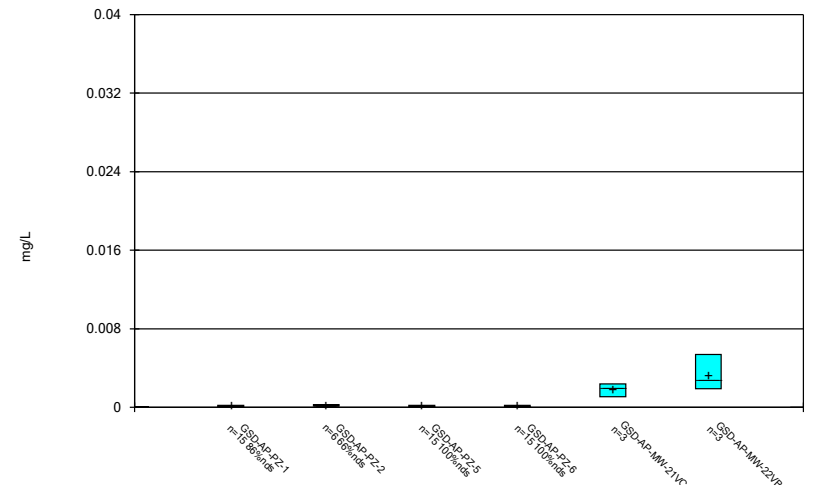
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



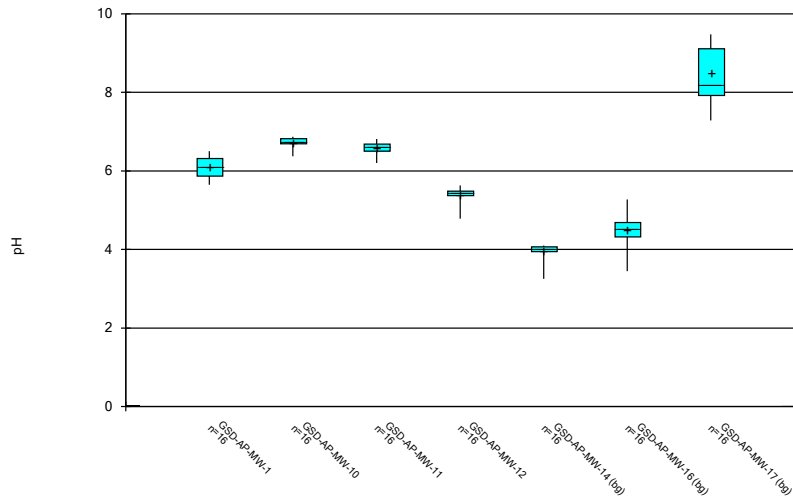
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### Box & Whiskers Plot



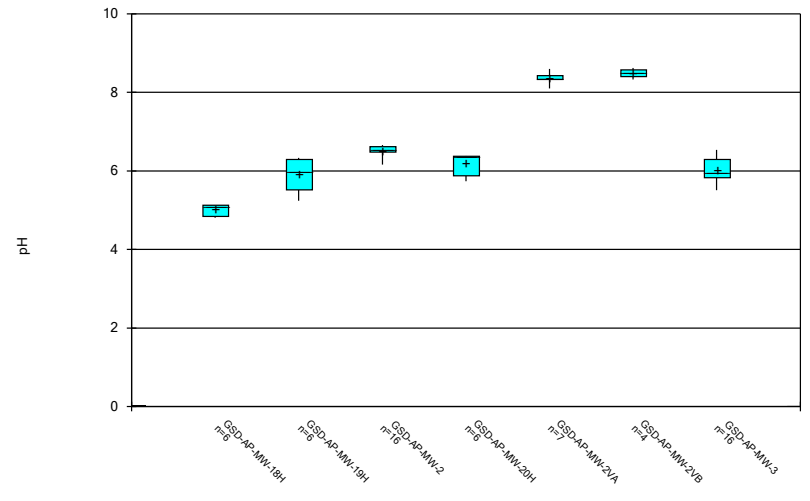
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



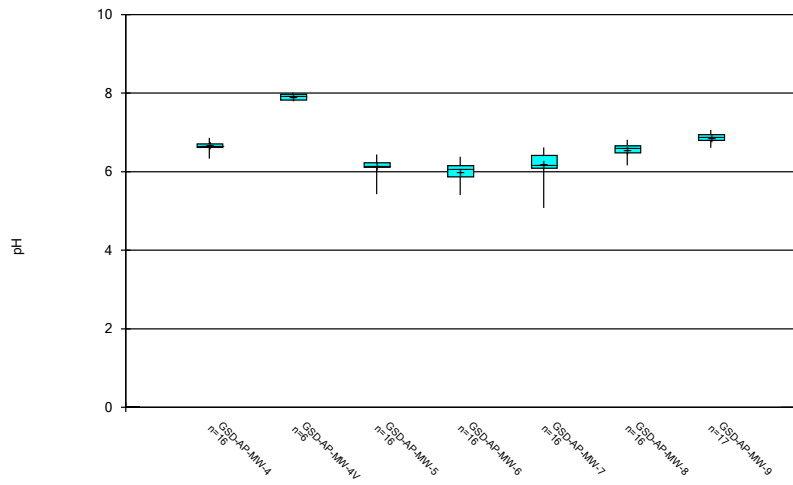
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



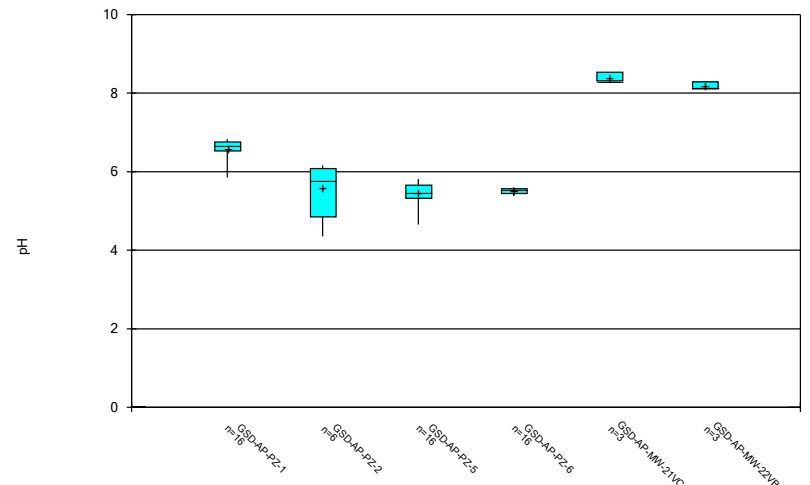
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



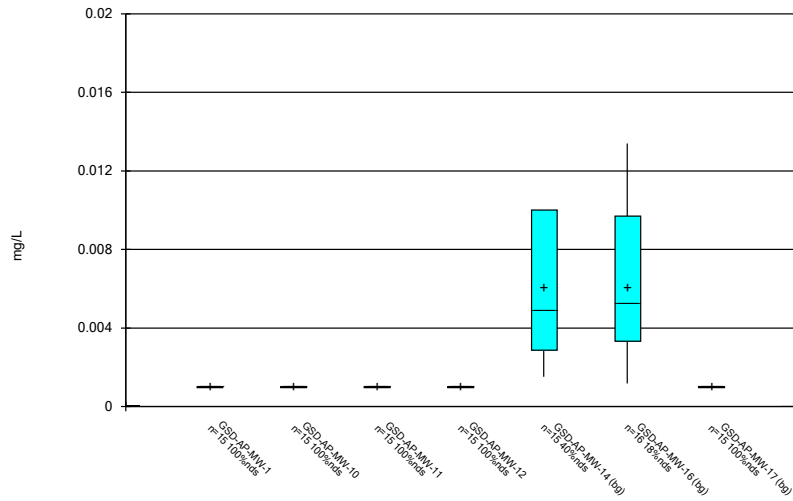
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



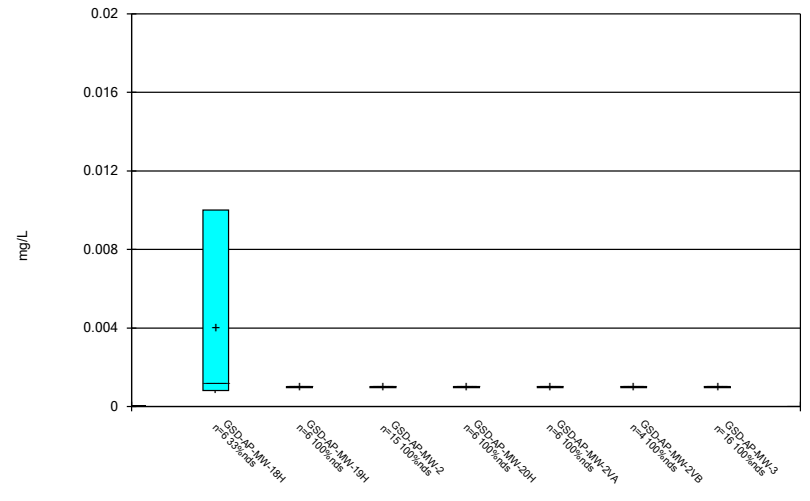
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



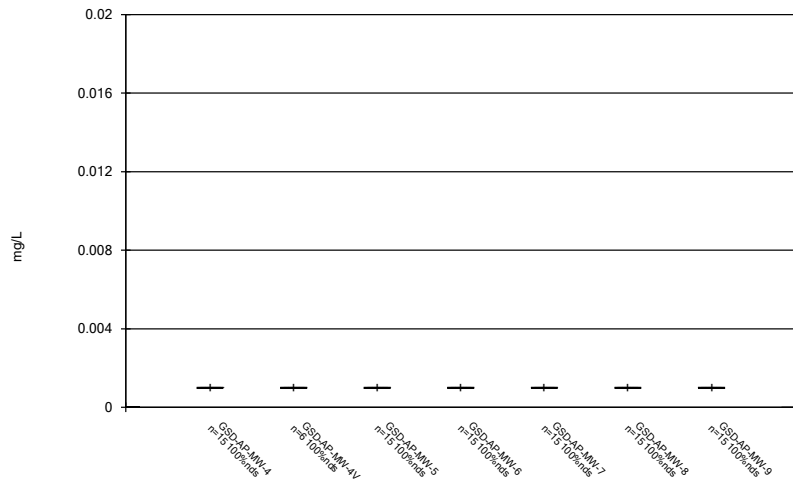
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



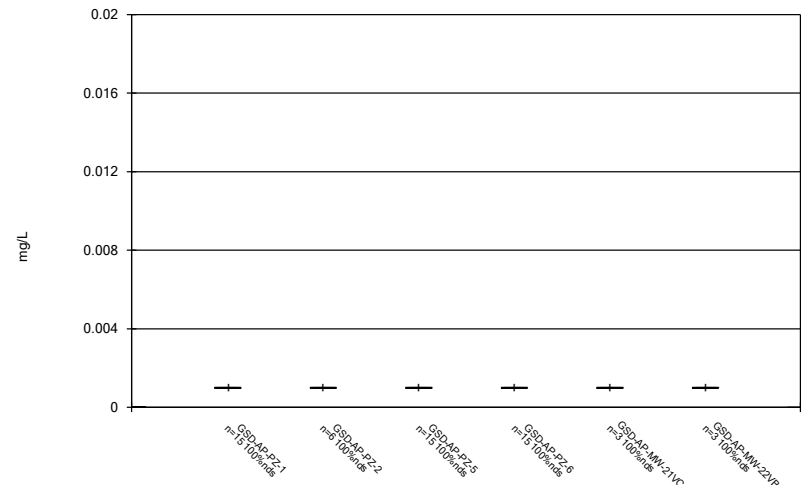
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Box & Whiskers Plot



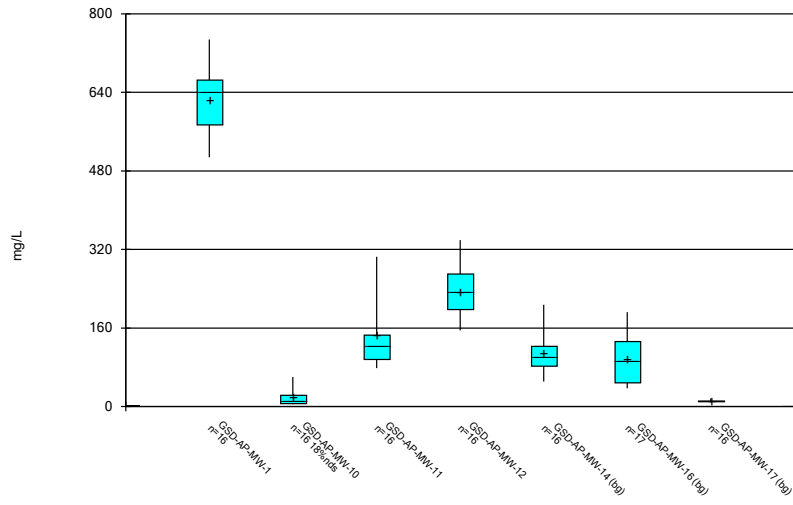
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Box & Whiskers Plot



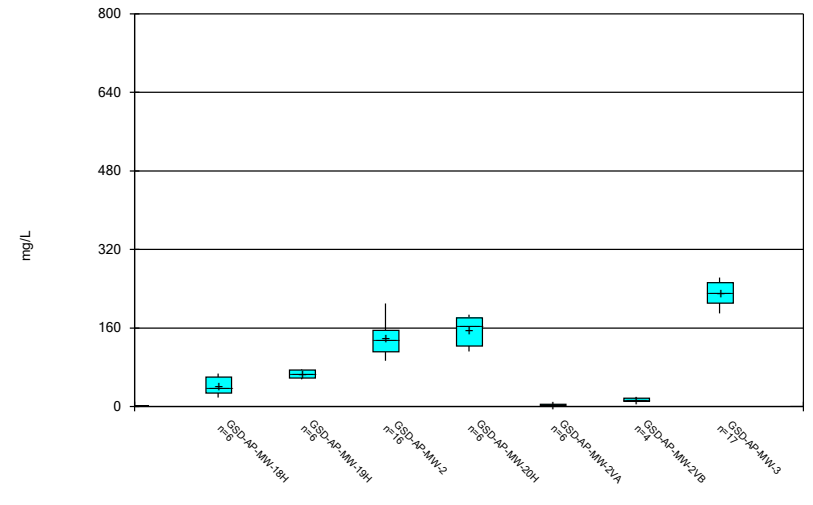
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### Box & Whiskers Plot



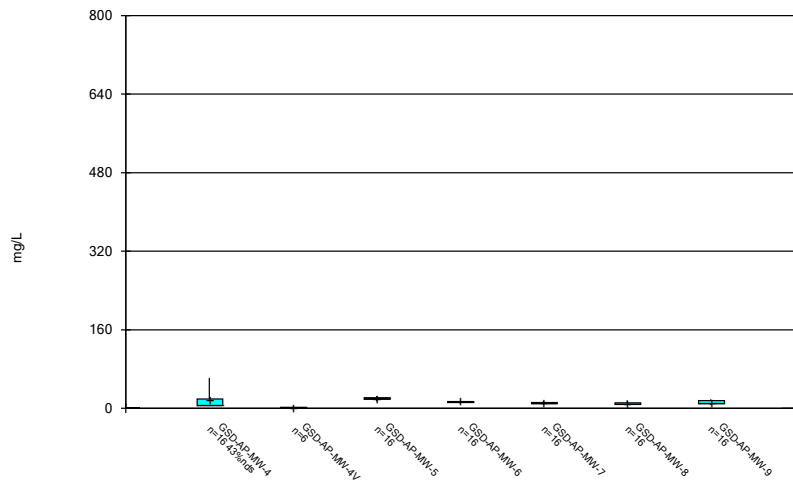
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### Box & Whiskers Plot



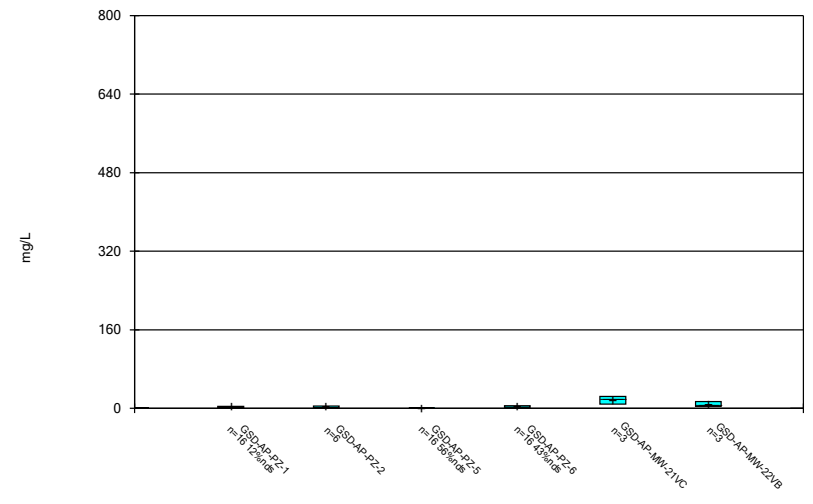
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### Box & Whiskers Plot



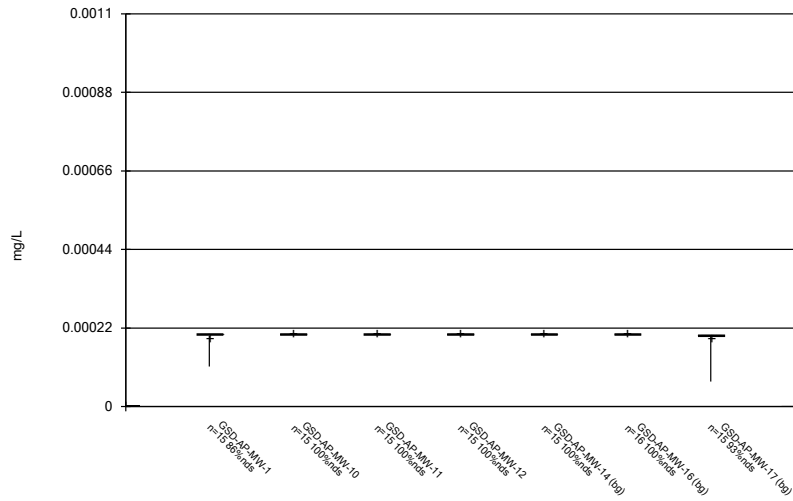
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### Box & Whiskers Plot



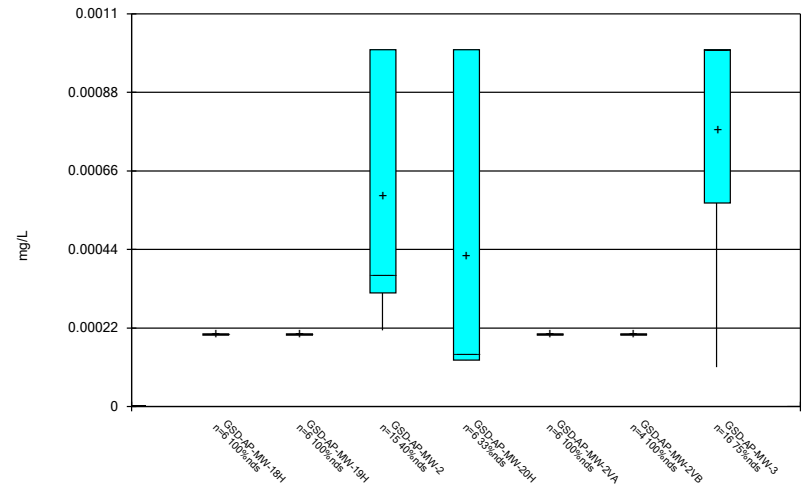
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Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



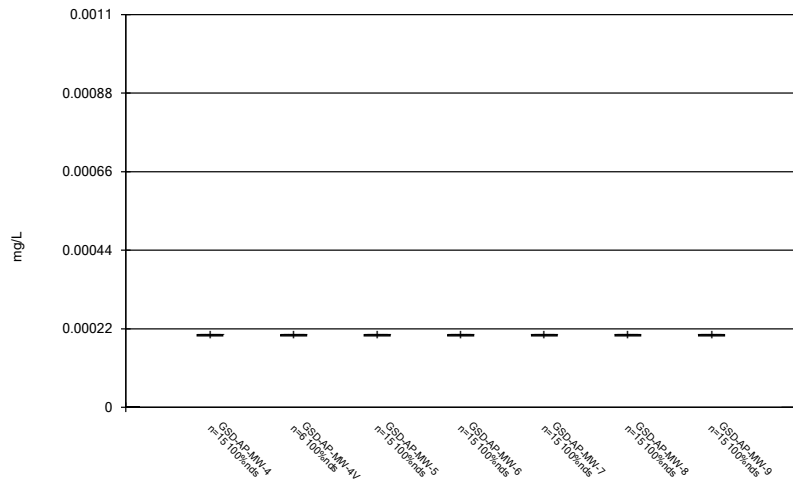
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Box & Whiskers Plot



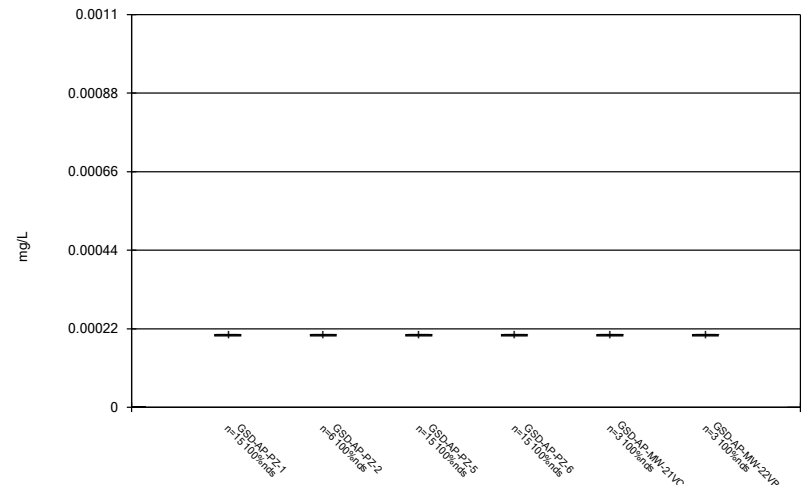
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Box & Whiskers Plot



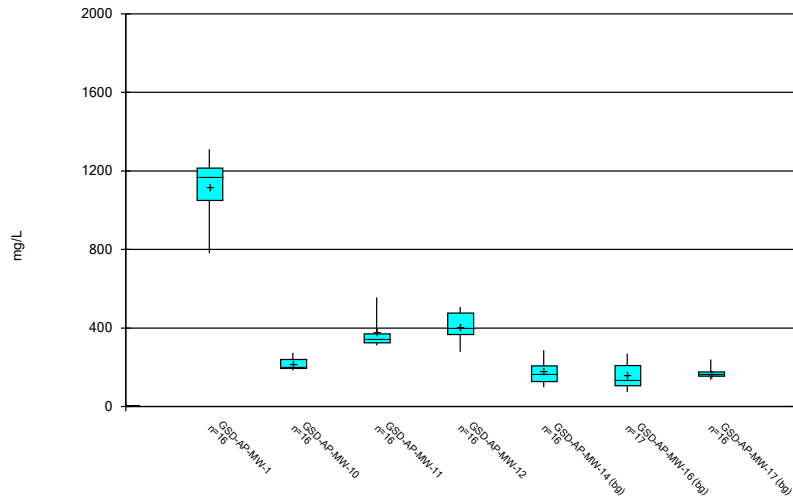
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Box & Whiskers Plot



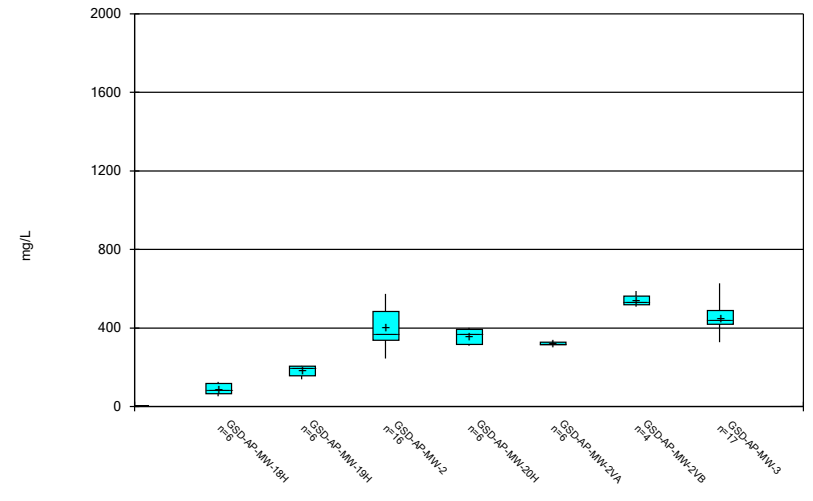
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### Box & Whiskers Plot



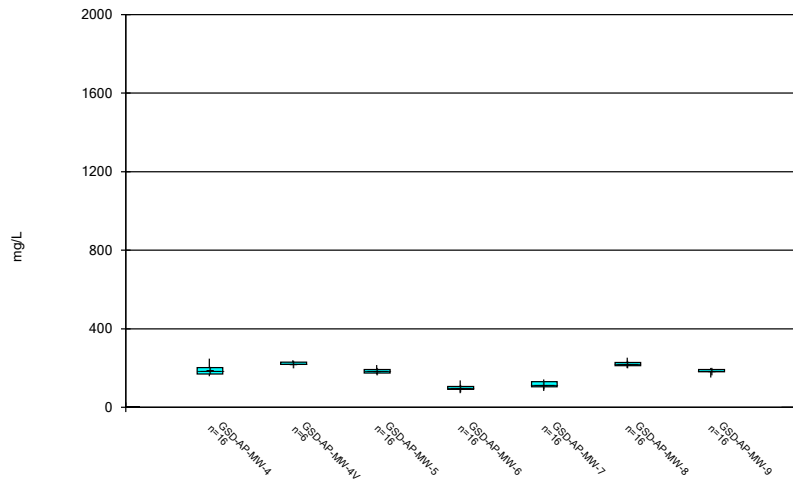
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### Box & Whiskers Plot



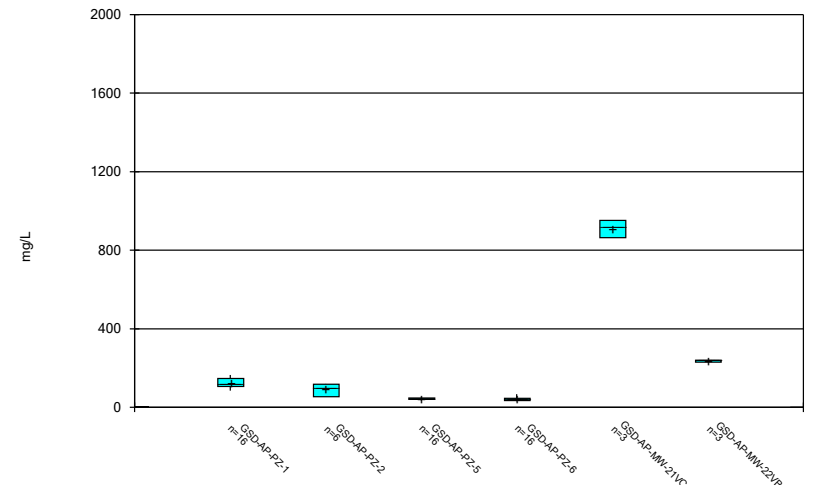
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 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 12/27/2022 6:39 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Box & Whiskers Plot



Constituent: Total Dissolved Solids Analysis Run 12/27/2022 6:39 PM  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR



FIGURE C.

# Outlier Summary

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 12/27/2022, 6:41 PM

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GSD-AP-MW-8 Combined Radium 226 + 228 (pCi/L)

12/7/2017

7.45 (o)

FIGURE D.

# Intrawell Prediction Limits - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 12/27/2022, 6:46 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	N	Bg	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	GSD-AP-MW-7	0.109	n/a	10/26/2022	0.128	Yes	13	0.0755	0.01236	23.08	Kaplan-Meier	No	0.0005016	Param Intra	1 of 2	
pH (pH)	GSD-AP-MW-11	7.012	6.206	10/26/2022	6.2	Yes	13	6.609	0.1486	0	None	No	0.0002508	Param Intra	1 of 2	
pH (pH)	GSD-AP-MW-5	6.352	5.982	10/26/2022	6.44	Yes	13	6.167	0.06836	0	None	No	0.0002508	Param Intra	1 of 2	

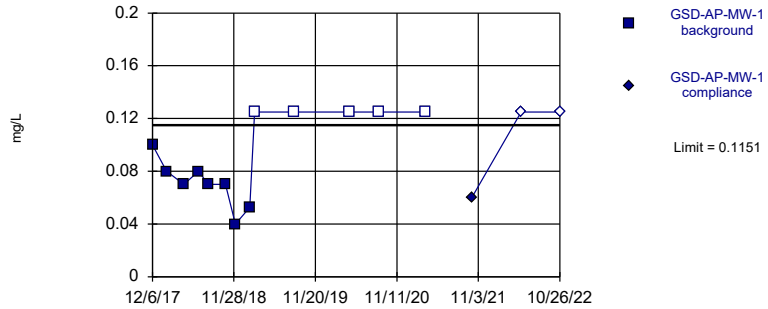
# Intrawell Prediction Limits - All Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 12/27/2022, 6:46 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Fluoride (mg/L)	GSD-AP-MW-1	0.1151	n/a	10/26/2022	0.125ND	No	13	0.06075	0.02003	38.46	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-10	0.1381	n/a	10/26/2022	0.0929J	No	13	0.08731	0.01872	0	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-11	0.1122	n/a	10/26/2022	0.069J	No	13	0.0646	0.01756	23.08	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-12	0.125	n/a	10/26/2022	0.125ND	No	13	n/a	n/a	92.31	n/a	n/a	0.009692	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	GSD-AP-MW-14	0.2947	n/a	10/26/2022	0.125ND	No	13	0.1209	0.06411	46.15	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-16	0.1599	n/a	10/25/2022	0.125ND	No	14	0.1026	0.02163	50	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-17	0.2376	n/a	10/25/2022	0.15	No	13	0.1837	0.01989	0	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-2	0.3534	n/a	10/25/2022	0.271	No	13	0.2362	0.04323	0	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-3	0.1359	n/a	10/26/2022	0.125ND	No	14	0.07651	0.02239	28.57	Kaplan-Meier	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-4	0.2837	n/a	10/26/2022	0.283	No	13	0.2314	0.01931	0	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-5	0.08126	n/a	10/26/2022	0.0845J	No	13	0.05878	0.008293	0	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-6	0.09393	n/a	10/26/2022	0.125ND	No	13	0.3704	0.03104	38.46	Kaplan-Meier	x^(1/3)	0.0005016	Param Intra 1 of 2
<b>Fluoride (mg/L)</b>	<b>GSD-AP-MW-7</b>	<b>0.109</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>0.128</b>	<b>Yes</b>	<b>13</b>	<b>0.0755</b>	<b>0.01236</b>	<b>23.08</b>	<b>Kaplan-Meier</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Intra 1 of 2</b>
Fluoride (mg/L)	GSD-AP-MW-8	0.1549	n/a	10/26/2022	0.0911J	No	13	0.09159	0.02334	7.692	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-MW-9	0.1718	n/a	10/26/2022	0.119J	No	13	0.01358	0.00588	7.692	None	x^2	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-PZ-1	0.1638	n/a	10/26/2022	0.125ND	No	13	0.109	0.02021	7.692	None	No	0.0005016	Param Intra 1 of 2
Fluoride (mg/L)	GSD-AP-PZ-5	0.125	n/a	10/26/2022	0.125ND	No	13	n/a	n/a	53.85	n/a	n/a	0.009692	NP Intra (NDs) 1 of 2
Fluoride (mg/L)	GSD-AP-PZ-6	0.125	n/a	10/26/2022	0.125ND	No	13	n/a	n/a	53.85	n/a	n/a	0.009692	NP Intra (NDs) 1 of 2
pH (pH)	GSD-AP-MW-1	6.84	5.503	10/26/2022	5.86	No	13	6.172	0.2466	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-10	7.042	6.384	10/26/2022	6.84	No	13	2060	147.3	0	None	x^4	0.0002508	Param Intra 1 of 2
<b>pH (pH)</b>	<b>GSD-AP-MW-11</b>	<b>7.012</b>	<b>6.206</b>	<b>10/26/2022</b>	<b>6.2</b>	<b>Yes</b>	<b>13</b>	<b>6.609</b>	<b>0.1486</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0002508</b>	<b>Param Intra 1 of 2</b>
pH (pH)	GSD-AP-MW-12	5.692	5.209	10/26/2022	5.52	No	13	5.451	0.08911	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-14	4.1	3.25	10/26/2022	4.07	No	13	n/a	n/a	0	n/a	n/a	0.01938	NP Intra (normality) 1 of 2
pH (pH)	GSD-AP-MW-16	5.683	3.348	10/25/2022	4.64	No	13	4.515	0.4307	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-17	10.35	6.943	10/25/2022	7.97	No	13	8.645	0.6277	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-2	6.801	6.273	10/25/2022	6.64	No	13	6.537	0.09742	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-3	6.88	5.224	10/26/2022	5.97	No	13	6.052	0.3053	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-4	6.998	6.332	10/26/2022	6.67	No	13	6.665	0.1229	0	None	No	0.0002508	Param Intra 1 of 2
<b>pH (pH)</b>	<b>GSD-AP-MW-5</b>	<b>6.352</b>	<b>5.982</b>	<b>10/26/2022</b>	<b>6.44</b>	<b>Yes</b>	<b>13</b>	<b>6.167</b>	<b>0.06836</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0002508</b>	<b>Param Intra 1 of 2</b>
pH (pH)	GSD-AP-MW-6	6.703	5.385	10/26/2022	5.98	No	13	6.044	0.243	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-7	6.847	5.694	10/26/2022	6.44	No	13	6.271	0.2126	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-8	7.032	6.084	10/26/2022	6.68	No	13	6.558	0.1748	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-MW-9	7.152	6.581	10/26/2022	7.07	No	14	6.866	0.1077	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-PZ-1	6.83	5.85	10/26/2022	6.66	No	13	n/a	n/a	0	n/a	n/a	0.01938	NP Intra (normality) 1 of 2
pH (pH)	GSD-AP-PZ-5	6.328	4.632	10/26/2022	5.31	No	13	5.48	0.3127	0	None	No	0.0002508	Param Intra 1 of 2
pH (pH)	GSD-AP-PZ-6	5.699	5.348	10/26/2022	5.43	No	13	5.523	0.06473	0	None	No	0.0002508	Param Intra 1 of 2

Within Limit

Prediction Limit  
Intrawell Parametric

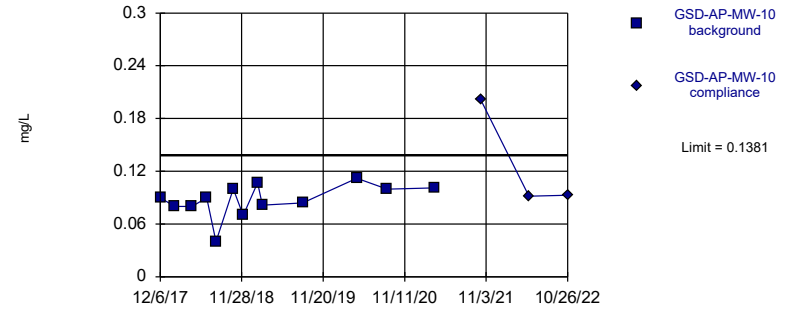


Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.06075, Std. Dev.=0.02003, n=13, 38.46% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8592, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: Fluoride Analysis Run 12/27/2022 6:43 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit  
Intrawell Parametric

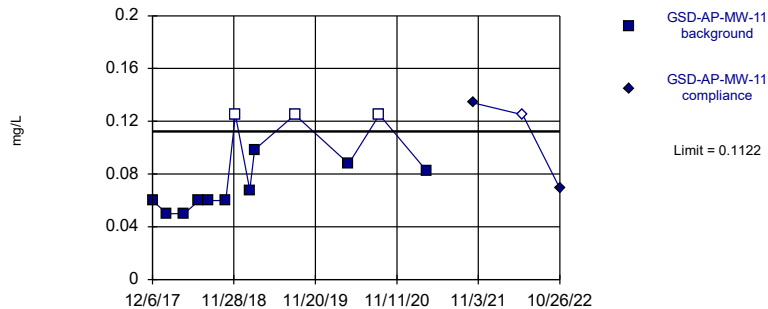


Background Data Summary: Mean=0.08731, Std. Dev.=0.01872, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9056, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: Fluoride Analysis Run 12/27/2022 6:43 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit  
Intrawell Parametric

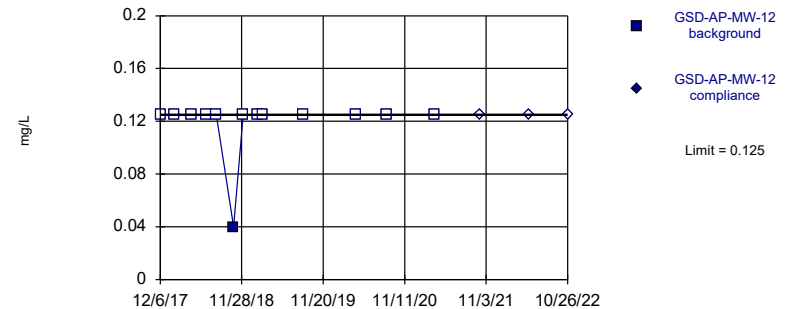


Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.0646, Std. Dev.=0.01756, n=13, 23.08% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8376, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: Fluoride Analysis Run 12/27/2022 6:43 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit  
Intrawell Non-parametric



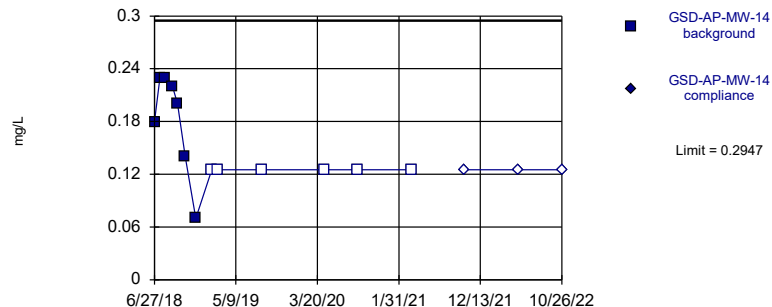
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 13 background values. 92.31% NDs. Well-constituent pair annual alpha = 0.01929. Individual comparison alpha = 0.009692 (1 of 2).

Constituent: Fluoride Analysis Run 12/27/2022 6:43 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

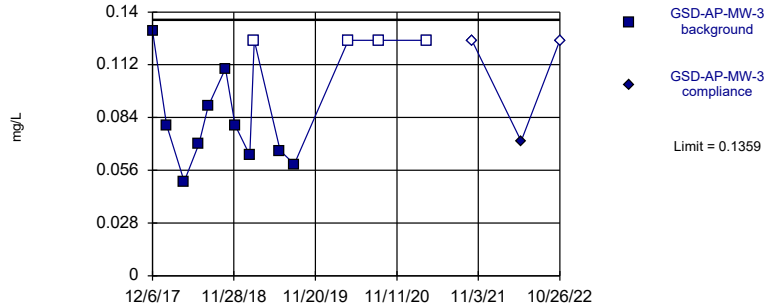
Prediction Limit

Intrawell Parametric



Within Limit

Prediction Limit  
Intrawell Parametric

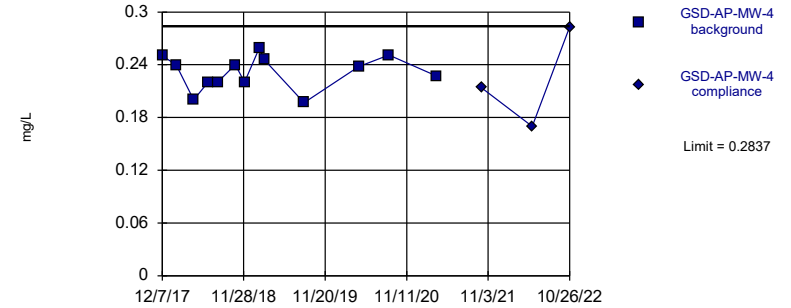


Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.07651, Std. Dev.=0.02239, n=14, 28.57% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8712, critical = 0.825. Kappa = 2.651 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: Fluoride Analysis Run 12/27/2022 6:43 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

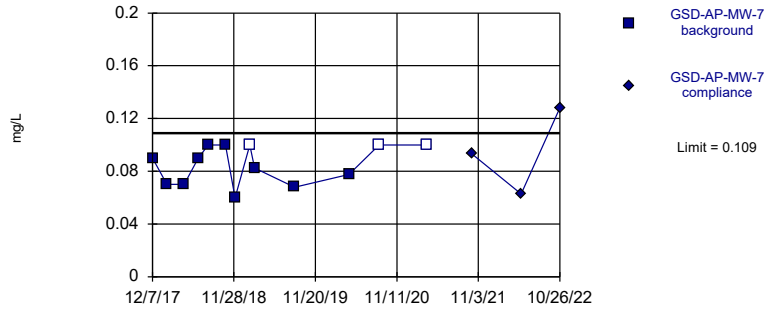
Prediction Limit  
Intrawell Parametric





Exceeds Limit

Prediction Limit  
Intrawell Parametric

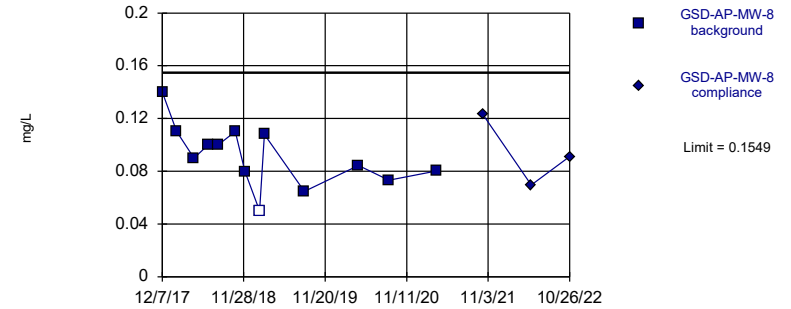


Background Data Summary (after Kaplan-Meier Adjustment): Mean=0.0755, Std. Dev.=0.01236, n=13, 23.08% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8606, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: Fluoride Analysis Run 12/27/2022 6:43 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit  
Intrawell Parametric

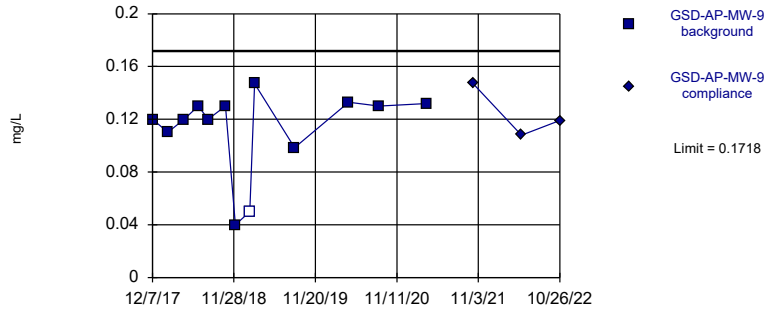


Background Data Summary: Mean=0.09159, Std. Dev.=0.02334, n=13, 7.692% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9776, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: Fluoride Analysis Run 12/27/2022 6:43 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit  
Intrawell Parametric

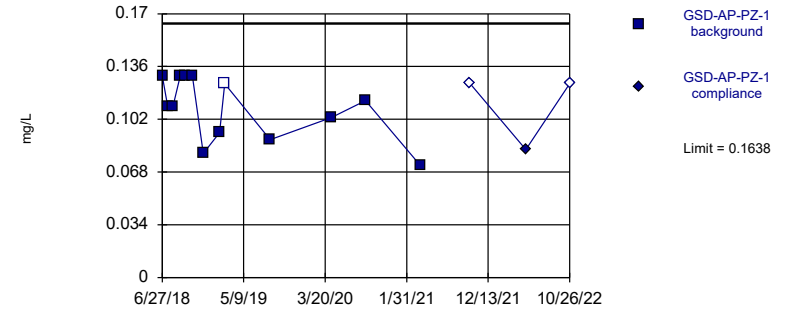


Background Data Summary (based on square transformation): Mean=0.01358, Std. Dev.=0.00588, n=13, 7.692% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8582, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: Fluoride Analysis Run 12/27/2022 6:43 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit  
Intrawell Parametric

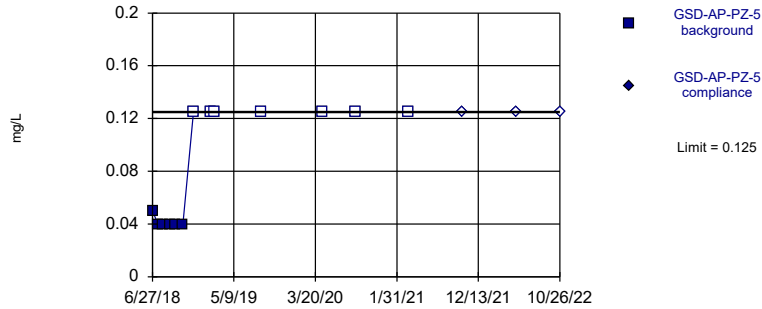


Background Data Summary: Mean=0.109, Std. Dev.=0.02021, n=13, 7.692% NDs. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8946, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: Fluoride Analysis Run 12/27/2022 6:43 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit  
Intrawell Non-parametric

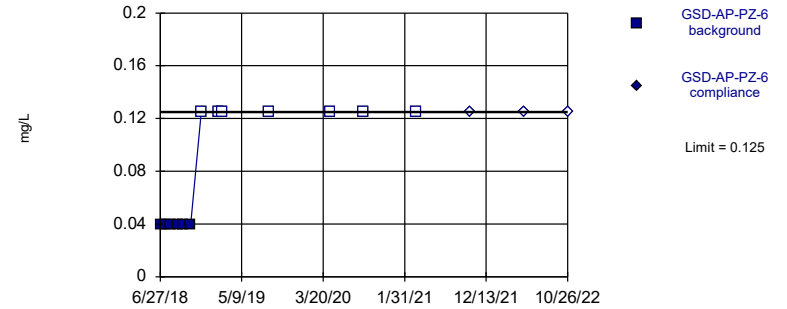


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 13 background values. 53.85% NDs. Well-constituent pair annual alpha = 0.01929. Individual comparison alpha = 0.009692 (1 of 2).

Constituent: Fluoride Analysis Run 12/27/2022 6:43 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limit

Prediction Limit  
Intrawell Non-parametric

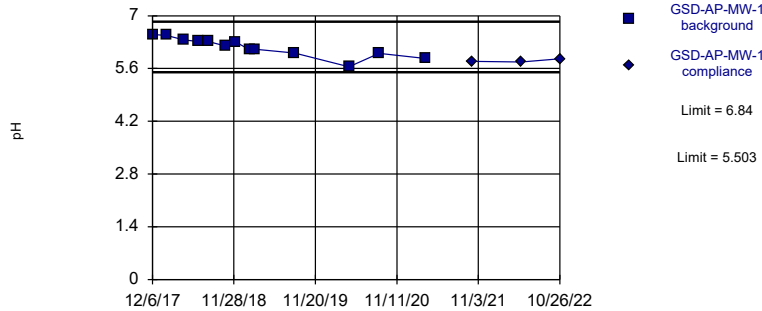


Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 13 background values. 53.85% NDs. Well-constituent pair annual alpha = 0.01929. Individual comparison alpha = 0.009692 (1 of 2).

Constituent: Fluoride Analysis Run 12/27/2022 6:43 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

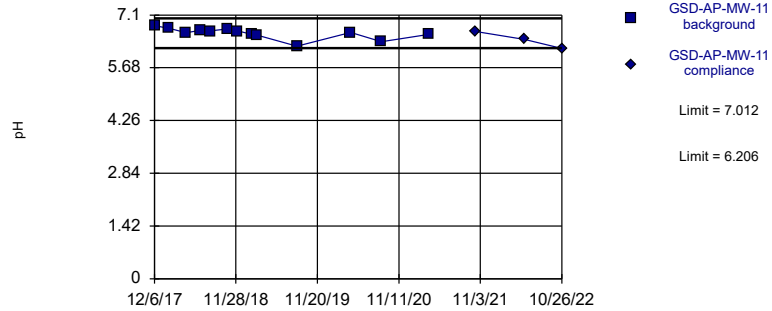
Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=

Exceeds Limits

Prediction Limit  
Intrawell Parametric

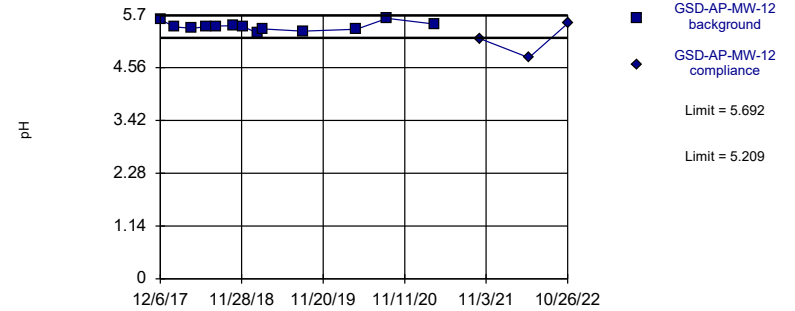


Background Data Summary: Mean=6.609, Std. Dev.=0.1486, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.894, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 12/27/2022 6:44 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit  
Intrawell Parametric

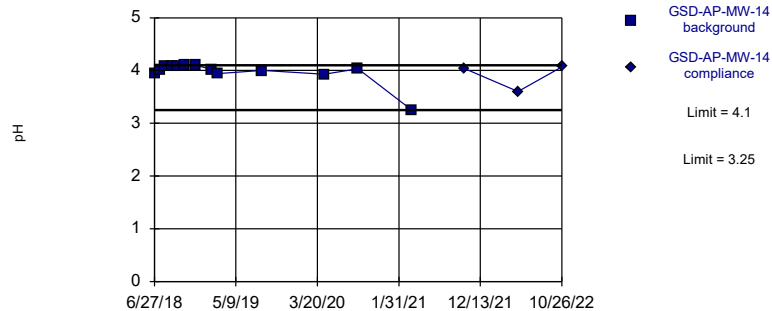


Background Data Summary: Mean=5.451, Std. Dev.=0.08911, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.939, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 12/27/2022 6:44 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit  
Intrawell Non-parametric

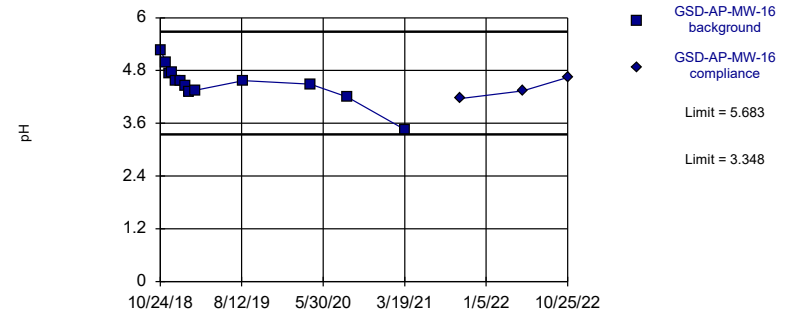


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 13 background values. Well-constituent pair annual alpha = 0.03858. Individual comparison alpha = 0.01938 (1 of 2).

Constituent: pH Analysis Run 12/27/2022 6:44 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit  
Intrawell Parametric



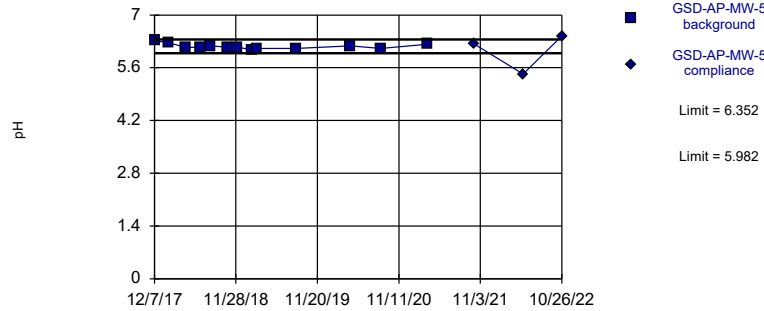
Background Data Summary: Mean=4.515, Std. Dev.=0.4307, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9225, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 12/27/2022 6:44 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR



Exceeds Limits

Prediction Limit  
Intrawell Parametric

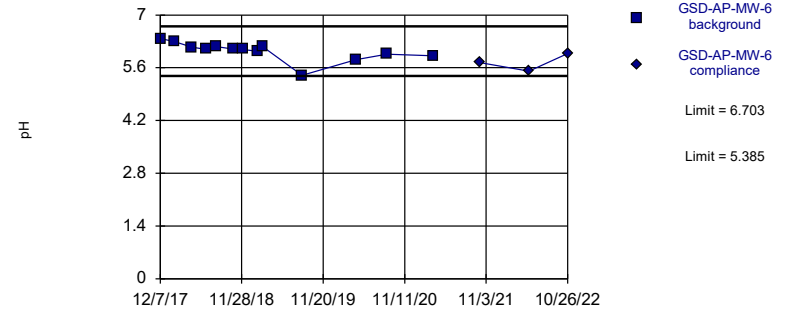


Background Data Summary: Mean=6.167, Std. Dev.=0.06836, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9003, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 12/27/2022 6:44 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit  
Intrawell Parametric

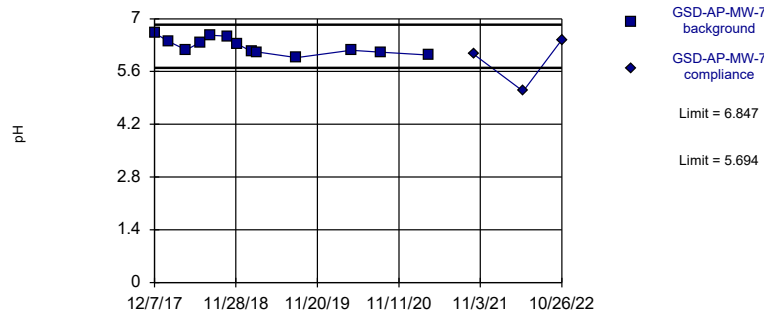


Background Data Summary: Mean=6.044, Std. Dev.=0.243, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8773, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 12/27/2022 6:44 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit  
Intrawell Parametric

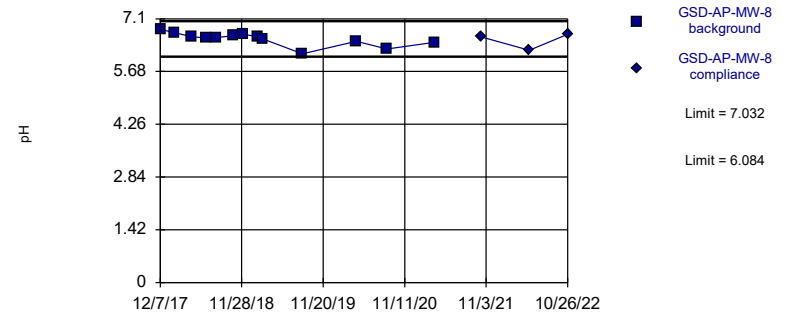


Background Data Summary: Mean=6.271, Std. Dev.=0.2126, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9235, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 12/27/2022 6:44 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit  
Intrawell Parametric

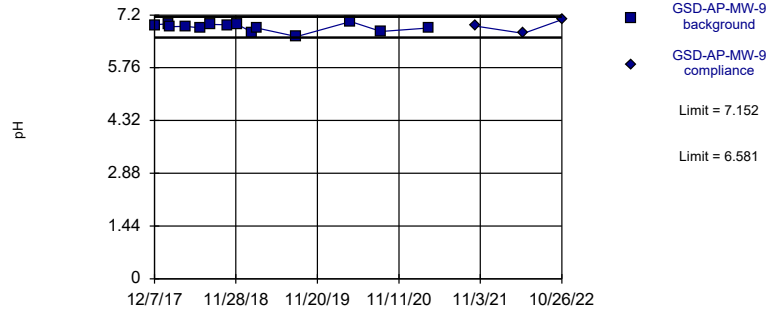


Background Data Summary: Mean=6.558, Std. Dev.=0.1748, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.913, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 12/27/2022 6:44 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit  
Intrawell Parametric

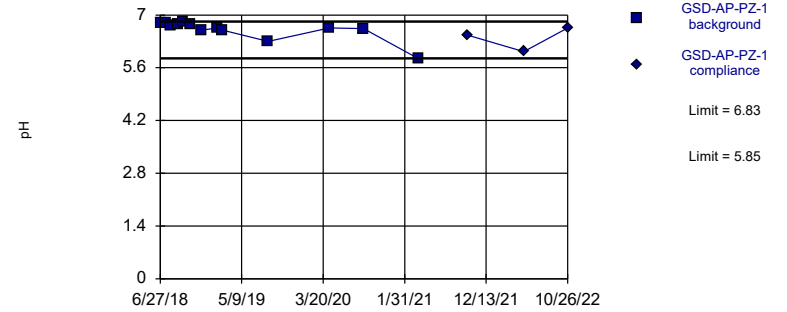


Background Data Summary: Mean=6.866, Std. Dev.=0.1077, n=14. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9109, critical = 0.825. Kappa = 2.651 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 12/27/2022 6:44 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit  
Intrawell Non-parametric

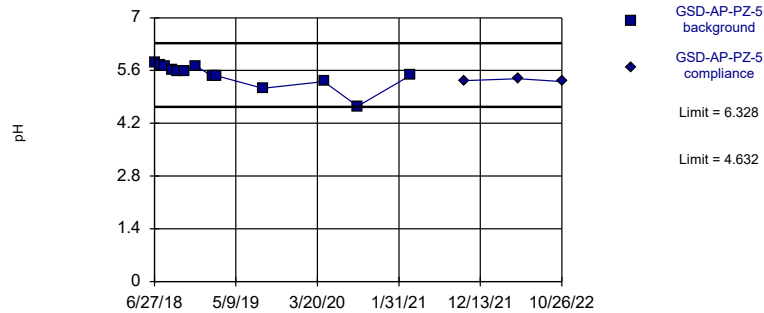


Non-parametric test used in lieu of parametric prediction limit because the Shapiro Wilk normality test showed the data to be non-normal at the 0.01 alpha level. Limits are highest and lowest of 13 background values. Well-constituent pair annual alpha = 0.03858. Individual comparison alpha = 0.01938 (1 of 2).

Constituent: pH Analysis Run 12/27/2022 6:44 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit  
Intrawell Parametric

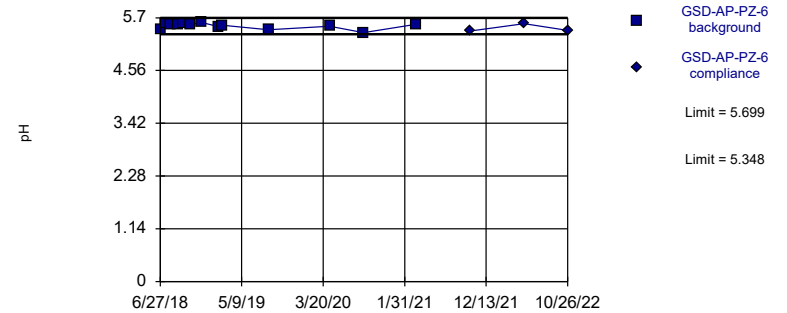


Background Data Summary: Mean=5.48, Std. Dev.=0.3127, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8416, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 12/27/2022 6:44 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Within Limits

Prediction Limit  
Intrawell Parametric



Background Data Summary: Mean=5.523, Std. Dev.=0.06473, n=13. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.8711, critical = 0.814. Kappa = 2.711 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.0005016.

Constituent: pH Analysis Run 12/27/2022 6:44 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-1
12/6/2017	0.1	
2/6/2018	0.08 (J)	
4/23/2018	0.07 (J)	
6/26/2018	0.08 (J)	
8/7/2018	0.07 (J)	
10/22/2018	0.07 (J)	
12/4/2018	0.04 (J)	
2/5/2019	0.0525 (J)	
2/26/2019	<0.125	
8/21/2019	<0.125	
4/15/2020	<0.125	
8/25/2020	<0.125	
3/16/2021	<0.125	
10/5/2021		0.0601 (J)
5/10/2022		<0.125
10/26/2022		<0.125

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-10	GSD-AP-MW-10
12/6/2017	0.09 (J)	
2/7/2018	0.08 (J)	
4/24/2018	0.08 (J)	
6/27/2018	0.09 (J)	
8/7/2018	0.04 (J)	
10/22/2018	0.1	
12/4/2018	0.07 (J)	
2/6/2019	0.107	
2/26/2019	0.0813 (J)	
8/22/2019	0.084 (J)	
4/15/2020	0.112	
8/26/2020	0.0997 (J)	
3/23/2021	0.101	
10/11/2021		0.201
5/10/2022		0.0918 (J)
10/26/2022		0.0929 (J)



# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-11	GSD-AP-MW-11
12/6/2017	0.06 (J)	
2/7/2018	0.05 (J)	
4/24/2018	0.05 (J)	
6/27/2018	0.06 (J)	
8/8/2018	0.06 (J)	
10/23/2018	0.06 (J)	
12/4/2018	<0.125	
2/6/2019	0.0678 (J)	
2/27/2019	0.0985 (J)	
8/22/2019	<0.125	
4/14/2020	0.0878 (J)	
8/26/2020	<0.125	
3/23/2021	0.0819 (J)	
10/12/2021		0.134
5/17/2022		<0.125
10/26/2022		0.069 (J)

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-12	GSD-AP-MW-12
12/6/2017	<0.125	
2/8/2018	<0.125	
4/24/2018	<0.125	
6/27/2018	<0.125	
8/8/2018	<0.125	
10/23/2018	0.04 (J)	
12/5/2018	<0.125	
2/6/2019	<0.125	
2/27/2019	<0.125	
8/22/2019	<0.125	
4/14/2020	<0.125	
8/26/2020	<0.125	
3/23/2021	<0.125	
10/5/2021		<0.125
5/10/2022		<0.125
10/26/2022		<0.125

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-14	GSD-AP-MW-14
6/27/2018	0.18	
7/18/2018	0.23	
8/6/2018	0.23	
9/5/2018	0.22	
9/24/2018	0.2	
10/24/2018	0.14	
12/5/2018	0.07 (J)	
2/5/2019	<0.125	
2/28/2019	<0.125	
8/20/2019	<0.125	
4/16/2020	<0.125	
8/25/2020	<0.125	
3/22/2021	<0.125	
10/12/2021		<0.125
5/9/2022		<0.125
10/26/2022		<0.125

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-16	GSD-AP-MW-16
10/24/2018	0.11	
11/14/2018	0.1	
11/28/2018	0.1	
12/5/2018	0.11	
12/18/2018	0.14	
1/3/2019	0.16	
1/24/2019	<0.125	
2/5/2019	<0.125	
2/28/2019	<0.125	
6/24/2019	<0.125 (D)	
8/19/2019	<0.125	
4/15/2020	<0.125	
8/25/2020	0.0863 (J)	
3/22/2021	<0.125	
10/6/2021		<0.125
5/17/2022		<0.125
10/25/2022		<0.125

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-17	GSD-AP-MW-17
10/24/2018	0.23	
11/14/2018	0.2	
11/28/2018	0.19	
12/5/2018	0.19	
12/18/2018	0.15	
1/3/2019	0.19	
1/24/2019	0.168	
2/5/2019	0.192	
2/28/2019	0.182	
8/19/2019	0.187	
4/16/2020	0.166	
8/24/2020	0.163	
3/22/2021	0.18	
10/6/2021		0.175
5/9/2022		0.191
10/25/2022		0.15

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-2	GSD-AP-MW-2
12/6/2017	0.3	
2/6/2018	0.27	
4/23/2018	0.19	
6/27/2018	0.28	
8/7/2018	0.24	
10/22/2018	0.24	
12/4/2018	0.15	
2/5/2019	0.207	
2/26/2019	0.264	
8/20/2019	0.252	
4/15/2020	0.21	
8/25/2020	0.273	
3/24/2021	0.194	
10/11/2021		0.283
5/16/2022		0.264
10/25/2022		0.271

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-3	GSD-AP-MW-3
12/6/2017	0.13	
2/6/2018	0.08 (J)	
4/24/2018	0.05 (J)	
6/27/2018	0.07 (J)	
8/7/2018	0.09 (J)	
10/22/2018	0.11	
12/3/2018	0.08 (J)	
2/5/2019	0.064 (J)	
2/25/2019	<0.125	
6/18/2019	0.0664 (J)	
8/20/2019	0.0592 (J)	
4/13/2020	<0.125	
8/26/2020	<0.125	
3/22/2021	<0.125	
10/5/2021		<0.125
5/10/2022		0.0714 (J)
10/26/2022		<0.125

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-4	GSD-AP-MW-4
12/7/2017	0.25	
2/6/2018	0.24	
4/24/2018	0.2	
6/26/2018	0.22	
8/6/2018	0.22	
10/22/2018	0.24	
12/3/2018	0.22	
2/5/2019	0.259	
2/26/2019	0.246	
8/20/2019	0.197	
4/15/2020	0.238	
8/26/2020	0.251	
3/24/2021	0.227	
10/5/2021		0.214
5/16/2022		0.17
10/26/2022		0.283



# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-5	GSD-AP-MW-5
12/7/2017	0.06 (J)	
2/6/2018	0.05 (J)	
4/25/2018	0.05 (J)	
6/27/2018	0.06 (J)	
8/7/2018	0.06 (J)	
10/23/2018	0.07 (J)	
12/5/2018	0.04 (J)	
2/5/2019	0.0651 (J)	
2/27/2019	0.0578 (J)	
8/20/2019	0.0567 (J)	
4/13/2020	0.0688 (J)	
8/24/2020	0.0607 (J)	
3/16/2021	0.065 (J)	
10/5/2021		0.122
5/9/2022		0.0682 (J)
10/26/2022		0.0845 (J)

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-6	GSD-AP-MW-6
12/7/2017	0.06 (J)	
2/8/2018	0.04 (J)	
4/25/2018	0.04 (J)	
6/26/2018	0.05 (J)	
8/7/2018	0.05 (J)	
10/23/2018	0.06 (J)	
12/3/2018	<0.125	
2/5/2019	0.0581 (J)	
2/26/2019	0.0816 (J)	
8/20/2019	<0.125	
4/13/2020	<0.125	
8/26/2020	<0.125	
3/17/2021	<0.125	
10/5/2021		<0.125
5/10/2022		<0.125
10/26/2022		<0.125

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-7	GSD-AP-MW-7
12/7/2017	0.09 (J)	
2/8/2018	0.07 (J)	
4/25/2018	0.07 (J)	
6/26/2018	0.09 (J)	
8/8/2018	0.1	
10/23/2018	0.1	
12/4/2018	0.06 (J)	
2/6/2019	<0.1	
2/27/2019	0.0824 (J)	
8/21/2019	0.068 (J)	
4/15/2020	0.0775 (J)	
8/26/2020	<0.1	
3/23/2021	<0.1	
10/5/2021		0.0933 (J)
5/10/2022		0.0627 (J)
10/26/2022		0.128

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-8	GSD-AP-MW-8
12/7/2017	0.14	
2/8/2018	0.11	
4/25/2018	0.09 (J)	
6/26/2018	0.1	
8/8/2018	0.1	
10/23/2018	0.11	
12/4/2018	0.08 (J)	
2/6/2019	<0.1	
2/27/2019	0.108	
8/21/2019	0.0648 (J)	
4/14/2020	0.0845 (J)	
8/26/2020	0.0732 (J)	
3/23/2021	0.0802 (J)	
10/12/2021		0.123
5/11/2022		0.0695 (J)
10/26/2022		0.0911 (J)

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-9	GSD-AP-MW-9
12/7/2017	0.12	
2/12/2018	0.11	
4/25/2018	0.12	
6/26/2018	0.13	
8/8/2018	0.12	
10/23/2018	0.13	
12/5/2018	0.04 (J)	
2/6/2019	<0.1	
2/27/2019	0.147	
8/21/2019	0.0984 (J)	
4/14/2020	0.133	
8/26/2020	0.13	
3/23/2021	0.132	
10/12/2021		0.147
5/11/2022		0.108 (J)
10/26/2022		0.119 (J)

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-PZ-1	GSD-AP-PZ-1
6/27/2018	0.13	
7/18/2018	0.11	
8/7/2018	0.11	
9/5/2018	0.13	
9/24/2018	0.13	
10/22/2018	0.13	
12/3/2018	0.08 (J)	
2/5/2019	0.0934 (J)	
2/25/2019	<0.125	
8/20/2019	0.0889 (J)	
4/13/2020	0.103	
8/24/2020	0.114	
3/24/2021	0.0725 (J)	
10/5/2021		<0.125
5/9/2022		0.0824 (J)
10/26/2022		<0.125

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-PZ-5	GSD-AP-PZ-5
6/27/2018	0.05 (J)	
7/18/2018	0.04 (J)	
8/8/2018	0.04 (J)	
9/5/2018	0.04 (J)	
9/24/2018	0.04 (J)	
10/23/2018	0.04 (J)	
12/3/2018	<0.125	
2/7/2019	<0.125	
2/25/2019	<0.125	
8/21/2019	<0.125	
4/15/2020	<0.125	
8/24/2020	<0.125	
3/16/2021	<0.125	
10/12/2021		<0.125
5/10/2022		<0.125
10/26/2022		<0.125

# Prediction Limit

Constituent: Fluoride (mg/L) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intravel  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-6	GSD-AP-PZ-6
6/27/2018	0.04 (J)	
7/18/2018	0.04 (J)	
8/8/2018	0.04 (J)	
9/5/2018	0.04 (J)	
9/24/2018	0.04 (J)	
10/23/2018	0.04 (J)	
12/3/2018	<0.125	
2/7/2019	<0.125	
2/25/2019	<0.125	
8/21/2019	<0.125	
4/15/2020	<0.125	
8/24/2020	<0.125	
3/16/2021	<0.125	
10/12/2021		<0.125
5/10/2022		<0.125
10/26/2022		<0.125



# Prediction Limit

Constituent: pH (pH) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-1	GSD-AP-MW-1
12/6/2017	6.5	
2/6/2018	6.48	
4/23/2018	6.36	
6/26/2018	6.32	
8/7/2018	6.32	
10/22/2018	6.2	
12/4/2018	6.31	
2/5/2019	6.1	
2/26/2019	6.11	
8/21/2019	6.01	
4/15/2020	5.65	
8/25/2020	6	
3/16/2021	5.87	
10/5/2021		5.79
5/10/2022		5.77
10/26/2022		5.86

# Prediction Limit

Constituent: pH (pH) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-10	GSD-AP-MW-10
12/6/2017	6.83	
2/7/2018	6.82	
4/24/2018	6.74	
6/27/2018	6.67	
8/7/2018	6.72	
10/22/2018	6.73	
12/4/2018	6.77	
2/6/2019	6.67	
2/26/2019	6.77	
8/22/2019	6.37	
4/15/2020	6.85	
8/26/2020	6.73	
3/23/2021	6.87	
10/11/2021		6.72
5/10/2022		6.39
10/26/2022		6.84

# Prediction Limit

Constituent: pH (pH) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-11	GSD-AP-MW-11
12/6/2017	6.81	
2/7/2018	6.74	
4/24/2018	6.62	
6/27/2018	6.69	
8/8/2018	6.67	
10/23/2018	6.73	
12/4/2018	6.67	
2/6/2019	6.58	
2/27/2019	6.56	
8/22/2019	6.26	
4/14/2020	6.63	
8/26/2020	6.38	
3/23/2021	6.58	
10/12/2021		6.66
5/17/2022		6.44
10/26/2022		6.2

# Prediction Limit

Constituent: pH (pH) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-12	GSD-AP-MW-12
12/6/2017	5.6	
2/8/2018	5.44	
4/24/2018	5.41	
6/27/2018	5.45	
8/8/2018	5.46	
10/23/2018	5.47	
12/5/2018	5.45	
2/6/2019	5.31	
2/27/2019	5.4	
8/22/2019	5.35	
4/14/2020	5.39	
8/26/2020	5.63	
3/23/2021	5.5	
10/5/2021		5.19
5/10/2022		4.78
10/26/2022		5.52

# Prediction Limit

Constituent: pH (pH) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-14	GSD-AP-MW-14
6/27/2018	3.95	
7/18/2018	4.02	
8/6/2018	4.07	
9/5/2018	4.07	
9/24/2018	4.07	
10/24/2018	4.1	
12/5/2018	4.1	
2/5/2019	4.02	
2/28/2019	3.94 (E)	
8/20/2019	4	
4/16/2020	3.93	
8/25/2020	4.03	
3/22/2021	3.25	
10/12/2021		4.04
5/9/2022		3.6
10/26/2022		4.07

# Prediction Limit

Constituent: pH (pH) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-16	GSD-AP-MW-16
10/24/2018	5.27	
11/14/2018	4.99	
11/28/2018	4.74	
12/5/2018	4.76	
12/18/2018	4.57	
1/3/2019	4.56	
1/24/2019	4.45	
2/5/2019	4.3	
2/28/2019	4.35	
8/19/2019	4.57	
4/15/2020	4.49	
8/25/2020	4.2	
3/22/2021	3.45	
10/6/2021		4.16
5/17/2022		4.34
10/25/2022		4.64

# Prediction Limit

Constituent: pH (pH) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-17	GSD-AP-MW-17
10/24/2018	7.92	
11/14/2018	8.23	
11/28/2018	8.95	
12/5/2018	8.77	
12/18/2018	8.99	
1/3/2019	9.35	
1/24/2019	9.42	
2/5/2019	9.23	
2/28/2019	9.48	
8/19/2019	7.93	
4/16/2020	8.1	
8/24/2020	8.17	
3/22/2021	7.85	
10/6/2021		7.92
5/9/2022		7.29
10/25/2022		7.97

# Prediction Limit

Constituent: pH (pH) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-2	GSD-AP-MW-2
12/6/2017	6.61	
2/6/2018	6.66	
4/23/2018	6.54	
6/27/2018	6.63	
8/7/2018	6.57	
10/22/2018	6.55	
12/4/2018	6.52	
2/5/2019	6.47	
2/26/2019	6.54	
8/20/2019	6.3	
4/15/2020	6.45	
8/25/2020	6.65	
3/24/2021	6.49	
10/11/2021		6.59
5/16/2022		6.16
10/25/2022		6.64



# Prediction Limit

Constituent: pH (pH) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-3	GSD-AP-MW-3
12/6/2017	6.54	
2/6/2018	6.39	
4/24/2018	6.02	
6/27/2018	6.07	
8/7/2018	6.28	
10/22/2018	6.3	
12/3/2018	6.38	
2/5/2019	5.83	
2/25/2019	5.93	
8/20/2019	5.73	
4/13/2020	5.83	
8/26/2020	5.87	
3/22/2021	5.51	
10/5/2021		5.76
5/10/2022		5.95
10/26/2022		5.97

# Prediction Limit

Constituent: pH (pH) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-4	GSD-AP-MW-4
12/7/2017	6.73	
2/6/2018	6.76	
4/24/2018	6.66	
6/26/2018	6.61	
8/6/2018	6.68	
10/22/2018	6.63	
12/3/2018	6.67	
2/5/2019	6.63	
2/26/2019	6.64	
8/20/2019	6.33	
4/15/2020	6.77	
8/26/2020	6.68	
3/24/2021	6.86	
10/5/2021		6.58
5/16/2022		6.61
10/26/2022		6.67

# Prediction Limit

Constituent: pH (pH) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-5	GSD-AP-MW-5
12/7/2017	6.32	
2/6/2018	6.27	
4/25/2018	6.14	
6/27/2018	6.15	
8/7/2018	6.18	
10/23/2018	6.15	
12/5/2018	6.15	
2/5/2019	6.08	
2/27/2019	6.11	
8/20/2019	6.11	
4/13/2020	6.18	
8/24/2020	6.11	
3/16/2021	6.22	
10/5/2021		6.24
5/9/2022		5.43
10/26/2022		6.44

# Prediction Limit

Constituent: pH (pH) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-6	GSD-AP-MW-6
12/7/2017	6.38	
2/8/2018	6.29	
4/25/2018	6.15	
6/26/2018	6.09	
8/7/2018	6.16	
10/23/2018	6.1	
12/3/2018	6.09	
2/5/2019	6.04	
2/26/2019	6.17	
8/20/2019	5.4	
4/13/2020	5.82	
8/26/2020	5.96	
3/17/2021	5.92	
10/5/2021		5.74
5/10/2022		5.51
10/26/2022		5.98

# Prediction Limit

Constituent: pH (pH) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-7	GSD-AP-MW-7
12/7/2017	6.62	
2/8/2018	6.39	
4/25/2018	6.17	
6/26/2018	6.38	
8/8/2018	6.56	
10/23/2018	6.54	
12/4/2018	6.33	
2/6/2019	6.13	
2/27/2019	6.12	
8/21/2019	5.97	
4/15/2020	6.16	
8/26/2020	6.11	
3/23/2021	6.04	
10/5/2021		6.06
5/10/2022		5.08
10/26/2022		6.44

# Prediction Limit

Constituent: pH (pH) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-8	GSD-AP-MW-8
12/7/2017	6.81	
2/8/2018	6.73	
4/25/2018	6.61	
6/26/2018	6.59	
8/8/2018	6.6	
10/23/2018	6.64	
12/4/2018	6.68	
2/6/2019	6.62	
2/27/2019	6.56	
8/21/2019	6.16	
4/14/2020	6.49	
8/26/2020	6.29	
3/23/2021	6.47	
10/12/2021		6.61
5/11/2022		6.25
10/26/2022		6.68

# Prediction Limit

Constituent: pH (pH) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-9	GSD-AP-MW-9
12/7/2017	6.93	
2/8/2018	6.96	
2/12/2018	6.88	
4/25/2018	6.89	
6/26/2018	6.85	
8/8/2018	6.94	
10/23/2018	6.93	
12/5/2018	6.94	
2/6/2019	6.73	
2/27/2019	6.85	
8/21/2019	6.61	
4/14/2020	7.02	
8/26/2020	6.75	
3/23/2021	6.85	
10/12/2021		6.9
5/11/2022		6.7
10/26/2022		7.07

# Prediction Limit

Constituent: pH (pH) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-PZ-1	GSD-AP-PZ-1
6/27/2018	6.79	
7/18/2018	6.8	
8/7/2018	6.73	
9/5/2018	6.75	
9/24/2018	6.83	
10/22/2018	6.76	
12/3/2018	6.6	
2/5/2019	6.66	
2/25/2019	6.6	
8/20/2019	6.3	
4/13/2020	6.66	
8/24/2020	6.64	
3/24/2021	5.85	
10/5/2021		6.46
5/9/2022		6.03
10/26/2022		6.66



# Prediction Limit

Constituent: pH (pH) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-PZ-5	GSD-AP-PZ-5
6/27/2018	5.81	
7/18/2018	5.74	
8/8/2018	5.7	
9/5/2018	5.61	
9/24/2018	5.59	
10/23/2018	5.6	
12/3/2018	5.73	
2/7/2019	5.44	
2/25/2019	5.46	
8/21/2019	5.13	
4/15/2020	5.31	
8/24/2020	4.65	
3/16/2021	5.47	
10/12/2021		5.33
5/10/2022		5.38
10/26/2022		5.31

# Prediction Limit

Constituent: pH (pH) Analysis Run 12/27/2022 6:46 PM View: Appendix III - Intrawell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-PZ-6	GSD-AP-PZ-6
6/27/2018	5.44	
7/18/2018	5.58	
8/8/2018	5.55	
9/5/2018	5.56	
9/24/2018	5.57	
10/23/2018	5.55	
12/3/2018	5.6	
2/7/2019	5.51	
2/25/2019	5.54	
8/21/2019	5.44	
4/15/2020	5.52	
8/24/2020	5.38	
3/16/2021	5.56	
10/12/2021		5.41
5/10/2022		5.57
10/26/2022		5.43

FIGURE E.

# Interwell Prediction Limits - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 12/27/2022, 6:49 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	N Bg	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Boron (mg/L)	GSD-AP-MW-1	0.1015	n/a	10/26/2022	0.977	Yes	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-11	0.1015	n/a	10/26/2022	0.306	Yes	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-2	0.1015	n/a	10/25/2022	0.5	Yes	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-3	0.1015	n/a	10/26/2022	0.85	Yes	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-4	0.1015	n/a	10/26/2022	0.371	Yes	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-5	0.1015	n/a	10/26/2022	0.23	Yes	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Calcium (mg/L)	GSD-AP-MW-1	33.58	n/a	10/26/2022	200	Yes	49	4.222	0.7344	0	None	sqrt(x)	0.0005016	Param Inter 1 of 2	
Calcium (mg/L)	GSD-AP-MW-10	33.58	n/a	10/26/2022	39.5	Yes	49	4.222	0.7344	0	None	sqrt(x)	0.0005016	Param Inter 1 of 2	
Calcium (mg/L)	GSD-AP-MW-11	33.58	n/a	10/26/2022	129	Yes	49	4.222	0.7344	0	None	sqrt(x)	0.0005016	Param Inter 1 of 2	
Calcium (mg/L)	GSD-AP-MW-12	33.58	n/a	10/26/2022	60.2	Yes	49	4.222	0.7344	0	None	sqrt(x)	0.0005016	Param Inter 1 of 2	
Calcium (mg/L)	GSD-AP-MW-2	33.58	n/a	10/25/2022	86.9	Yes	49	4.222	0.7344	0	None	sqrt(x)	0.0005016	Param Inter 1 of 2	
Calcium (mg/L)	GSD-AP-MW-3	33.58	n/a	10/26/2022	55.3	Yes	49	4.222	0.7344	0	None	sqrt(x)	0.0005016	Param Inter 1 of 2	
Calcium (mg/L)	GSD-AP-MW-4	33.58	n/a	10/26/2022	33.6	Yes	49	4.222	0.7344	0	None	sqrt(x)	0.0005016	Param Inter 1 of 2	
Calcium (mg/L)	GSD-AP-MW-5	33.58	n/a	10/26/2022	39.6	Yes	49	4.222	0.7344	0	None	sqrt(x)	0.0005016	Param Inter 1 of 2	
Calcium (mg/L)	GSD-AP-MW-8	33.58	n/a	10/26/2022	63.7	Yes	49	4.222	0.7344	0	None	sqrt(x)	0.0005016	Param Inter 1 of 2	
Calcium (mg/L)	GSD-AP-MW-9	33.58	n/a	10/26/2022	47.7	Yes	49	4.222	0.7344	0	None	sqrt(x)	0.0005016	Param Inter 1 of 2	
Chloride (mg/L)	GSD-AP-MW-1	4.048	n/a	10/26/2022	6.02	Yes	49	3.229	0.382	0	None	No	0.0005016	Param Inter 1 of 2	
Chloride (mg/L)	GSD-AP-MW-10	4.048	n/a	10/26/2022	5.87	Yes	49	3.229	0.382	0	None	No	0.0005016	Param Inter 1 of 2	
Chloride (mg/L)	GSD-AP-MW-11	4.048	n/a	10/26/2022	4.98	Yes	49	3.229	0.382	0	None	No	0.0005016	Param Inter 1 of 2	
Chloride (mg/L)	GSD-AP-MW-12	4.048	n/a	10/26/2022	5.76	Yes	49	3.229	0.382	0	None	No	0.0005016	Param Inter 1 of 2	
Chloride (mg/L)	GSD-AP-MW-3	4.048	n/a	10/26/2022	4.38	Yes	49	3.229	0.382	0	None	No	0.0005016	Param Inter 1 of 2	
Chloride (mg/L)	GSD-AP-MW-4	4.048	n/a	10/26/2022	7.88	Yes	49	3.229	0.382	0	None	No	0.0005016	Param Inter 1 of 2	
Chloride (mg/L)	GSD-AP-MW-5	4.048	n/a	10/26/2022	6.4	Yes	49	3.229	0.382	0	None	No	0.0005016	Param Inter 1 of 2	
Chloride (mg/L)	GSD-AP-MW-6	4.048	n/a	10/26/2022	9.4	Yes	49	3.229	0.382	0	None	No	0.0005016	Param Inter 1 of 2	
Chloride (mg/L)	GSD-AP-MW-7	4.048	n/a	10/26/2022	7.09	Yes	49	3.229	0.382	0	None	No	0.0005016	Param Inter 1 of 2	
Chloride (mg/L)	GSD-AP-MW-8	4.048	n/a	10/26/2022	5.72	Yes	49	3.229	0.382	0	None	No	0.0005016	Param Inter 1 of 2	
Chloride (mg/L)	GSD-AP-MW-9	4.048	n/a	10/26/2022	6.99	Yes	49	3.229	0.382	0	None	No	0.0005016	Param Inter 1 of 2	
Sulfate (mg/L)	GSD-AP-MW-1	207	n/a	10/26/2022	512	Yes	49	n/a	n/a	0	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	GSD-AP-MW-11	207	n/a	10/26/2022	278	Yes	49	n/a	n/a	0	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2	
Sulfate (mg/L)	GSD-AP-MW-12	207	n/a	10/26/2022	230	Yes	49	n/a	n/a	0	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2	
Total Dissolved Solids (mg/L)	GSD-AP-MW-1	276.7	n/a	10/26/2022	840	Yes	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	GSD-AP-MW-11	276.7	n/a	10/26/2022	545	Yes	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	GSD-AP-MW-12	276.7	n/a	10/26/2022	402	Yes	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	GSD-AP-MW-2	276.7	n/a	10/25/2022	337	Yes	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	GSD-AP-MW-3	276.7	n/a	10/26/2022	328	Yes	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2	

# Interwell Prediction Limits - All Results

Plant Gadsden    Client: Southern Company    Data: Plant Gadsden CCR    Printed 12/27/2022, 6:49 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bq	N Bq	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-1</b>	<b>0.1015</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>0.977</b>	<b>Yes</b>	<b>49</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>55.1</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0007557</b>	<b>NP Inter (NDs) 1 of 2</b>
Boron (mg/L)	GSD-AP-MW-10	0.1015	n/a	10/26/2022	0.0868J	No	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>0.1015</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>0.306</b>	<b>Yes</b>	<b>49</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>55.1</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0007557</b>	<b>NP Inter (NDs) 1 of 2</b>
Boron (mg/L)	GSD-AP-MW-12	0.1015	n/a	10/26/2022	0.0995J	No	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>0.1015</b>	<b>n/a</b>	<b>10/25/2022</b>	<b>0.5</b>	<b>Yes</b>	<b>49</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>55.1</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0007557</b>	<b>NP Inter (NDs) 1 of 2</b>
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-3</b>	<b>0.1015</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>0.85</b>	<b>Yes</b>	<b>49</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>55.1</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0007557</b>	<b>NP Inter (NDs) 1 of 2</b>
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-4</b>	<b>0.1015</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>0.371</b>	<b>Yes</b>	<b>49</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>55.1</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0007557</b>	<b>NP Inter (NDs) 1 of 2</b>
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-5</b>	<b>0.1015</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>0.23</b>	<b>Yes</b>	<b>49</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>55.1</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0007557</b>	<b>NP Inter (NDs) 1 of 2</b>
Boron (mg/L)	GSD-AP-MW-6	0.1015	n/a	10/26/2022	0.0788J	No	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-7	0.1015	n/a	10/26/2022	0.0839J	No	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-8	0.1015	n/a	10/26/2022	0.0526J	No	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-MW-9	0.1015	n/a	10/26/2022	0.0595J	No	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-PZ-1	0.1015	n/a	10/26/2022	0.1015ND	No	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-PZ-5	0.1015	n/a	10/26/2022	0.1015ND	No	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
Boron (mg/L)	GSD-AP-PZ-6	0.1015	n/a	10/26/2022	0.1015ND	No	49	n/a	n/a	n/a	55.1	n/a	n/a	0.0007557	NP Inter (NDs) 1 of 2
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-1</b>	<b>33.58</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>200</b>	<b>Yes</b>	<b>49</b>	<b>4.222</b>	<b>0.7344</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-10</b>	<b>33.58</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>39.5</b>	<b>Yes</b>	<b>49</b>	<b>4.222</b>	<b>0.7344</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>33.58</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>129</b>	<b>Yes</b>	<b>49</b>	<b>4.222</b>	<b>0.7344</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-12</b>	<b>33.58</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>60.2</b>	<b>Yes</b>	<b>49</b>	<b>4.222</b>	<b>0.7344</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>33.58</b>	<b>n/a</b>	<b>10/25/2022</b>	<b>86.9</b>	<b>Yes</b>	<b>49</b>	<b>4.222</b>	<b>0.7344</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-3</b>	<b>33.58</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>55.3</b>	<b>Yes</b>	<b>49</b>	<b>4.222</b>	<b>0.7344</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-4</b>	<b>33.58</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>33.6</b>	<b>Yes</b>	<b>49</b>	<b>4.222</b>	<b>0.7344</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-5</b>	<b>33.58</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>39.6</b>	<b>Yes</b>	<b>49</b>	<b>4.222</b>	<b>0.7344</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
Calcium (mg/L)	GSD-AP-MW-6	33.58	n/a	10/26/2022	12.2	No	49	4.222	0.7344	0	None	sqrt(x)	0.0005016	Param Inter 1 of 2	
Calcium (mg/L)	GSD-AP-MW-7	33.58	n/a	10/26/2022	21.4	No	49	4.222	0.7344	0	None	sqrt(x)	0.0005016	Param Inter 1 of 2	
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-8</b>	<b>33.58</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>63.7</b>	<b>Yes</b>	<b>49</b>	<b>4.222</b>	<b>0.7344</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-9</b>	<b>33.58</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>47.7</b>	<b>Yes</b>	<b>49</b>	<b>4.222</b>	<b>0.7344</b>	<b>0</b>	<b>None</b>	<b>sqrt(x)</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
Calcium (mg/L)	GSD-AP-PZ-1	33.58	n/a	10/26/2022	23.1	No	49	4.222	0.7344	0	None	sqrt(x)	0.0005016	Param Inter 1 of 2	
Calcium (mg/L)	GSD-AP-PZ-5	33.58	n/a	10/26/2022	3.09	No	49	4.222	0.7344	0	None	sqrt(x)	0.0005016	Param Inter 1 of 2	
Calcium (mg/L)	GSD-AP-PZ-6	33.58	n/a	10/26/2022	3.42	No	49	4.222	0.7344	0	None	sqrt(x)	0.0005016	Param Inter 1 of 2	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-1</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>6.02</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-10</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>5.87</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>4.98</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-12</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>5.76</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
Chloride (mg/L)	GSD-AP-MW-2	4.048	n/a	10/25/2022	2.45	No	49	3.229	0.382	0	None	No	0.0005016	Param Inter 1 of 2	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-3</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>4.38</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-4</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>7.88</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-5</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>6.4</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-6</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>9.4</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-7</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>7.09</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-8</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>5.72</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-9</b>	<b>4.048</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>6.99</b>	<b>Yes</b>	<b>49</b>	<b>3.229</b>	<b>0.382</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
Chloride (mg/L)	GSD-AP-PZ-1	4.048	n/a	10/26/2022	3.39	No	49	3.229	0.382	0	None	No	0.0005016	Param Inter 1 of 2	
Chloride (mg/L)	GSD-AP-PZ-5	4.048	n/a	10/26/2022	4.03	No	49	3.229	0.382	0	None	No	0.0005016	Param Inter 1 of 2	
Chloride (mg/L)	GSD-AP-PZ-6	4.048	n/a	10/26/2022	3.5	No	49	3.229	0.382	0	None	No	0.0005016	Param Inter 1 of 2	
<b>Sulfate (mg/L)</b>	<b>GSD-AP-MW-1</b>	<b>207</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>512</b>	<b>Yes</b>	<b>49</b>	<b>n/a</b>	<b>n/a</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0007557</b>	<b>NP Inter (normality) 1 of 2</b>	
Sulfate (mg/L)	GSD-AP-MW-10	207	n/a	10/26/2022	4.42	No	49	n/a	n/a	0	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2	
<b>Sulfate (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>207</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>278</b>	<b>Yes</b>	<b>49</b>	<b>n/a</b>	<b>n/a</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0007557</b>	<b>NP Inter (normality) 1 of 2</b>	
<b>Sulfate (mg/L)</b>	<b>GSD-AP-MW-12</b>	<b>207</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>230</b>	<b>Yes</b>	<b>49</b>	<b>n/a</b>	<b>n/a</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.0007557</b>	<b>NP Inter (normality) 1 of 2</b>	
Sulfate (mg/L)	GSD-AP-MW-2	207	n/a	10/25/2022	111	No	49	n/a	n/a	0	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2	

# Interwell Prediction Limits - All Results

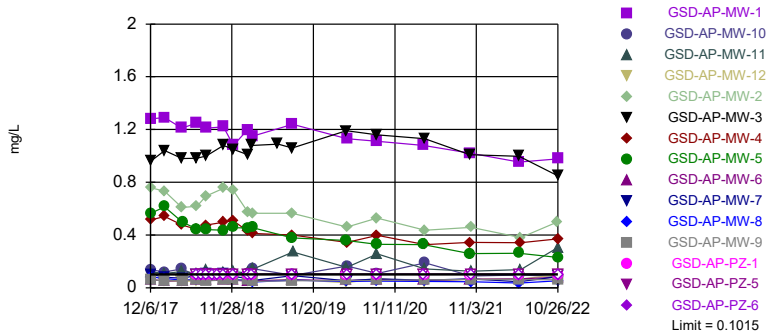
Plant Gadsden    Client: Southern Company    Data: Plant Gadsden CCR    Printed 12/27/2022, 6:49 PM

Constituent	Well	Upper Lim.	Lower Lim.	Date	Observ.	Sig.	Bg	N	Bg Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Sulfate (mg/L)	GSD-AP-MW-3	207	n/a	10/26/2022	206	No	49	n/a	n/a	n/a	0	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-4	207	n/a	10/26/2022	61.8	No	49	n/a	n/a	n/a	0	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-5	207	n/a	10/26/2022	16.1	No	49	n/a	n/a	n/a	0	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-6	207	n/a	10/26/2022	12.2	No	49	n/a	n/a	n/a	0	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-7	207	n/a	10/26/2022	11.4	No	49	n/a	n/a	n/a	0	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-8	207	n/a	10/26/2022	10.1	No	49	n/a	n/a	n/a	0	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-MW-9	207	n/a	10/26/2022	13.8	No	49	n/a	n/a	n/a	0	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-PZ-1	207	n/a	10/26/2022	3.43	No	49	n/a	n/a	n/a	0	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-PZ-5	207	n/a	10/26/2022	0.992J	No	49	n/a	n/a	n/a	0	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
Sulfate (mg/L)	GSD-AP-PZ-6	207	n/a	10/26/2022	1.7J	No	49	n/a	n/a	n/a	0	n/a	n/a	0.0007557	NP Inter (normality) 1 of 2
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-1</b>	<b>276.7</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>840</b>	<b>Yes</b>	<b>49</b>	<b>167.4</b>	<b>51.01</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
Total Dissolved Solids (mg/L)	GSD-AP-MW-10	276.7	n/a	10/26/2022	202	No	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2	
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>276.7</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>545</b>	<b>Yes</b>	<b>49</b>	<b>167.4</b>	<b>51.01</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-12</b>	<b>276.7</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>402</b>	<b>Yes</b>	<b>49</b>	<b>167.4</b>	<b>51.01</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>276.7</b>	<b>n/a</b>	<b>10/25/2022</b>	<b>337</b>	<b>Yes</b>	<b>49</b>	<b>167.4</b>	<b>51.01</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-3</b>	<b>276.7</b>	<b>n/a</b>	<b>10/26/2022</b>	<b>328</b>	<b>Yes</b>	<b>49</b>	<b>167.4</b>	<b>51.01</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.0005016</b>	<b>Param Inter 1 of 2</b>	
Total Dissolved Solids (mg/L)	GSD-AP-MW-4	276.7	n/a	10/26/2022	247	No	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	GSD-AP-MW-5	276.7	n/a	10/26/2022	178	No	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	GSD-AP-MW-6	276.7	n/a	10/26/2022	91.3	No	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	GSD-AP-MW-7	276.7	n/a	10/26/2022	121	No	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	GSD-AP-MW-8	276.7	n/a	10/26/2022	226	No	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	GSD-AP-MW-9	276.7	n/a	10/26/2022	194	No	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	GSD-AP-PZ-1	276.7	n/a	10/26/2022	96	No	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	GSD-AP-PZ-5	276.7	n/a	10/26/2022	45.3	No	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2	
Total Dissolved Solids (mg/L)	GSD-AP-PZ-6	276.7	n/a	10/26/2022	38	No	49	167.4	51.01	0	None	No	0.0005016	Param Inter 1 of 2	

Exceeds Limit: GSD-AP-MW-1, GSD-AP-MW-11, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5

Prediction Limit

Interwell Non-parametric



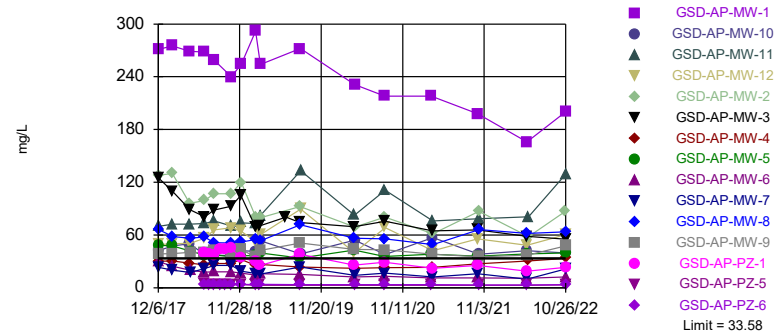
Non-parametric test used in lieu of parametric prediction limit because censored data exceeded 50%. Limit is highest of 49 background values. 55.1% NDs. Annual per-constituent alpha = 0.02243. Individual comparison alpha = 0.0007557 (1 of 2). Comparing 15 points to limit.

Constituent: Boron Analysis Run 12/27/2022 6:47 PM View: Appendix III - Interwell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Exceeds Limit: GSD-AP-MW-1, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-MW-2, GSD-AP-MW-3, GSD-AP-MW-4...

Prediction Limit

Interwell Parametric



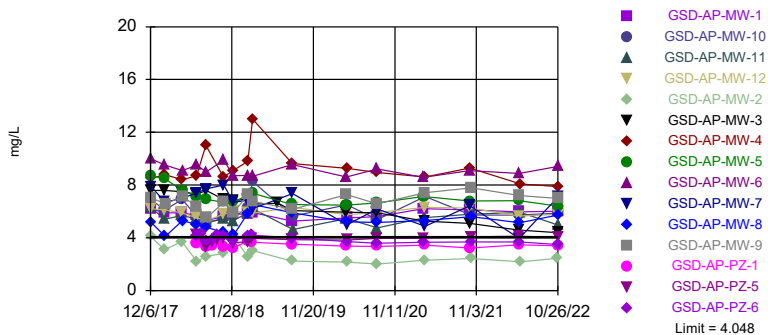
Background Data Summary (based on square root transformation): Mean=4.222, Std. Dev.=0.7344, n=49. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9421, critical = 0.929. Kappa = 2.142 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0005016. Comparing 15 points to limit.

Constituent: Calcium Analysis Run 12/27/2022 6:47 PM View: Appendix III - Interwell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Exceeds Limit: GSD-AP-MW-1, GSD-AP-MW-10, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-MW-3, GSD-AP-MW-4, GSD-AP-MW-5...

Prediction Limit

Interwell Parametric



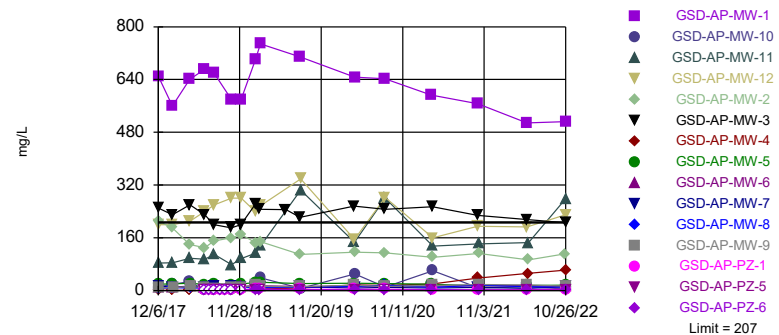
Background Data Summary: Mean=3.229, Std. Dev.=0.382, n=49. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9824, critical = 0.929. Kappa = 2.142 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0005016. Comparing 15 points to limit.

Constituent: Chloride Analysis Run 12/27/2022 6:47 PM View: Appendix III - Interwell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Exceeds Limit: GSD-AP-MW-1, GSD-AP-MW-11, GSD-AP-MW-12

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. Annual per-constituent alpha = 0.02243. Individual comparison alpha = 0.0007557 (1 of 2). Comparing 15 points to limit.

Constituent: Sulfate Analysis Run 12/27/2022 6:47 PM View: Appendix III - Interwell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 12/27/2022 6:49 PM View: Appendix III - Interwell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-2	GSD-AP-MW-12	GSD-AP-MW-11	GSD-AP-MW-10	GSD-AP-MW-3	GSD-AP-MW-8	GSD-AP-MW-7	GSD-AP-MW-4
12/6/2017	1.28	0.758	0.0605 (J)	0.12	0.135	0.959			
12/7/2017							0.0828 (J)	0.102	0.515
2/6/2018	1.29	0.733				1.04			0.541
2/7/2018				0.109	0.12				
2/8/2018			0.0527 (J)				0.0691 (J)	0.0787 (J)	
4/23/2018	1.21	0.608							
4/24/2018			0.0476 (J)	0.124	0.144	0.979			0.475
4/25/2018							0.0571 (J)	0.0734 (J)	
6/26/2018	1.25						0.0634 (J)	0.094 (J)	0.444
6/27/2018		0.619	0.0539 (J)	0.111	0.0903 (J)	0.982			
7/18/2018									
8/6/2018									0.474
8/7/2018	1.21	0.697			0.106	1			
8/8/2018			0.0637 (J)	0.135			0.0659 (J)	0.103	
9/5/2018									
9/24/2018									
10/22/2018	1.22	0.754			0.107	1.08			0.496
10/23/2018			0.0696 (J)	0.114			0.0666 (J)	0.106	
10/24/2018									
11/14/2018									
11/28/2018									
12/3/2018						1.05			0.51
12/4/2018	1.08	0.737		0.124	0.103		0.0617 (J)	0.085 (J)	
12/5/2018			0.0652 (J)						
12/18/2018									
1/3/2019									
1/24/2019									
2/5/2019	1.2	0.575				1.01			0.43
2/6/2019			0.0511 (J)	0.112	0.105		0.0586 (J)	0.0733 (J)	
2/7/2019									
2/25/2019						1.08			
2/26/2019	1.15	0.566			0.146				0.411
2/27/2019			0.0494 (J)	0.14			0.0428 (J)	0.0548 (J)	
2/28/2019									
6/18/2019						1.09			
6/24/2019									
8/19/2019									
8/20/2019		0.566				1.06			0.399
8/21/2019	1.24						0.0569 (J)	0.091 (J)	
8/22/2019			0.0625 (J)	0.272	0.0951 (J)				
4/13/2020						1.19			
4/14/2020			0.0377 (J)	0.154			0.0474 (J)		
4/15/2020	1.13	0.461			0.164			0.0534 (J)	0.344
4/16/2020									
8/24/2020									
8/25/2020	1.11	0.528							
8/26/2020			0.0698 (J)	0.257	0.108	1.16	0.0501 (J)	0.0665 (J)	0.398
3/16/2021	1.08								
3/17/2021									
3/22/2021						1.13			
3/23/2021			0.0452 (J)	0.142	0.188		0.0476 (J)	0.0587 (J)	
3/24/2021		0.437							0.326



# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 12/27/2022 6:49 PM View: Appendix III - Interwell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-1	GSD-AP-MW-2	GSD-AP-MW-12	GSD-AP-MW-11	GSD-AP-MW-10	GSD-AP-MW-3	GSD-AP-MW-8	GSD-AP-MW-7	GSD-AP-MW-4
10/5/2021	1.02		0.0661 (J)			1.01		0.0673 (J)	0.344
10/6/2021									
10/11/2021		0.459			0.09 (J)				
10/12/2021				0.125			0.0462 (J)		
5/9/2022									
5/10/2022	0.954		0.066 (J)		0.097 (J)	0.998		0.0465 (J)	
5/11/2022							0.037 (J)		
5/16/2022		0.381							0.342
5/17/2022				0.139					
10/25/2022		0.5							
10/26/2022	0.977		0.0995 (J)	0.306	0.0868 (J)	0.85	0.0526 (J)	0.0839 (J)	0.371

# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 12/27/2022 6:49 PM View: Appendix III - Interwell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-5	GSD-AP-MW-9	GSD-AP-MW-6	GSD-AP-PZ-1	GSD-AP-PZ-6	GSD-AP-MW-14 ...	GSD-AP-PZ-5	GSD-AP-MW-17 ...	GSD-AP-MW-16 ...
12/6/2017									
12/7/2017	0.566	0.0614 (J)	0.063 (J)						
2/6/2018	0.614								
2/7/2018									
2/8/2018		0.0531 (J)	0.0508 (J)						
4/23/2018									
4/24/2018									
4/25/2018	0.498	0.0551 (J)	0.0548 (J)						
6/26/2018		0.0568 (J)	0.0571 (J)						
6/27/2018	0.446			<0.1015	<0.1015	<0.1015	<0.1015		
7/18/2018				<0.1015	<0.1015	<0.1015	<0.1015		
8/6/2018						<0.1015			
8/7/2018	0.442		0.0571 (J)	<0.1015					
8/8/2018		0.0524 (J)			<0.1015		<0.1015		
9/5/2018				<0.1015	<0.1015	<0.1015	<0.1015		
9/24/2018				<0.1015	<0.1015	<0.1015	<0.1015		
10/22/2018				<0.1015					
10/23/2018	0.436	0.0576 (J)	0.0636 (J)		<0.1015		<0.1015		
10/24/2018						<0.1015		0.0357 (J)	0.0261 (J)
11/14/2018								0.0348 (J)	0.0209 (J)
11/28/2018								0.0313 (J)	0.0239 (J)
12/3/2018			0.0568 (J)	<0.1015	<0.1015		<0.1015		
12/4/2018									
12/5/2018	0.456	0.0561 (J)				<0.1015		0.0363 (J)	<0.1015
12/18/2018								0.033 (J)	<0.1015
1/3/2019								0.036 (J)	0.0209 (J)
1/24/2019								0.0307 (J)	0.0271 (J)
2/5/2019	0.453		0.0509 (J)	<0.1015		<0.1015		0.0306 (J)	0.0245 (J)
2/6/2019		0.0627 (J)							
2/7/2019					<0.1015		<0.1015		
2/25/2019				<0.1015	<0.1015		<0.1015		
2/26/2019			0.0527 (J)						
2/27/2019	0.457	0.0474 (J)							
2/28/2019						<0.1015		0.0206 (J)	<0.1015
6/18/2019									
6/24/2019									<0.1015
8/19/2019								0.0341 (J)	<0.1015
8/20/2019	0.378		0.0608 (J)	<0.1015		<0.1015			
8/21/2019		0.0524 (J)			<0.1015		<0.1015		
8/22/2019									
4/13/2020	0.359		0.0561 (J)	<0.1015					
4/14/2020		0.0562 (J)							
4/15/2020					<0.1015		<0.1015		<0.1015
4/16/2020						<0.1015		0.0331 (J)	
8/24/2020	0.329			<0.1015	<0.1015		<0.1015	0.0303 (J)	
8/25/2020						<0.1015			<0.1015
8/26/2020		0.0565 (J)	0.0633 (J)						
3/16/2021	0.328				<0.1015		<0.1015		
3/17/2021			0.0563 (J)						
3/22/2021						<0.1015		0.0333 (J)	<0.1015
3/23/2021		0.0609 (J)							
3/24/2021				<0.1015					

# Prediction Limit

Constituent: Boron (mg/L) Analysis Run 12/27/2022 6:49 PM View: Appendix III - Interwell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-5	GSD-AP-MW-9	GSD-AP-MW-6	GSD-AP-PZ-1	GSD-AP-PZ-6	GSD-AP-MW-14 ...	GSD-AP-PZ-5	GSD-AP-MW-17 ...	GSD-AP-MW-16 ...
10/5/2021	0.26		0.0649 (J)	<0.1015					
10/6/2021								0.0305 (J)	<0.1015
10/11/2021									
10/12/2021		0.0632 (J)			<0.1015	<0.1015	<0.1015		
5/9/2022	0.261			<0.1015		<0.1015		0.0347 (J)	
5/10/2022			0.0681 (J)		<0.1015		<0.1015		
5/11/2022		0.0636 (J)							
5/16/2022									
5/17/2022									<0.1015
10/25/2022								0.0308 (J)	<0.1015
10/26/2022	0.23	0.0595 (J)	0.0788 (J)	<0.1015	<0.1015	<0.1015	<0.1015		

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 12/27/2022 6:49 PM View: Appendix III - Interwell

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-2	GSD-AP-MW-12	GSD-AP-MW-11	GSD-AP-MW-10	GSD-AP-MW-3	GSD-AP-MW-8	GSD-AP-MW-7	GSD-AP-MW-4
12/6/2017	271	128	49	70	42	125			
12/7/2017							66.1	23.4	30.1
2/6/2018	275	130				110			30.6
2/7/2018				72.4	47.6				
2/8/2018			50				58	20.1	
4/23/2018	269	95.9							
4/24/2018			50.5	72.3	50.1	88.8			27.8
4/25/2018							56.3	17.4	
6/26/2018	268						57.7	21.8	26.2
6/27/2018		99.4	56.3	73.1	37.1	80.8			
7/18/2018									
8/6/2018									27.5
8/7/2018	259	107			37.4	88.5			
8/8/2018			65.7	76			51.2	25.4	
9/5/2018									
9/24/2018									
10/22/2018	240	107			36.3	92.7			27.7
10/23/2018			68.3	70.2			50.9	25.6	
10/24/2018									
11/14/2018									
11/28/2018									
12/3/2018						105			32.3
12/4/2018	254	120		74	42.1		51.9	19	
12/5/2018			64.3						
12/18/2018									
1/3/2019									
1/24/2019									
2/5/2019	292	80.6				68.6			25.5
2/6/2019			52.2	73.1	41.3		55	16.4	
2/7/2019									
2/25/2019						70.6			
2/26/2019	254	79.6			53.3				26.4
2/27/2019			60.2	82.2			53.4	15.6	
2/28/2019									
6/18/2019						80.5			
6/24/2019									
8/19/2019									
8/20/2019		92.3				74.1			23.5
8/21/2019	272						71.5	23.5	
8/22/2019			89.4	133	38.5				
4/13/2020						69.5			
4/14/2020			40	82.4			56.2		
4/15/2020	231	69.2			54.1			14	22
4/16/2020									
8/24/2020									
8/25/2020	218	80.5							
8/26/2020			68.4	111	37.8	75.7	55.5	16.7	22.8
3/16/2021	218								
3/17/2021									
3/22/2021						64.9			
3/23/2021			42	75.9	57		48.9	12.5	
3/24/2021		61.5							23.1

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 12/27/2022 6:49 PM View: Appendix III - Interwell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-1	GSD-AP-MW-2	GSD-AP-MW-12	GSD-AP-MW-11	GSD-AP-MW-10	GSD-AP-MW-3	GSD-AP-MW-8	GSD-AP-MW-7	GSD-AP-MW-4
10/5/2021	198		55.8			65.9		15.9	27.4
10/6/2021									
10/11/2021		87.1			38.2				
10/12/2021				78.6			66.3		
5/9/2022									
5/10/2022	166		48.2		42.2	58.5		9.95	
5/11/2022							61.9		
5/16/2022		58.2							30.7
5/17/2022				80.6					
10/25/2022		86.900002							
10/26/2022	200		60.200001	129	39.5	55.299999	63.700001	21.4	33.599998

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 12/27/2022 6:49 PM View: Appendix III - Interwell

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-5	GSD-AP-MW-9	GSD-AP-MW-6	GSD-AP-PZ-1	GSD-AP-PZ-6	GSD-AP-MW-14 ...	GSD-AP-PZ-5	GSD-AP-MW-17 ...	GSD-AP-MW-16 ...
12/6/2017									
12/7/2017	48.2	38.7	29.8						
2/6/2018	47.8								
2/7/2018									
2/8/2018		38.8	24.3						
4/23/2018									
4/24/2018									
4/25/2018	41.8	40.3	19.8						
6/26/2018		39.9	17.8						
6/27/2018	36.9			39.4	3.89	16.6	4.56		
7/18/2018				38.4	3.8	15.3	3.92		
8/6/2018						13.8			
8/7/2018	37.6		18.3	36.7					
8/8/2018		42.3			3.89		3.74		
9/5/2018				43.6	3.78	12.1	3.38		
9/24/2018				44.5	3.73	11.8	3.25		
10/22/2018				45					
10/23/2018	35.3	39.8	18.1		3.79		3.37		
10/24/2018						10.2		28.3	18
11/14/2018								27.5	14.9
11/28/2018								20.7	14.8
12/3/2018			16.6	33.7	3.79		3.67		
12/4/2018									
12/5/2018	36.3	43.8				9.14		25.3	14.8
12/18/2018								20.9	16.4
1/3/2019								18.5	19.7
1/24/2019								17	19.6
2/5/2019	36.6		14.5	30.1		15.1		17.1	20.8
2/6/2019		34.9							
2/7/2019					3.75		2.89		
2/25/2019				25.6	3.81		2.95		
2/26/2019			16						
2/27/2019	39.6	42.5							
2/28/2019						21.4		18.6	21.5
6/18/2019									
6/24/2019									18.4
8/19/2019								25.3	12.8
8/20/2019	33.7		15.1	38.3		14.4			
8/21/2019		50.9			3.71		3.04		
8/22/2019									
4/13/2020	43		12.5	25.9					
4/14/2020		43.6							
4/15/2020					3.56		2.93		13.1
4/16/2020						20.1		30.7	
8/24/2020	35.5			29	3.45		2.94	30.8	
8/25/2020						13.1			12.2
8/26/2020		43.2	12.9						
3/16/2021	38.1				3.44		2.9		
3/17/2021			11.3						
3/22/2021						12.2		31	18.4
3/23/2021		38.1							
3/24/2021				22.2					

# Prediction Limit

Constituent: Calcium (mg/L) Analysis Run 12/27/2022 6:49 PM View: Appendix III - Interwell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-5	GSD-AP-MW-9	GSD-AP-MW-6	GSD-AP-PZ-1	GSD-AP-PZ-6	GSD-AP-MW-14 ...	GSD-AP-PZ-5	GSD-AP-MW-17 ...	GSD-AP-MW-16 ...
10/5/2021	36		11.4	25.4					
10/6/2021								31	13.4
10/11/2021									
10/12/2021		35.4			3.29	11.8	2.94		
5/9/2022	38.4			18.9		14.5		28.4	
5/10/2022			10.8		3.24		2.87		
5/11/2022		36.9							
5/16/2022									
5/17/2022									19.7
10/25/2022								30.700001	8.46
10/26/2022	39.599998	47.700001	12.2	23.1	3.42	8.97	3.09		

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 12/27/2022 6:49 PM View: Appendix III - Interwell

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-2	GSD-AP-MW-12	GSD-AP-MW-11	GSD-AP-MW-10	GSD-AP-MW-3	GSD-AP-MW-8	GSD-AP-MW-7	GSD-AP-MW-4
12/6/2017	6.2	4.1	6.2	6.3	6.9	7.6			
12/7/2017							5.2	7.9	8.5
2/6/2018	5.9	3.1				7.6			8.8
2/7/2018				5.4	6.1				
2/8/2018			6.1				4.1	6.7	
2/12/2018									
4/23/2018	5.9	3.7							
4/24/2018			5.9	5.7	6.9	7.5			8.4
4/25/2018							5.3	7	
6/26/2018	5.7						5	7.4	8.7
6/27/2018		2.2	5.5	5.4	5.6	7.3			
7/18/2018									
8/6/2018									11
8/7/2018	5.3	2.6			5.1	7.6			
8/8/2018			5.3	5.2			4.8	7.7	
9/5/2018									
9/24/2018									
10/22/2018	5.6	2.8			5.5	6.9			8.6
10/23/2018			5.8	5.4			4.4	8	
10/24/2018									
11/14/2018									
11/28/2018									
12/3/2018						6.8			9.1
12/4/2018	5.8	4.1		5.3	5.6		4.2	6.7	
12/5/2018			6						
12/18/2018									
1/3/2019									
1/24/2019									
2/5/2019	5.8	2.56				6.95			9.81
2/6/2019			5.95	5.89	6.24		5.84	6.84	
2/7/2019									
2/25/2019						6.55			
2/26/2019	5.92	3.03			8.28				13
2/27/2019			5.88	6.2			6.52	6.21	
2/28/2019									
6/18/2019						6.62			
6/24/2019									
8/19/2019									
8/20/2019		2.24				6.07			9.62
8/21/2019	5.26						5.89	7.35	
8/22/2019			6.31	4.64	5.66				
4/13/2020						5.95			
4/14/2020			5.74	5.46			5.21		
4/15/2020	5.5	2.16			6.49			4.99	9.27
4/16/2020									
8/24/2020									
8/25/2020	5.59	2							
8/26/2020			5.91	4.74	5.39	5.89	5.16	6.19	8.96
3/16/2021	6.2								
3/17/2021									
3/22/2021						5.26			
3/23/2021			6.3	5.54	7.14		5.3	4.87	



# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 12/27/2022 6:49 PM View: Appendix III - Interwell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-1	GSD-AP-MW-2	GSD-AP-MW-12	GSD-AP-MW-11	GSD-AP-MW-10	GSD-AP-MW-3	GSD-AP-MW-8	GSD-AP-MW-7	GSD-AP-MW-4
3/24/2021		2.29							8.61
10/5/2021	6.1		6.26			5.09		6.43	9.3
10/6/2021									
10/11/2021		2.43			5.72				
10/12/2021				5.8			5.6		
5/9/2022									
5/10/2022	5.97		5.64		5.72	4.59		3.96	
5/11/2022							5.13		
5/16/2022		2.18							8.07
5/17/2022				5.92					
10/25/2022		2.45							
10/26/2022	6.02		5.76	4.98	5.87	4.38	5.72	7.09	7.88

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 12/27/2022 6:49 PM View: Appendix III - Interwell

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-5	GSD-AP-MW-9	GSD-AP-MW-6	GSD-AP-PZ-1	GSD-AP-PZ-6	GSD-AP-MW-14 ...	GSD-AP-PZ-5	GSD-AP-MW-17 ...	GSD-AP-MW-16 ...
12/6/2017									
12/7/2017	8.7	7	10						
2/6/2018	8.5								
2/7/2018									
2/8/2018			9.5						
2/12/2018		6.6							
4/23/2018									
4/24/2018									
4/25/2018	7.6	7.1	9.1						
6/26/2018		6.4	9.5						
6/27/2018	7.1			3.6	4.1	3.1	4.2		
7/18/2018				3.8	4.3	3.4	4.1		
8/6/2018						2.8			
8/7/2018	6.9		9	3.3					
8/8/2018		5.5			3.8		3.3		
9/5/2018				3.4	3.9	2.8	3.7		
9/24/2018				3.8	4.2	3.1	3.9		
10/22/2018				3.3					
10/23/2018	6.7	6.7	9.9		4.1		4		
10/24/2018						2.8		4	3.3
11/14/2018								3.6	3.6
11/28/2018								3.5	3.5
12/3/2018			8.7	3.2	3.8		3.6		
12/4/2018									
12/5/2018	6.7	5.9				2.2		3.2	3.3
12/18/2018								3.4	3.6
1/3/2019								3.2	3.4
1/24/2019								3.15	3.91
2/5/2019	7.24		8.73	3.78		3.12		2.98	3.94
2/6/2019		7.26							
2/7/2019					4.15		3.72		
2/25/2019				3.66	4.2		3.95		
2/26/2019			8.66						
2/27/2019	7.38	6.77							
2/28/2019						3.45		3.05	4.15
6/18/2019									
6/24/2019									3.36 (D)
8/19/2019								2.8	3.42
8/20/2019	6.53		9.55	3.52		3.27			
8/21/2019		6.16			4		3.85		
8/22/2019									
4/13/2020	6.48		8.6	3.36					
4/14/2020		7.27							
4/15/2020					3.71		3.83		3.39
4/16/2020						3.74		2.93	
8/24/2020	6.64			3.35	3.59		3.96	2.82	
8/25/2020						3.03			2.94
8/26/2020		6.57	9.21						
3/16/2021	7.14				3.66		3.98		
3/17/2021			8.59						
3/22/2021						3.15		2.94	3.61
3/23/2021		7.42							

# Prediction Limit

Constituent: Chloride (mg/L) Analysis Run 12/27/2022 6:49 PM View: Appendix III - Interwell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-5	GSD-AP-MW-9	GSD-AP-MW-6	GSD-AP-PZ-1	GSD-AP-PZ-6	GSD-AP-MW-14 ...	GSD-AP-PZ-5	GSD-AP-MW-17 ...	GSD-AP-MW-16 ...
3/24/2021				3.45					
10/5/2021	6.78		9.09	3.23					
10/6/2021								2.98	3.17
10/11/2021									
10/12/2021		7.78			3.68	2.87	4.07		
5/9/2022	6.81			3.46		3		3.01	
5/10/2022			8.87		3.68		4.12		
5/11/2022		7.2							
5/16/2022									
5/17/2022									3.58
10/25/2022								2.88	3.24
10/26/2022	6.4	6.99	9.4	3.39	3.5	2.56	4.03		

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/27/2022 6:49 PM View: Appendix III - Interwell

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-2	GSD-AP-MW-12	GSD-AP-MW-11	GSD-AP-MW-10	GSD-AP-MW-3	GSD-AP-MW-8	GSD-AP-MW-7	GSD-AP-MW-4
12/6/2017	650	210	200	83	11	250			
12/7/2017							6.5	14	<1
2/6/2018	560	190				230			<1
2/7/2018				84	19				
2/8/2018			200				8.9	10	
2/12/2018									
4/23/2018	640	140							
4/24/2018			210	98	27	260			<1
4/25/2018							7.9	11	
6/26/2018	670						7.5	11	<1
6/27/2018		130	240	95	<1	230			
7/18/2018									
8/6/2018									<1
8/7/2018	660	150			<1	200			
8/8/2018			260	110			7.3	13	
9/5/2018									
9/24/2018									
10/22/2018	580	160			<1	190			<1
10/23/2018			280	78			7.8	13	
10/24/2018									
11/14/2018									
11/28/2018									
12/3/2018						200			<1
12/4/2018	580	170		97	11		8.2	9.8	
12/5/2018			280						
12/18/2018									
1/3/2019									
1/24/2019									
2/5/2019	702	145				263			5.38
2/6/2019			239	113	16.8		9.53	10.8	
2/7/2019									
2/25/2019						246			
2/26/2019	748	148			38.4				5.1
2/27/2019			257	135			8.25	8.98	
2/28/2019									
6/18/2019						245			
6/24/2019									
8/19/2019									
8/20/2019		110				222			7.34
8/21/2019	708						10.8	11.8	
8/22/2019			339	305	6.74				
4/13/2020						256			
4/14/2020			155	146			12.5		
4/15/2020	647	116			50.7			7.95	17.2
4/16/2020									
8/24/2020									
8/25/2020	642	114							
8/26/2020			282	280	10.5	246	16.1	9.19	15.5
3/16/2021	593								
3/17/2021									
3/22/2021						254			
3/23/2021			160	135	60.1		9.21	8.08	

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/27/2022 6:49 PM View: Appendix III - Interwell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-1	GSD-AP-MW-2	GSD-AP-MW-12	GSD-AP-MW-11	GSD-AP-MW-10	GSD-AP-MW-3	GSD-AP-MW-8	GSD-AP-MW-7	GSD-AP-MW-4
3/24/2021		101							19.9
10/5/2021	567		195			228		9.19	37.8
10/6/2021									
10/11/2021		112			7.75				
10/12/2021				142			16		
5/9/2022									
5/10/2022	508		193		11.6	215		7.13	
5/11/2022							11.8		
5/16/2022		93.1							51.8
5/17/2022				145					
10/25/2022		111							
10/26/2022	512		230	278	4.42	206	10.1	11.4	61.799999

# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/27/2022 6:49 PM View: Appendix III - Interwell  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-5	GSD-AP-MW-9	GSD-AP-MW-6	GSD-AP-PZ-1	GSD-AP-PZ-6	GSD-AP-MW-14 ...	GSD-AP-PZ-5	GSD-AP-MW-17 ...	GSD-AP-MW-16 ...
12/6/2017									
12/7/2017	19	9	10						
2/6/2018	20								
2/7/2018									
2/8/2018			11						
2/12/2018		8.3							
4/23/2018									
4/24/2018									
4/25/2018	22	12	13						
6/26/2018		8.5	11						
6/27/2018	18			2.2 (J)	<1	120	<1		
7/18/2018				2.5 (J)	<1	120	<1		
8/6/2018						110			
8/7/2018	20		12	<1					
8/8/2018		6.7			<1		<1		
9/5/2018				1.4 (J)	<1	86	<1		
9/24/2018				<1	<1	80	<1		
10/22/2018				1.7 (J)					
10/23/2018	18	9.4	11		<1		<1		
10/24/2018						68		16	44
11/14/2018								13	44
11/28/2018								11	46
12/3/2018			12	2.1 (J)	<1		<1		
12/4/2018									
12/5/2018	20	7.8				54		12	51
12/18/2018								11	76
1/3/2019								10	94
1/24/2019								10.2	135
2/5/2019	24.3		13.9	3.99		126		10.4	183
2/6/2019		17							
2/7/2019					1.69		0.639 (J)		
2/25/2019				4.01	1.53		<1		
2/26/2019			14.1						
2/27/2019	24.7	12.4							
2/28/2019						207		9.86	192
6/18/2019									
6/24/2019									129 (D)
8/19/2019								8.74	66.6
8/20/2019	21.3		12.3	3.73		106			
8/21/2019		11.3			1.62		1.21		
8/22/2019									
4/13/2020	21.9		13.9	3.83					
4/14/2020		15.9							
4/15/2020					1.68		0.554 (J)		92.8
4/16/2020						191		11.5	
8/24/2020	21.2			4.16	1.31		<1	10	
8/25/2020						98.4			74.1
8/26/2020		12.9	13.1						
3/16/2021	18.8				1.7		1.02		
3/17/2021			13.7						
3/22/2021						83.8		10.6	128
3/23/2021		15.7							

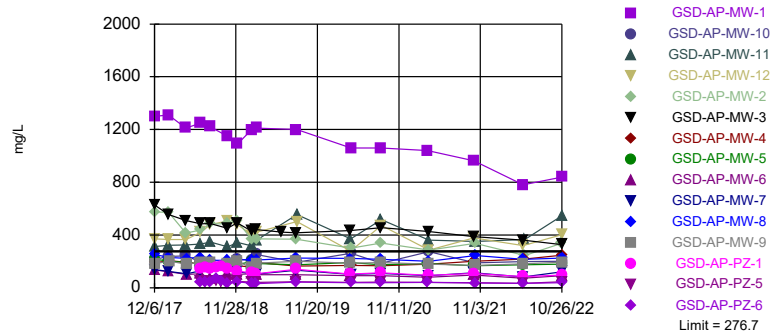
# Prediction Limit

Constituent: Sulfate (mg/L) Analysis Run 12/27/2022 6:49 PM View: Appendix III - Interwell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-5	GSD-AP-MW-9	GSD-AP-MW-6	GSD-AP-PZ-1	GSD-AP-PZ-6	GSD-AP-MW-14 ...	GSD-AP-PZ-5	GSD-AP-MW-17 ...	GSD-AP-MW-16 ...
3/24/2021				2.88					
10/5/2021	14.4		14.2	2.17					
10/6/2021								10.2	93.5
10/11/2021									
10/12/2021		18			1.34	95.7	0.895 (J)		
5/9/2022	15.5			2.51		125		10	
5/10/2022			14.8		1.28 (J)		1.02 (J)		
5/11/2022		17.7							
5/16/2022									
5/17/2022									139
10/25/2022								9.25	37.099998
10/26/2022	16.1	13.8	12.2	3.43	1.7 (J)	50.700001	0.992 (J)		

Exceeds Limit: GSD-AP-MW-1, GSD-AP-MW-11, GSD-AP-MW-12, GSD-AP-MW-2, GSD-AP-MW-3

Prediction Limit  
Interwell Parametric



Background Data Summary: Mean=167.4, Std. Dev.=51.01, n=49. Normality test: Shapiro Wilk @alpha = 0.01, calculated = 0.9519, critical = 0.929. Kappa = 2.142 (c=7, w=15, 1 of 2, event alpha = 0.05132). Report alpha = 0.007498. Individual comparison alpha = 0.0005016. Comparing 15 points to limit.

Constituent: Total Dissolved Solids Analysis Run 12/27/2022 6:47 PM View: Appendix III - Interwell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR



# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/27/2022 6:49 PM View: Appendix III - Interwell

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-2	GSD-AP-MW-12	GSD-AP-MW-11	GSD-AP-MW-10	GSD-AP-MW-3	GSD-AP-MW-8	GSD-AP-MW-7	GSD-AP-MW-4
12/6/2017	1300	574	371	312	215	628			
12/7/2017							253	137	189
2/6/2018	1310	572				556			206
2/7/2018				323	237				
2/8/2018			367				229	124	
2/12/2018									
4/23/2018	1210	414							
4/24/2018			365	324	242	510			193
4/25/2018							223	106	
6/26/2018	1250						232	129	180
6/27/2018		440	421	333	194	486			
7/18/2018									
8/6/2018									182
8/7/2018	1220	485			195	487			
8/8/2018			479	346			208	142	
9/5/2018									
9/24/2018									
10/22/2018	1150	484			184	450			204
10/23/2018			507	311			209	142	
10/24/2018									
11/14/2018									
11/28/2018									
12/3/2018						492			168
12/4/2018	1090	504		343	215		213	121	
12/5/2018			479						
12/18/2018									
1/3/2019									
1/24/2019									
2/5/2019	1200	366				428			158
2/6/2019			399	317	208		212	108	
2/7/2019									
2/25/2019						441			
2/26/2019	1210	372			252				191
2/27/2019			422	360			211	103	
2/28/2019									
6/18/2019						422			
6/24/2019									
8/19/2019									
8/20/2019		369				416			164
8/21/2019	1200						226	133	
8/22/2019			501	555	194				
4/13/2020						433			
4/14/2020			278	372			222		
4/15/2020	1060	300			262			102	170
4/16/2020									
8/24/2020									
8/25/2020	1060	339							
8/26/2020			472	517	186	455	215	109	168
3/16/2021	1040								
3/17/2021									
3/22/2021						427			
3/23/2021			286	361	273		200	92.7	

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/27/2022 6:49 PM View: Appendix III - Interwell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-MW-1	GSD-AP-MW-2	GSD-AP-MW-12	GSD-AP-MW-11	GSD-AP-MW-10	GSD-AP-MW-3	GSD-AP-MW-8	GSD-AP-MW-7	GSD-AP-MW-4
3/24/2021		287							180
10/5/2021	964		378			389		113	200
10/6/2021									
10/11/2021		337			190				
10/12/2021				352			245		
5/9/2022									
5/10/2022	780		319		199	362		82.7	
5/11/2022							216		
5/16/2022		244							218
5/17/2022				367					
10/25/2022		337							
10/26/2022	840		402	545	202	328	226	121	247

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/27/2022 6:49 PM View: Appendix III - Interwell

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-5	GSD-AP-MW-9	GSD-AP-MW-6	GSD-AP-PZ-1	GSD-AP-PZ-6	GSD-AP-MW-14 ...	GSD-AP-PZ-5	GSD-AP-MW-17 ...	GSD-AP-MW-16 ...
12/6/2017									
12/7/2017	215	183	136						
2/6/2018	204								
2/7/2018									
2/8/2018			122						
2/12/2018		201							
4/23/2018									
4/24/2018									
4/25/2018	192	180	102						
6/26/2018		191	106						
6/27/2018	180			144	44	219	48.7		
7/18/2018				156	42.7	195	46		
8/6/2018						175			
8/7/2018	183		71.3	140					
8/8/2018		192			46		48		
9/5/2018				154	67.3	153	47.3		
9/24/2018				165	49.3	127	44.7		
10/22/2018				148					
10/23/2018	169	185	105		31.3		35.3		
10/24/2018						125		184	107
11/14/2018								170	96.7
11/28/2018								167	102
12/3/2018			102	127	46		48.7		
12/4/2018									
12/5/2018	177	200				101		185	103
12/18/2018								164	126
1/3/2019								167	191
1/24/2019								137	212
2/5/2019	198		107	113		180		138	269
2/6/2019		151							
2/7/2019					32.7		42.7		
2/25/2019				106	31.3		40.7		
2/26/2019			99.3						
2/27/2019	185	186							
2/28/2019						287		140	261
6/18/2019									
6/24/2019									203.5 (D)
8/19/2019								240	121
8/20/2019	174		98.7	141		265			
8/21/2019		200			42.7		46		
8/22/2019									
4/13/2020	192		90.7	104					
4/14/2020		187							
4/15/2020					37.3		41.3		155
4/16/2020						280		166	
8/24/2020	175			114	37.3		42.7	162	
8/25/2020						160			131
8/26/2020		192	91.3						
3/16/2021	184				41.3		42		
3/17/2021			80						
3/22/2021						126		157	204
3/23/2021		178							

# Prediction Limit

Constituent: Total Dissolved Solids (mg/L) Analysis Run 12/27/2022 6:49 PM View: Appendix III - Interwell  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-5	GSD-AP-MW-9	GSD-AP-MW-6	GSD-AP-PZ-1	GSD-AP-PZ-6	GSD-AP-MW-14 ...	GSD-AP-PZ-5	GSD-AP-MW-17 ...	GSD-AP-MW-16 ...
3/24/2021				94					
10/5/2021	168		96.7	108					
10/6/2021								182	136
10/11/2021									
10/12/2021		169			35.3	142	38.7		
5/9/2022	174			85.3		185		152	
5/10/2022			73.3		33.3		33.3		
5/11/2022		181							
5/16/2022									
5/17/2022									226
10/25/2022								159	72.699997
10/26/2022	178	194	91.300003	96	38	98	45.299999		

FIGURE F.

# Trend Tests - Prediction Limit Exceedances - Significant Results

Plant Gadsden    Client: Southern Company    Data: Plant Gadsden CCR    Printed 12/27/2022, 6:58 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
Boron (mg/L)	GSD-AP-MW-1	-0.06272	-88	-58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-11	0.0113	63	58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-2	-0.06977	-85	-58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-4	-0.043	-87	-58	Yes	16	0	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-5	-0.05974	-94	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-1	-19.11	-80	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-11	4.053	71	58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-2	-11.63	-69	-58	Yes	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-3	-9.136	-98	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-17 (bg)	-0.2175	-80	-58	Yes	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-3	-0.697	-123	-63	Yes	17	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-5	-0.2449	-61	-58	Yes	16	0	n/a	n/a	0.01	NP
pH (pH)	GSD-AP-MW-11	-0.08419	-72	-58	Yes	16	0	n/a	n/a	0.01	NP
pH (pH)	GSD-AP-MW-16 (bg)	-0.2316	-69	-58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-11	23.94	77	58	Yes	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-17 (bg)	-0.792	-63	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-1	-89.27	-95	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-11	22.05	70	58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-2	-55.25	-85	-58	Yes	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-3	-41.2	-104	-63	Yes	17	0	n/a	n/a	0.01	NP

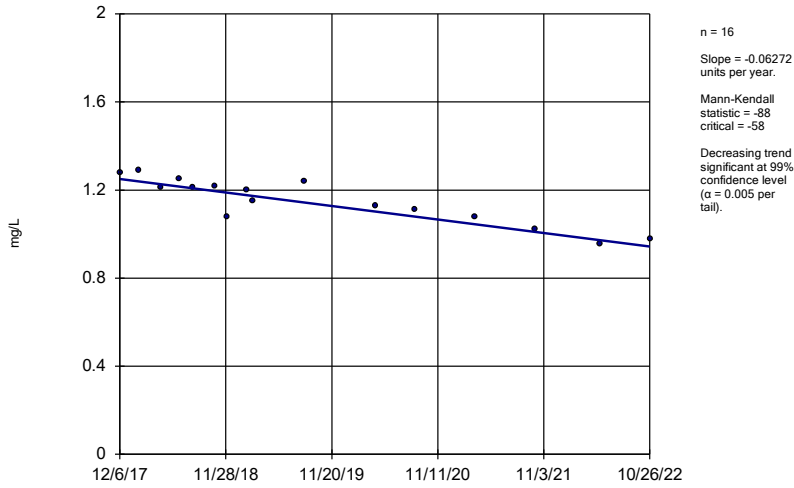
# Trend Tests - Prediction Limit Exceedances - All Results

Plant Gadsden    Client: Southern Company    Data: Plant Gadsden CCR    Printed 12/27/2022, 6:58 PM

Constituent	Well	Slope	Calc.	Critical	Sig.	N	%NDs	Normality	Xform	Alpha	Method
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-1</b>	<b>-0.06272</b>	<b>-88</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>0.0113</b>	<b>63</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron (mg/L)	GSD-AP-MW-14 (bg)	0	0	58	No	16	100	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-16 (bg)	0.001587	56	63	No	17	64.71	n/a	n/a	0.01	NP
Boron (mg/L)	GSD-AP-MW-17 (bg)	-0.0009573	-34	-58	No	16	0	n/a	n/a	0.01	NP
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>-0.06977</b>	<b>-85</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Boron (mg/L)	GSD-AP-MW-3	0.02648	34	63	No	17	0	n/a	n/a	0.01	NP
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-4</b>	<b>-0.043</b>	<b>-87</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Boron (mg/L)</b>	<b>GSD-AP-MW-5</b>	<b>-0.05974</b>	<b>-94</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-1</b>	<b>-19.11</b>	<b>-80</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	GSD-AP-MW-10	0.2953	12	58	No	16	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>4.053</b>	<b>71</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	GSD-AP-MW-12	1.444	9	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-14 (bg)	-0.7905	-27	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-16 (bg)	-0.8295	-19	-63	No	17	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-17 (bg)	1.555	39	58	No	16	0	n/a	n/a	0.01	NP
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>-11.63</b>	<b>-69</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Calcium (mg/L)</b>	<b>GSD-AP-MW-3</b>	<b>-9.136</b>	<b>-98</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Calcium (mg/L)	GSD-AP-MW-4	-1.089	-20	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-5	-0.7867	-23	-58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-8	0.9641	6	58	No	16	0	n/a	n/a	0.01	NP
Calcium (mg/L)	GSD-AP-MW-9	0.873	14	58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-1	0.02129	11	58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-10	0.01104	3	58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-11	-0.05352	-7	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-12	-0.01676	-4	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-14 (bg)	-0.008802	-4	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-16 (bg)	-0.03896	-16	-63	No	17	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-17 (bg)</b>	<b>-0.2175</b>	<b>-80</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-3</b>	<b>-0.697</b>	<b>-123</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	GSD-AP-MW-4	-0.08104	-6	-58	No	16	0	n/a	n/a	0.01	NP
<b>Chloride (mg/L)</b>	<b>GSD-AP-MW-5</b>	<b>-0.2449</b>	<b>-61</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Chloride (mg/L)	GSD-AP-MW-6	-0.1248	-39	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-7	-0.4945	-53	-58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-8	0.144	31	58	No	16	0	n/a	n/a	0.01	NP
Chloride (mg/L)	GSD-AP-MW-9	0.1519	34	58	No	16	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	GSD-AP-MW-14 (bg)	-0.01829	-57	-58	No	16	56.25	n/a	n/a	0.01	NP
Fluoride (mg/L)	GSD-AP-MW-16 (bg)	0	21	63	No	17	58.82	n/a	n/a	0.01	NP
Fluoride (mg/L)	GSD-AP-MW-17 (bg)	-0.008461	-50	-58	No	16	0	n/a	n/a	0.01	NP
Fluoride (mg/L)	GSD-AP-MW-7	0.002021	18	58	No	16	18.75	n/a	n/a	0.01	NP
<b>pH (pH)</b>	<b>GSD-AP-MW-11</b>	<b>-0.08419</b>	<b>-72</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
pH (pH)	GSD-AP-MW-14 (bg)	-0.01296	-22	-58	No	16	0	n/a	n/a	0.01	NP
<b>pH (pH)</b>	<b>GSD-AP-MW-16 (bg)</b>	<b>-0.2316</b>	<b>-69</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
pH (pH)	GSD-AP-MW-17 (bg)	-0.2293	-29	-58	No	16	0	n/a	n/a	0.01	NP
pH (pH)	GSD-AP-MW-5	-0.01447	-11	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-1	-17.42	-29	-58	No	16	0	n/a	n/a	0.01	NP
<b>Sulfate (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>23.94</b>	<b>77</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Sulfate (mg/L)	GSD-AP-MW-12	-0.6523	-2	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-14 (bg)	-5.22	-17	-58	No	16	0	n/a	n/a	0.01	NP
Sulfate (mg/L)	GSD-AP-MW-16 (bg)	17.25	37	63	No	17	0	n/a	n/a	0.01	NP
<b>Sulfate (mg/L)</b>	<b>GSD-AP-MW-17 (bg)</b>	<b>-0.792</b>	<b>-63</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-1</b>	<b>-89.27</b>	<b>-95</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-11</b>	<b>22.05</b>	<b>70</b>	<b>58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
Total Dissolved Solids (mg/L)	GSD-AP-MW-12	-6.344	-9	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-14 (bg)	-11.74	-22	-58	No	16	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-16 (bg)	16.45	32	63	No	17	0	n/a	n/a	0.01	NP
Total Dissolved Solids (mg/L)	GSD-AP-MW-17 (bg)	-3.317	-31	-58	No	16	0	n/a	n/a	0.01	NP
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>-55.25</b>	<b>-85</b>	<b>-58</b>	<b>Yes</b>	<b>16</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>
<b>Total Dissolved Solids (mg/L)</b>	<b>GSD-AP-MW-3</b>	<b>-41.2</b>	<b>-104</b>	<b>-63</b>	<b>Yes</b>	<b>17</b>	<b>0</b>	<b>n/a</b>	<b>n/a</b>	<b>0.01</b>	<b>NP</b>

### Sen's Slope Estimator

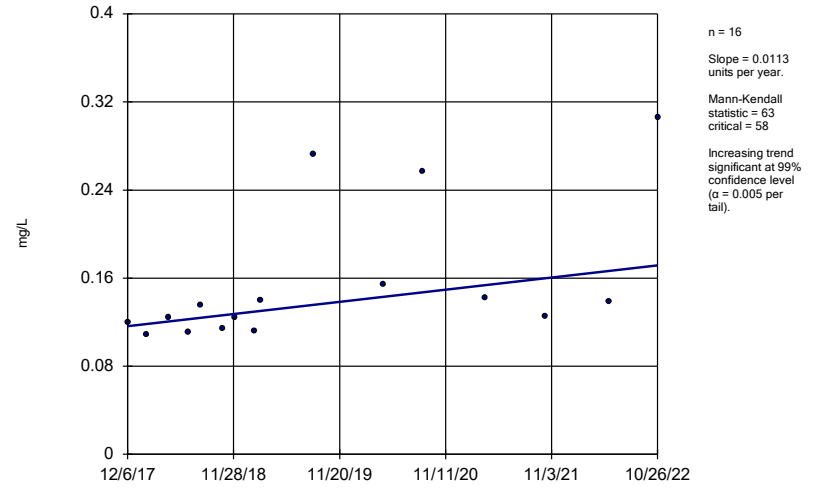
GSD-AP-MW-1



Constituent: Boron Analysis Run 12/27/2022 6:54 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

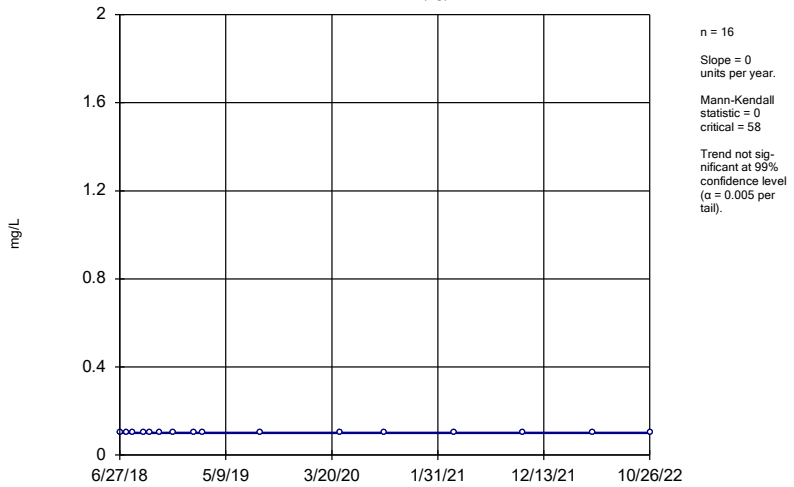
GSD-AP-MW-11



Constituent: Boron Analysis Run 12/27/2022 6:54 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

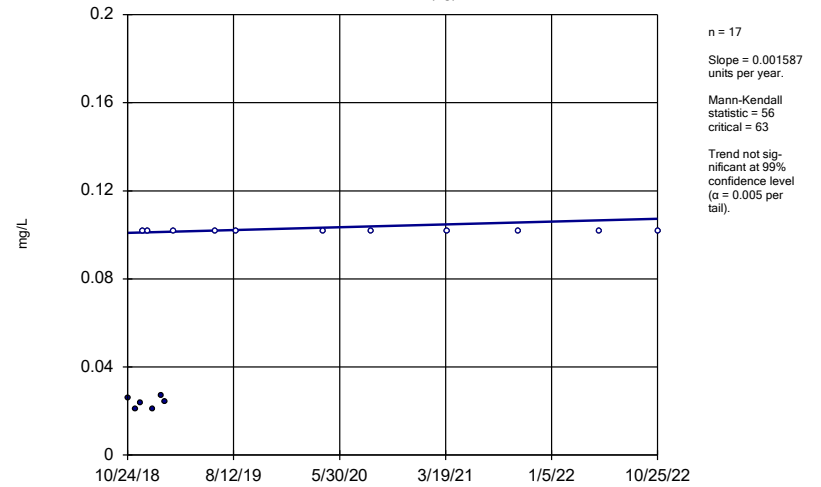
GSD-AP-MW-14 (bg)



Constituent: Boron Analysis Run 12/27/2022 6:54 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

GSD-AP-MW-16 (bg)

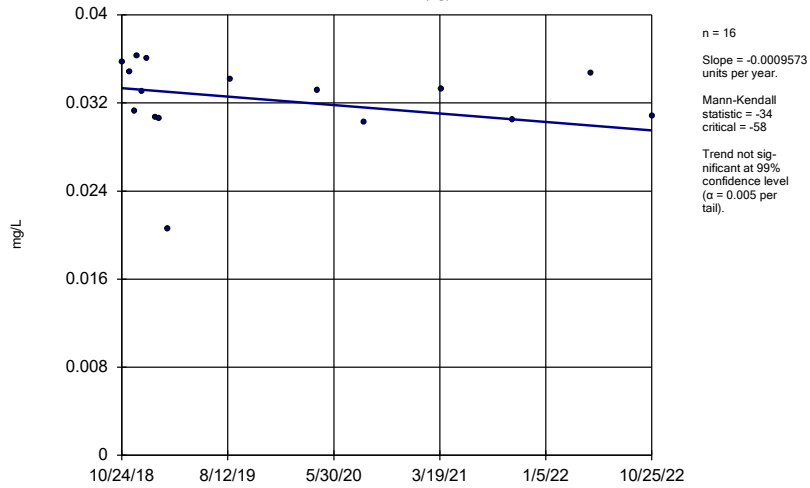


Constituent: Boron Analysis Run 12/27/2022 6:54 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR



### Sen's Slope Estimator

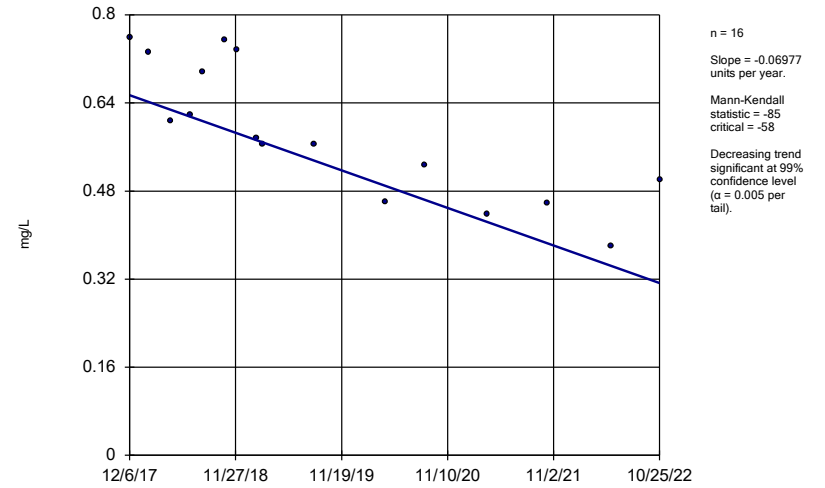
GSD-AP-MW-17 (bg)



Constituent: Boron Analysis Run 12/27/2022 6:54 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

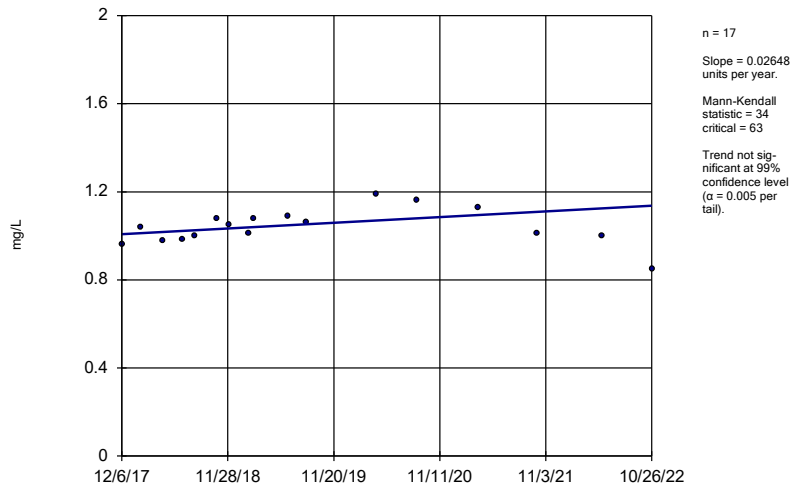
GSD-AP-MW-2



Constituent: Boron Analysis Run 12/27/2022 6:54 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

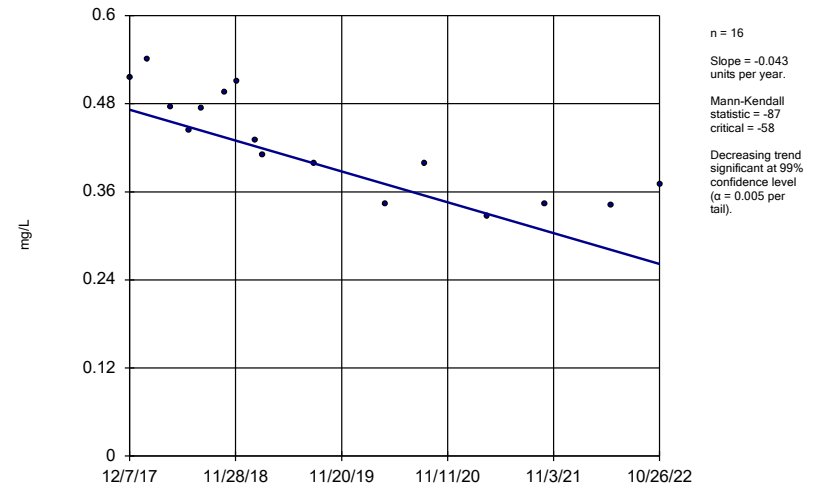
GSD-AP-MW-3



Constituent: Boron Analysis Run 12/27/2022 6:54 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

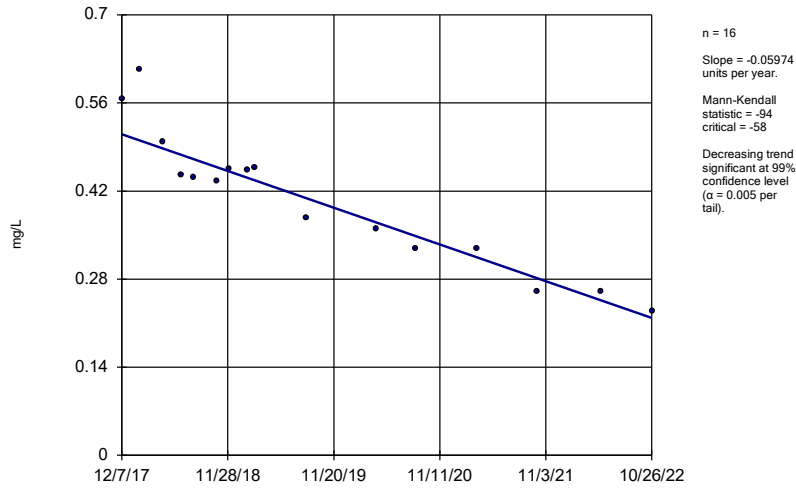
GSD-AP-MW-4



Constituent: Boron Analysis Run 12/27/2022 6:54 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

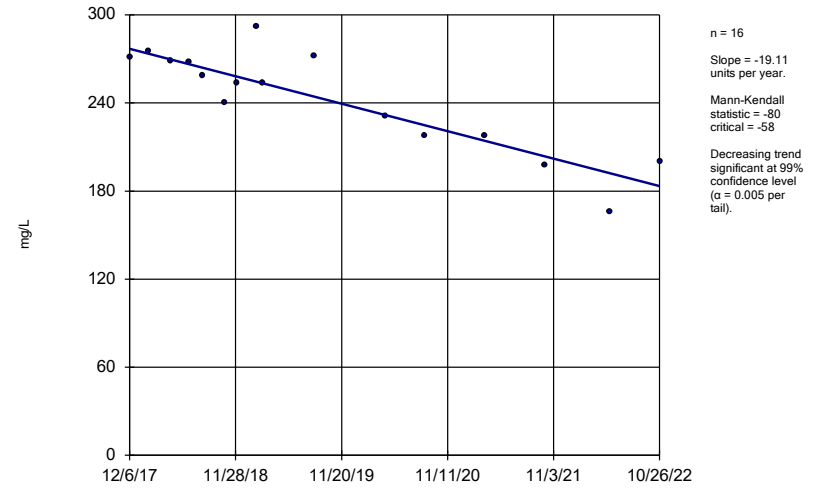
GSD-AP-MW-5



Constituent: Boron Analysis Run 12/27/2022 6:54 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

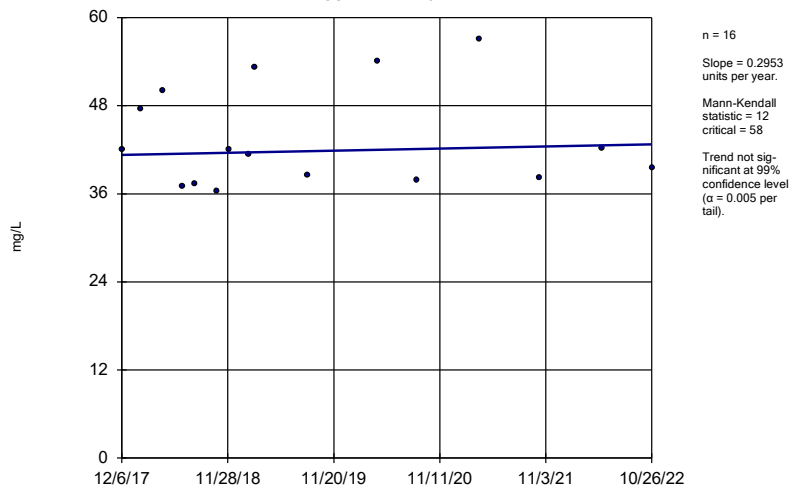
GSD-AP-MW-1



Constituent: Calcium Analysis Run 12/27/2022 6:54 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

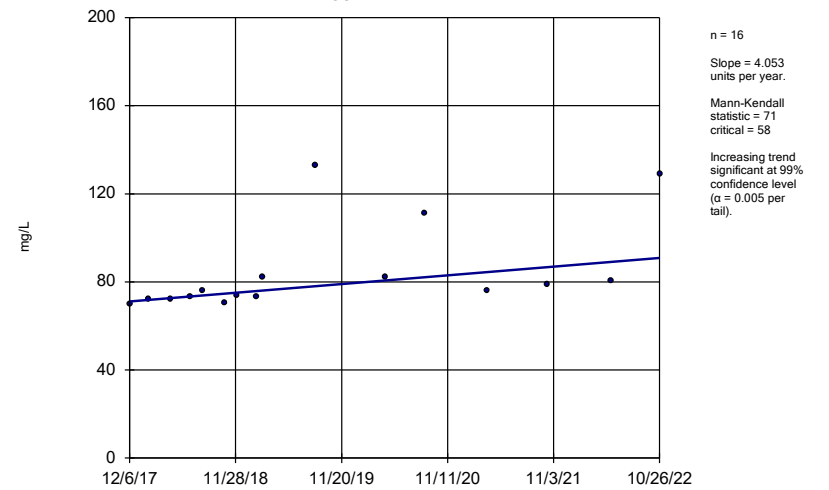
GSD-AP-MW-10



Constituent: Calcium Analysis Run 12/27/2022 6:54 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

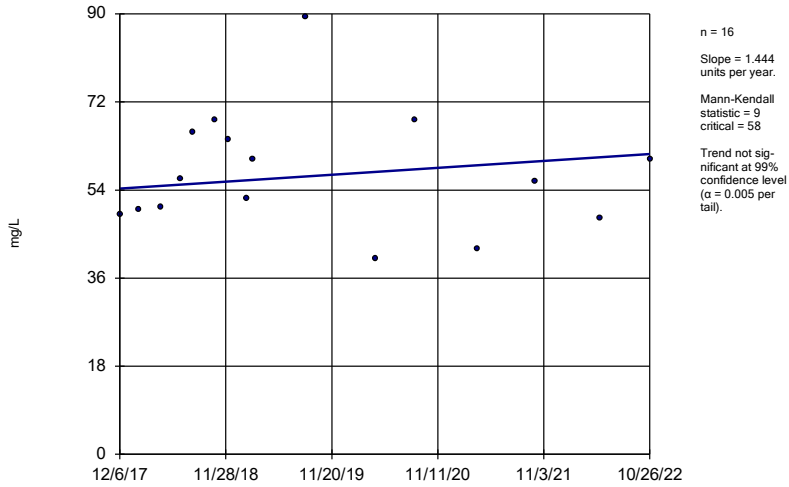
GSD-AP-MW-11



Constituent: Calcium Analysis Run 12/27/2022 6:54 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

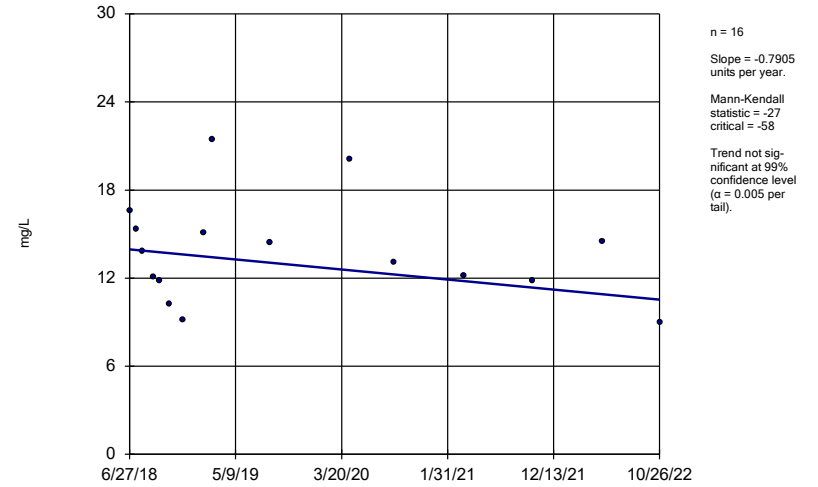
GSD-AP-MW-12



Constituent: Calcium Analysis Run 12/27/2022 6:54 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

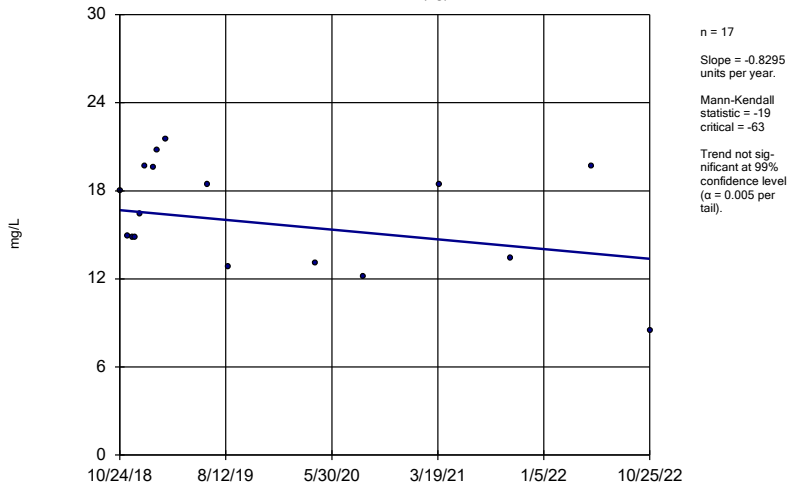
GSD-AP-MW-14 (bg)



Constituent: Calcium Analysis Run 12/27/2022 6:54 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

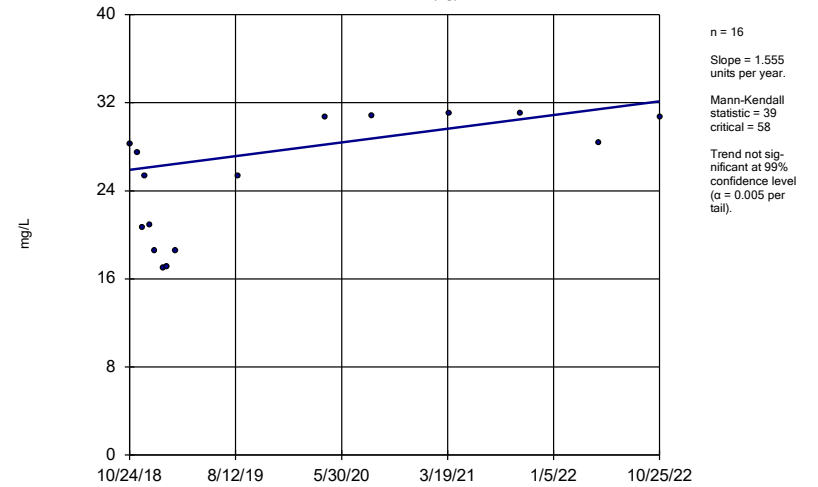
GSD-AP-MW-16 (bg)



Constituent: Calcium Analysis Run 12/27/2022 6:54 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

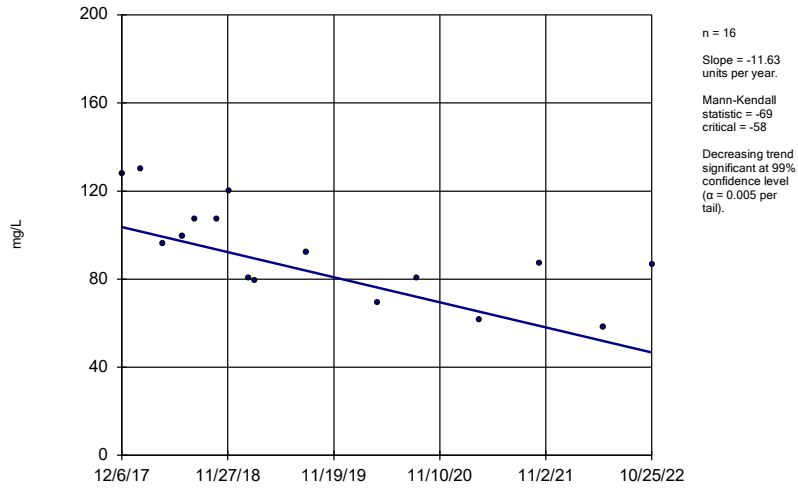
GSD-AP-MW-17 (bg)



Constituent: Calcium Analysis Run 12/27/2022 6:54 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

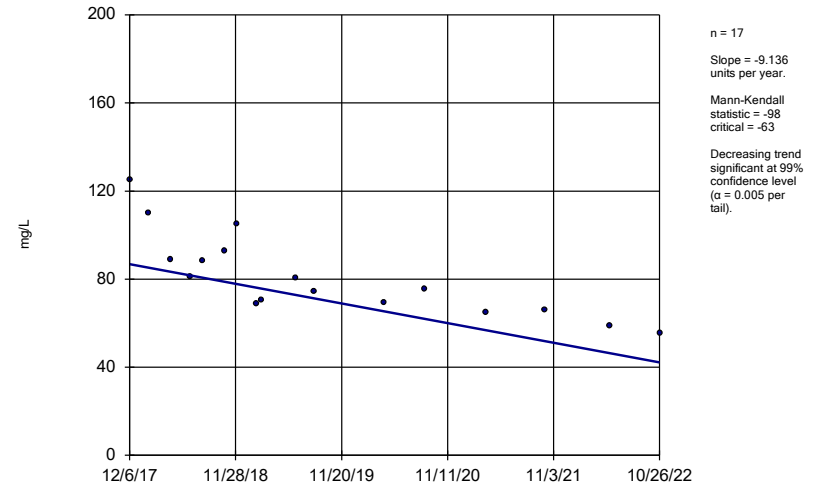
GSD-AP-MW-2



Constituent: Calcium Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

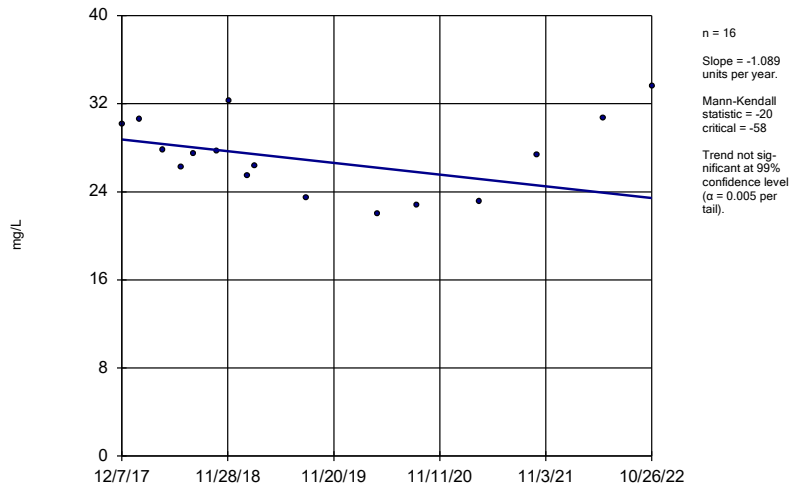
GSD-AP-MW-3



Constituent: Calcium Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

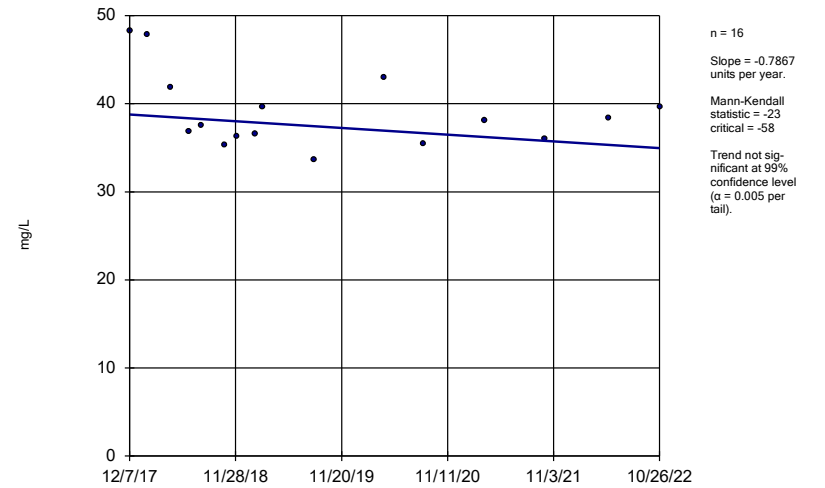
GSD-AP-MW-4



Constituent: Calcium Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

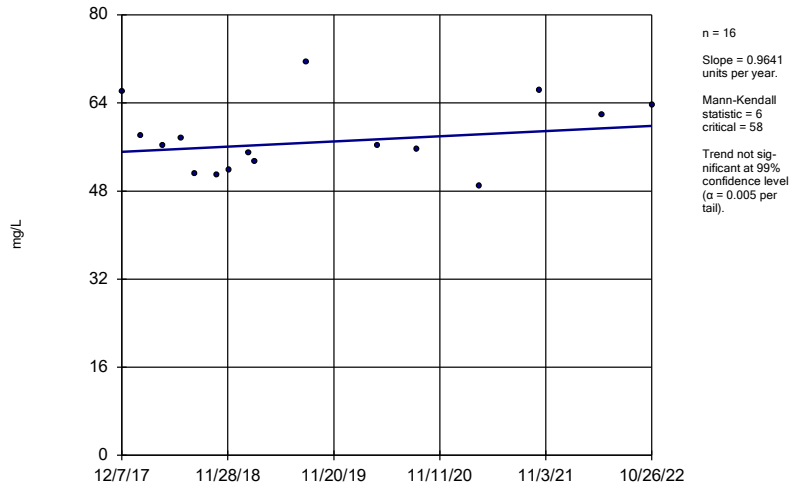
GSD-AP-MW-5



Constituent: Calcium Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

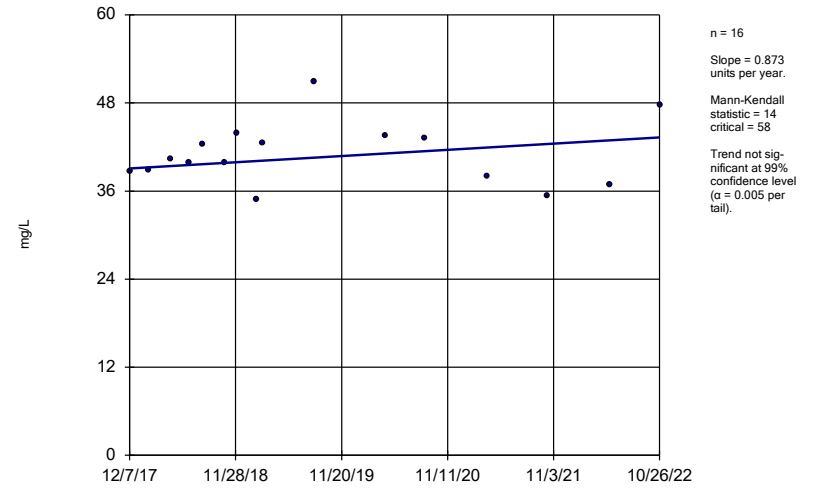
GSD-AP-MW-8



Constituent: Calcium Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

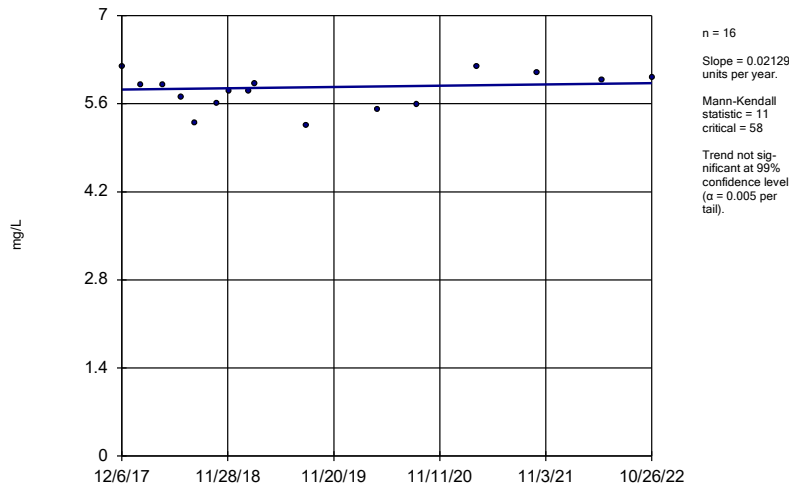
GSD-AP-MW-9



Constituent: Calcium Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

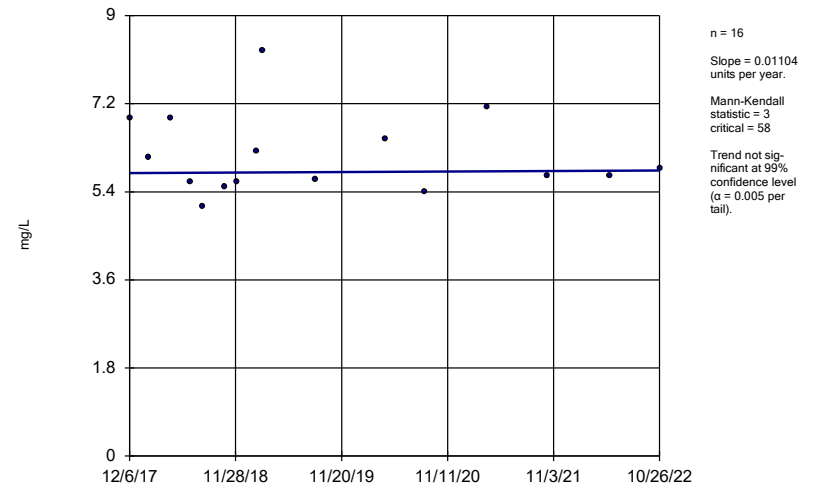
GSD-AP-MW-1



Constituent: Chloride Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

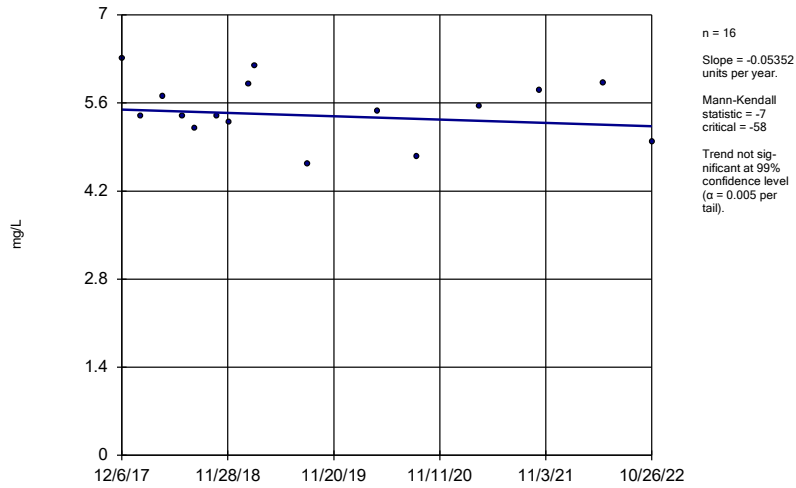
GSD-AP-MW-10



Constituent: Chloride Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

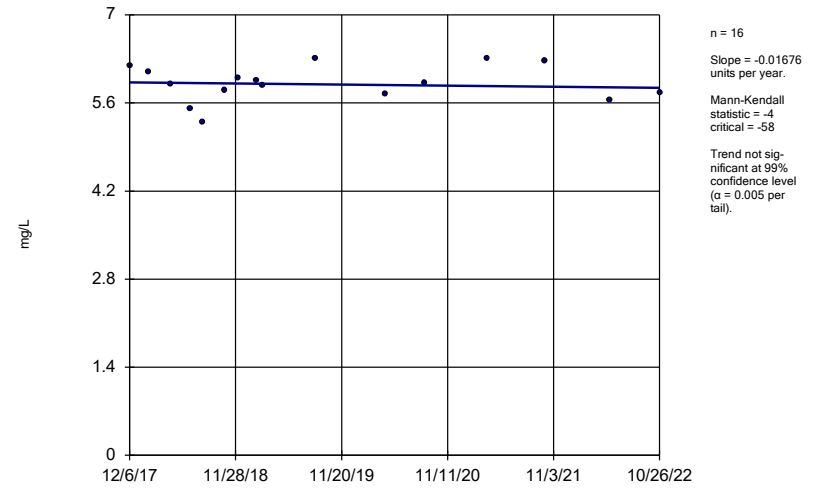
GSD-AP-MW-11



Constituent: Chloride Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

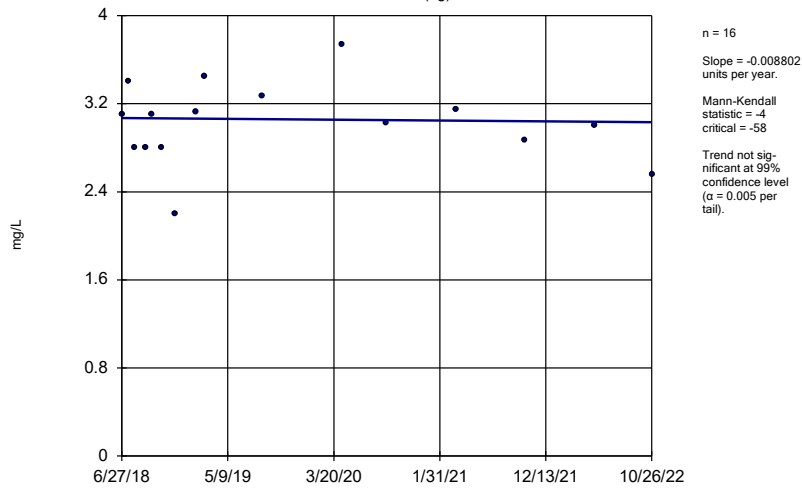
GSD-AP-MW-12



Constituent: Chloride Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

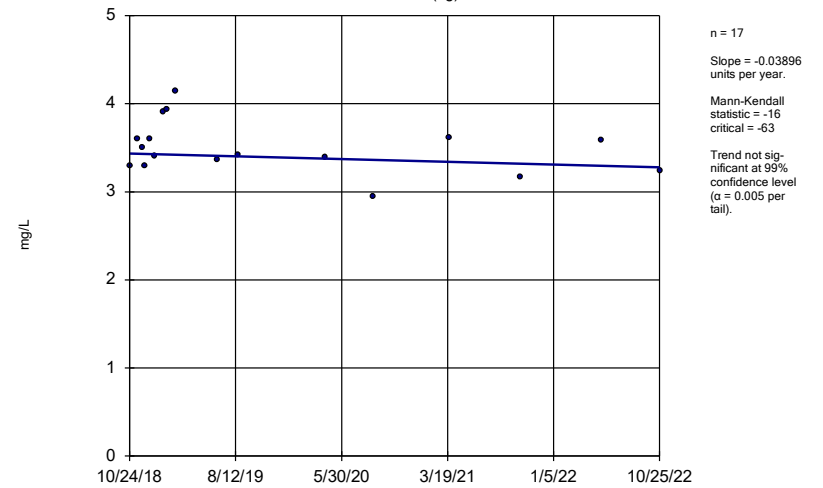
GSD-AP-MW-14 (bg)



Constituent: Chloride Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

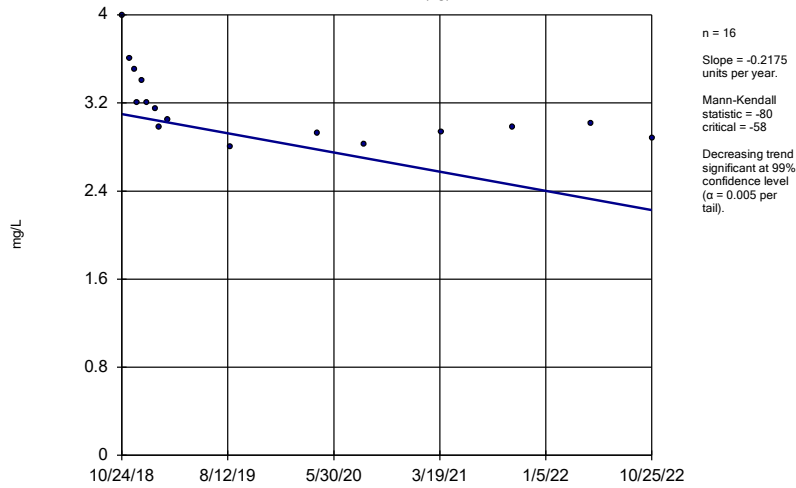
GSD-AP-MW-16 (bg)



Constituent: Chloride Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

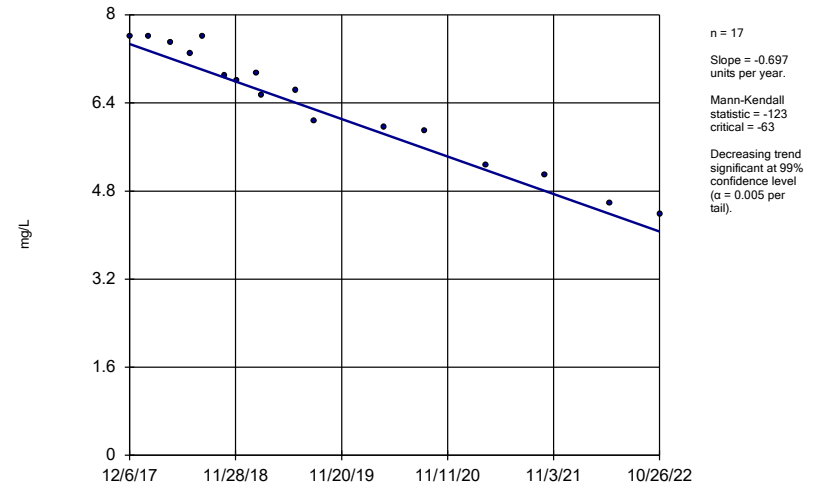
GSD-AP-MW-17 (bg)



Constituent: Chloride Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

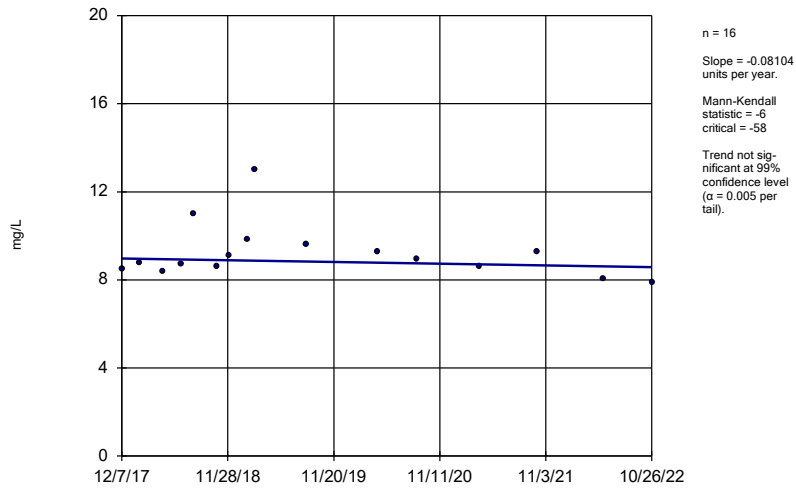
GSD-AP-MW-3



Constituent: Chloride Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

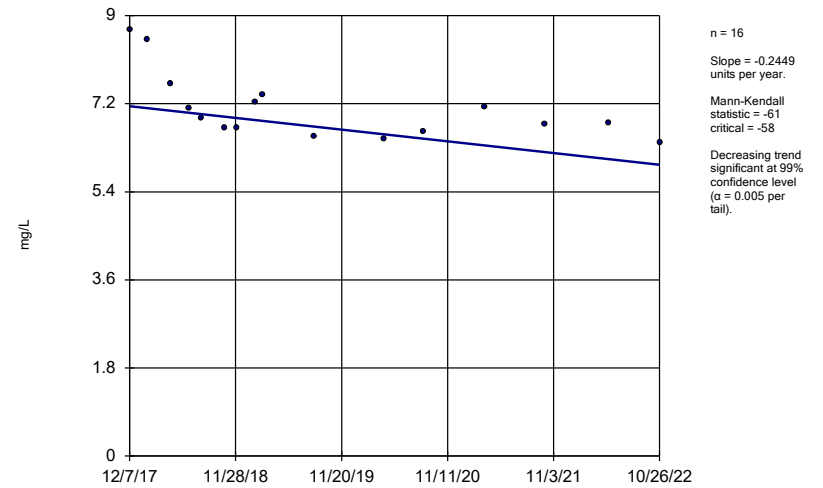
GSD-AP-MW-4



Constituent: Chloride Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

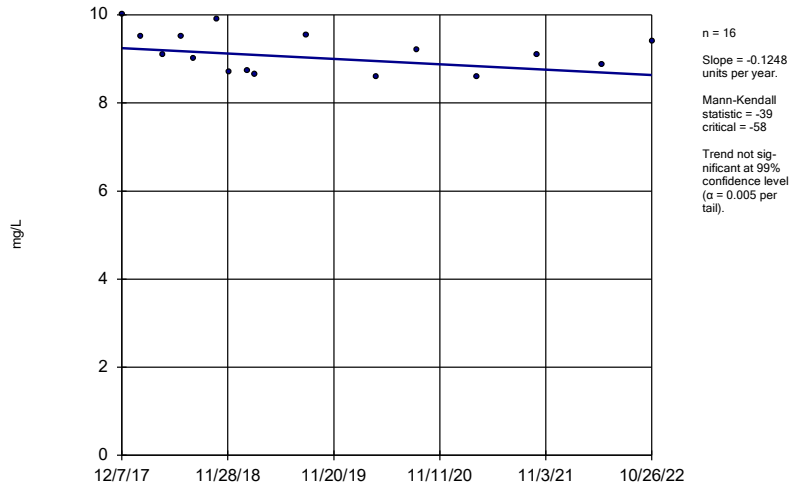
GSD-AP-MW-5



Constituent: Chloride Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

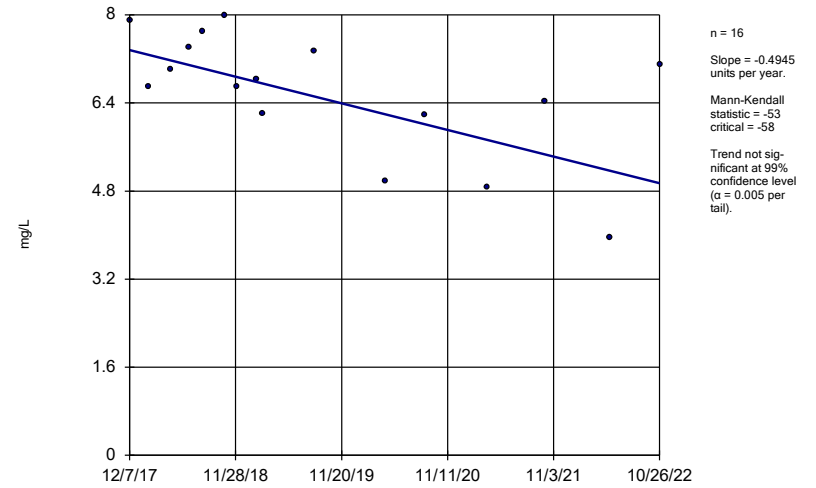
GSD-AP-MW-6



Constituent: Chloride Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

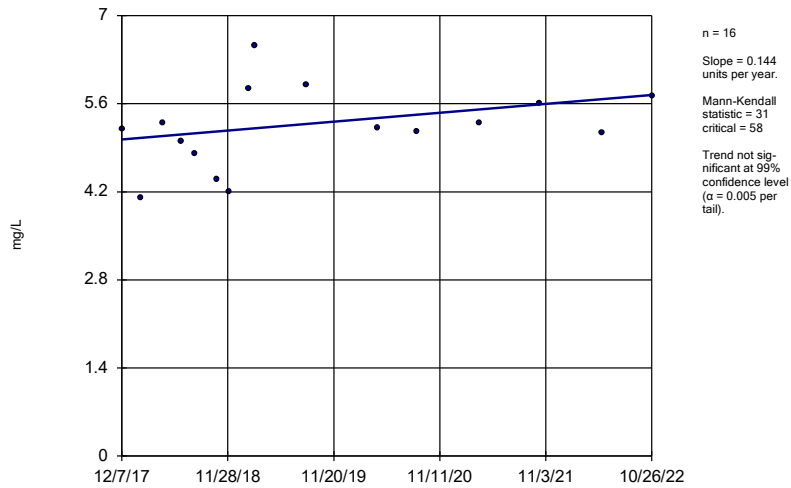
GSD-AP-MW-7



Constituent: Chloride Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

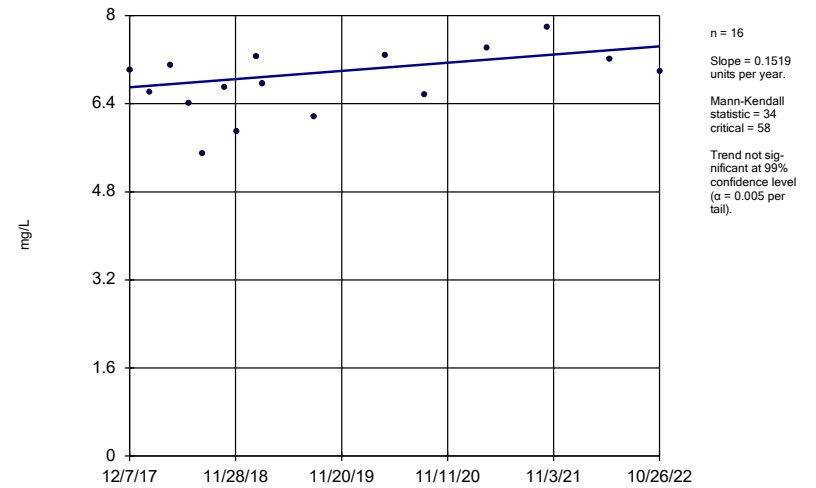
GSD-AP-MW-8



Constituent: Chloride Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

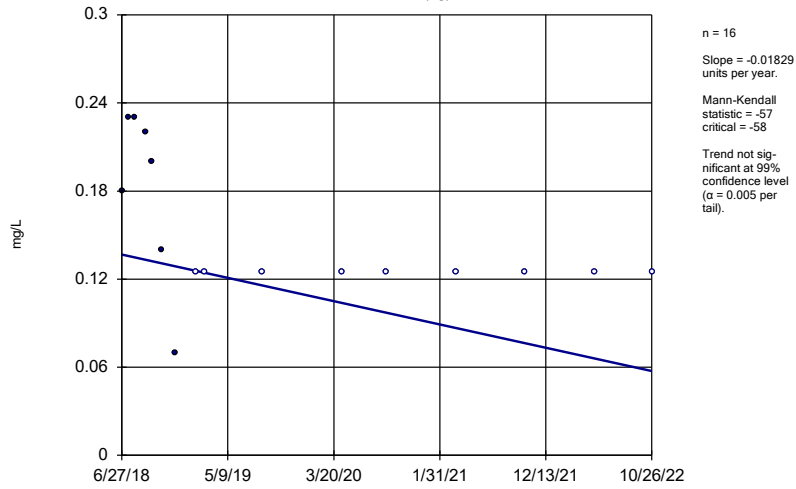
GSD-AP-MW-9



Constituent: Chloride Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

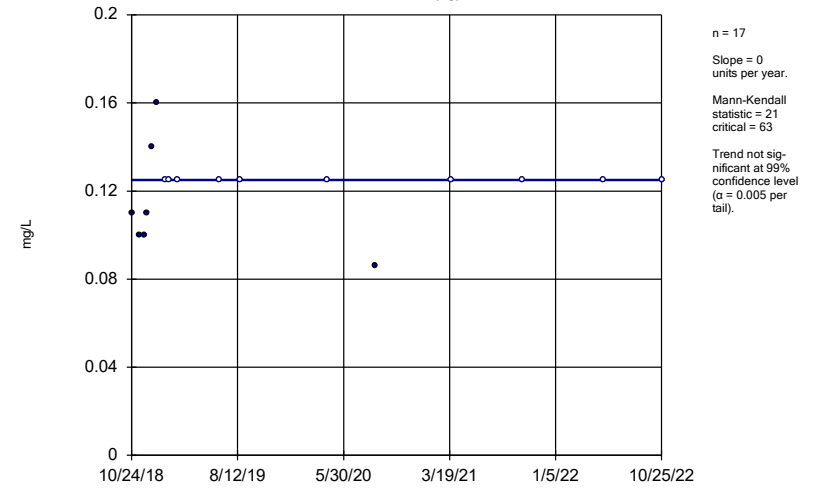


Sen's Slope Estimator  
GSD-AP-MW-14 (bg)



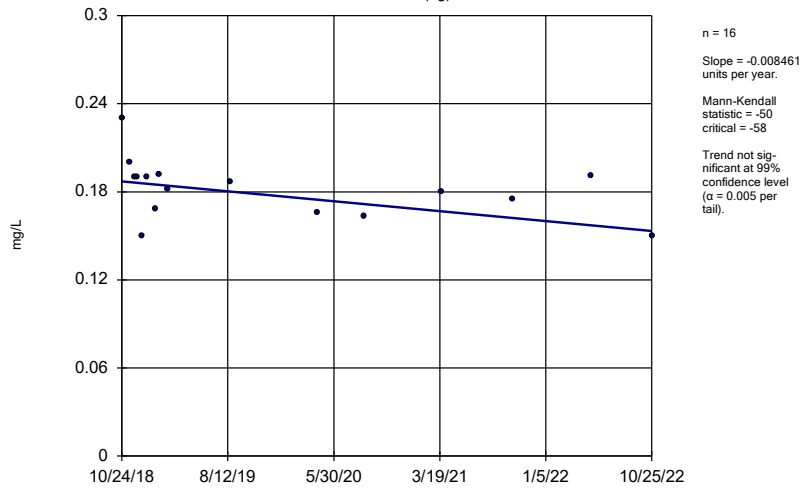
Constituent: Fluoride Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator  
GSD-AP-MW-16 (bg)



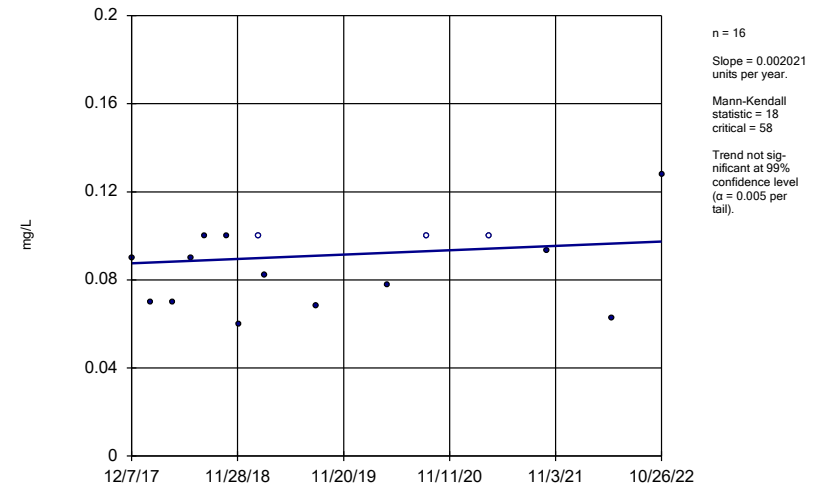
Constituent: Fluoride Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Sen's Slope Estimator  
GSD-AP-MW-17 (bg)



Constituent: Fluoride Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

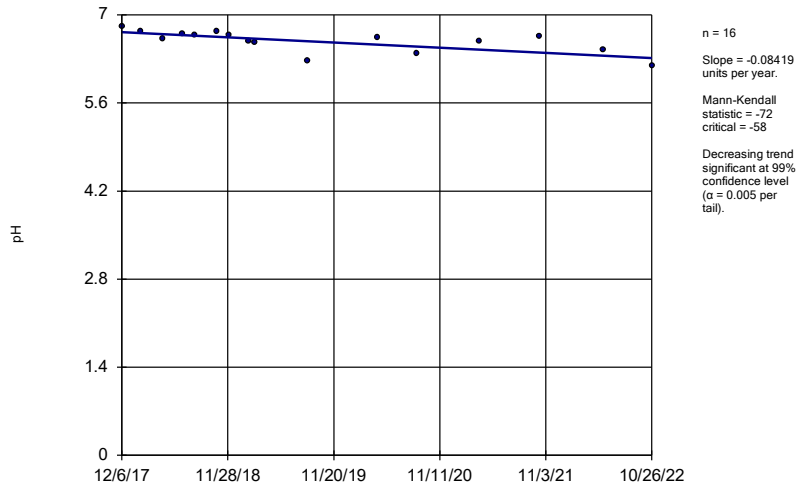
Sen's Slope Estimator  
GSD-AP-MW-7



Constituent: Fluoride Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

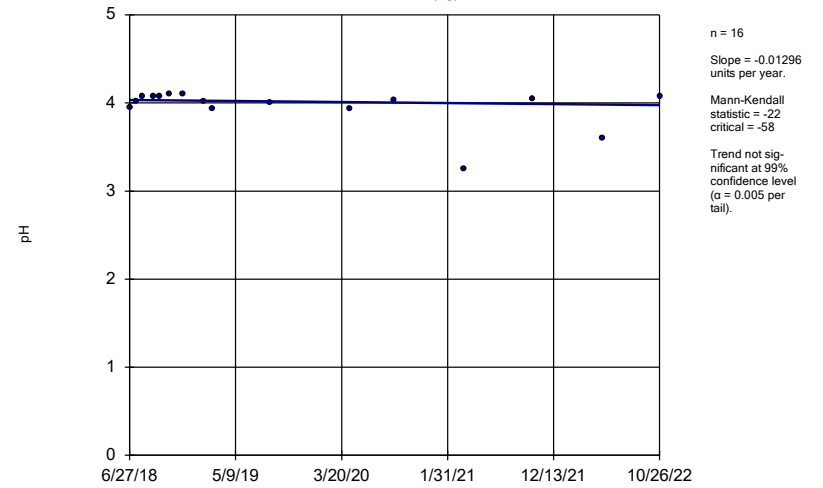
GSD-AP-MW-11



Constituent: pH Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

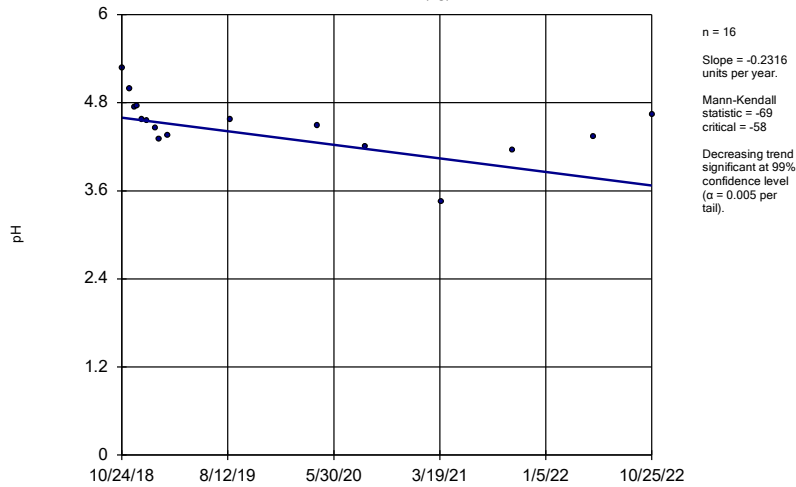
GSD-AP-MW-14 (bg)



Constituent: pH Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

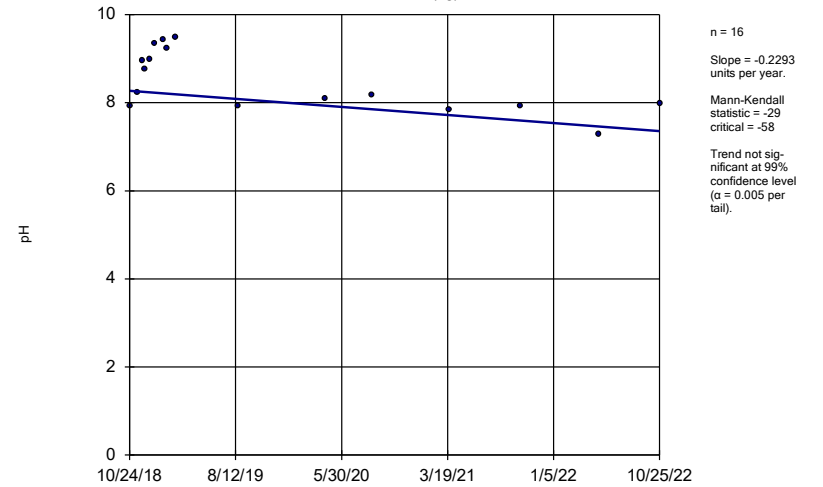
GSD-AP-MW-16 (bg)



Constituent: pH Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

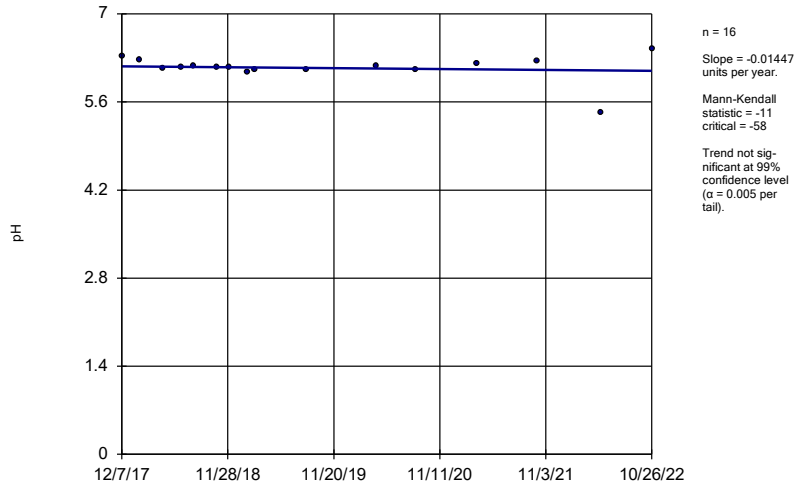
GSD-AP-MW-17 (bg)



Constituent: pH Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

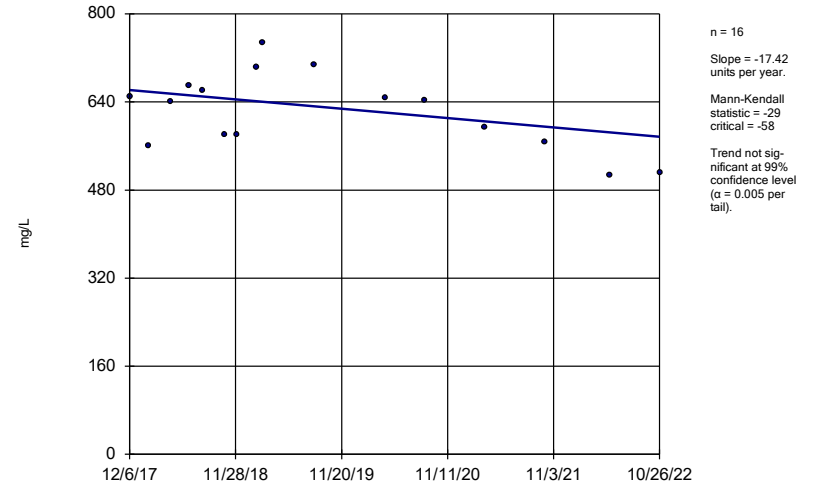
GSD-AP-MW-5



Constituent: pH Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

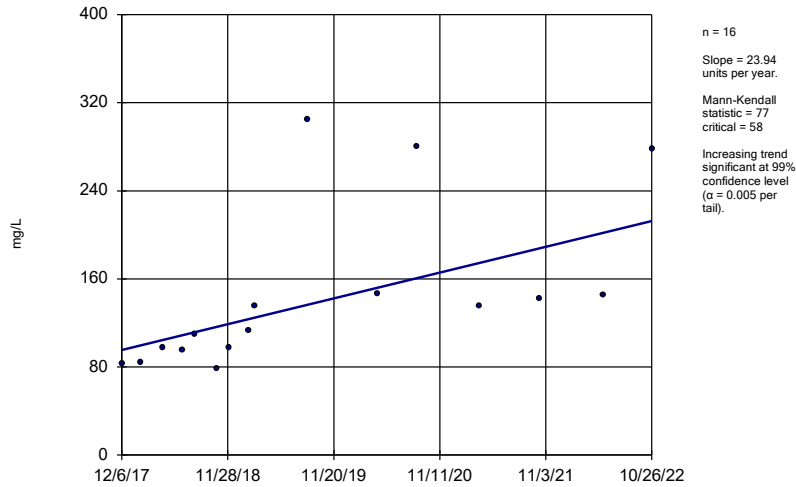
GSD-AP-MW-1



Constituent: Sulfate Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

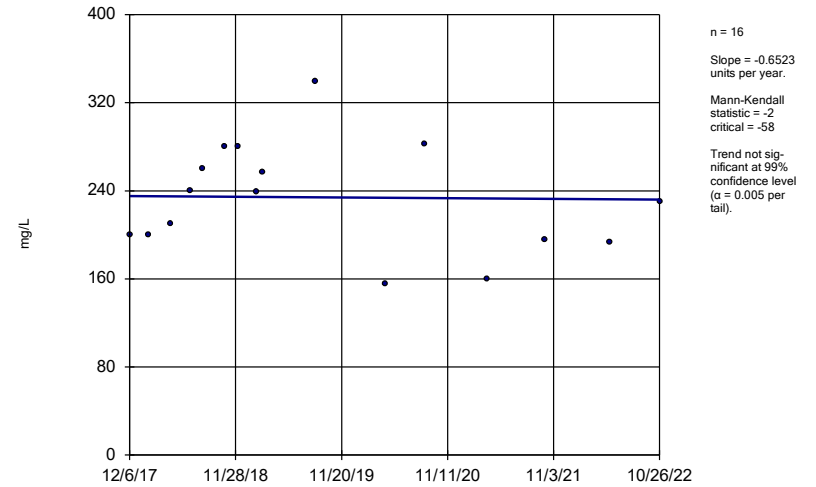
GSD-AP-MW-11



Constituent: Sulfate Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

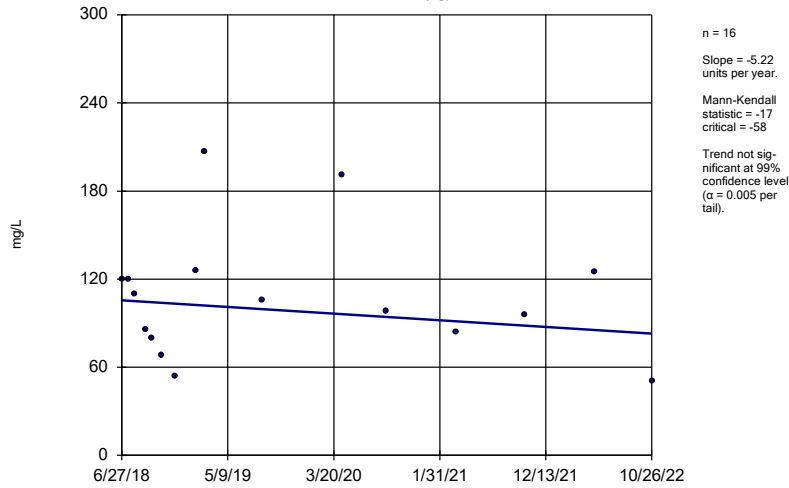
GSD-AP-MW-12



Constituent: Sulfate Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

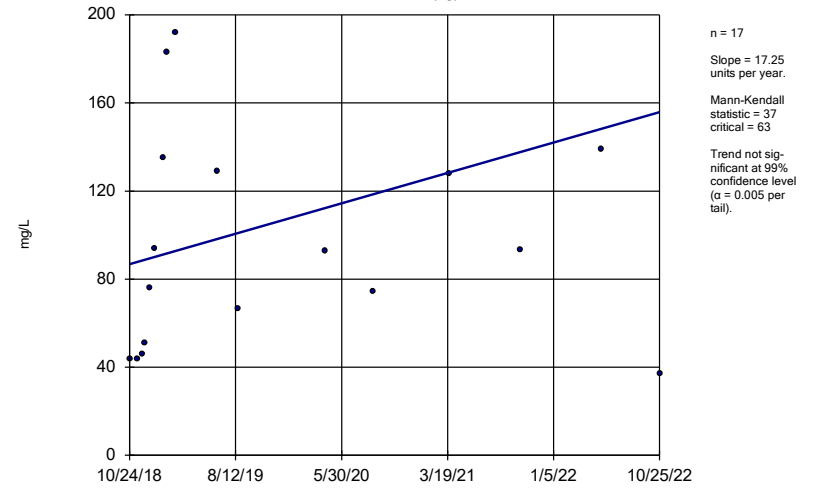
GSD-AP-MW-14 (bg)



Constituent: Sulfate Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

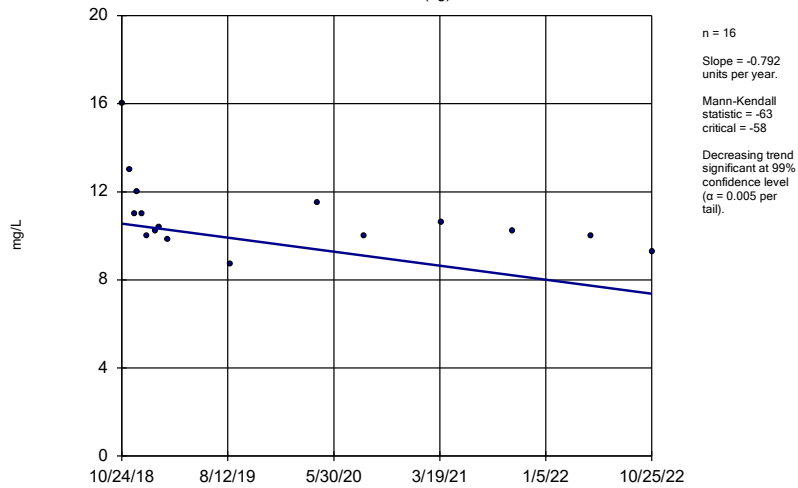
GSD-AP-MW-16 (bg)



Constituent: Sulfate Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

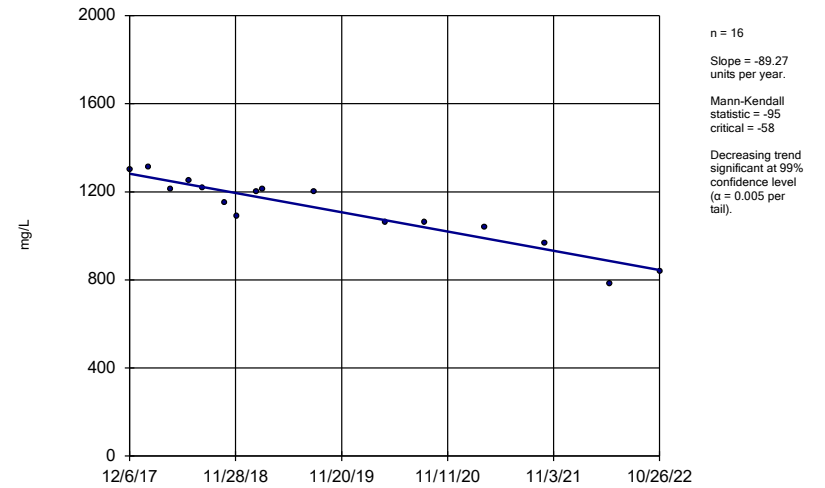
GSD-AP-MW-17 (bg)



Constituent: Sulfate Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

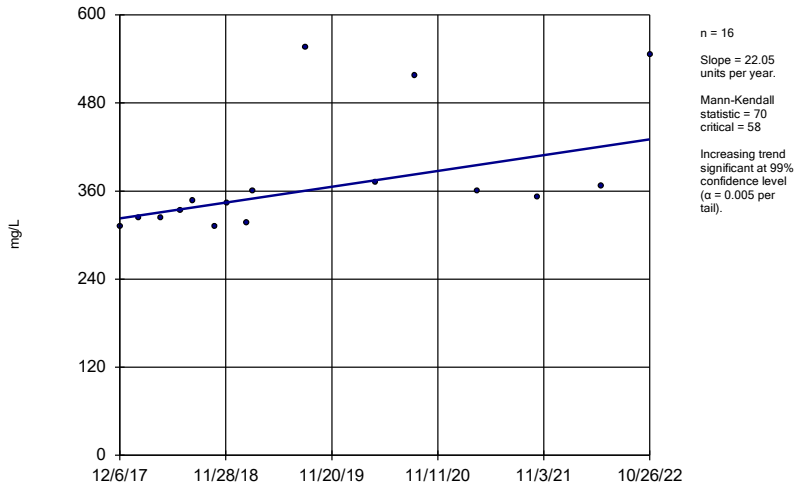
GSD-AP-MW-1



Constituent: Total Dissolved Solids Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

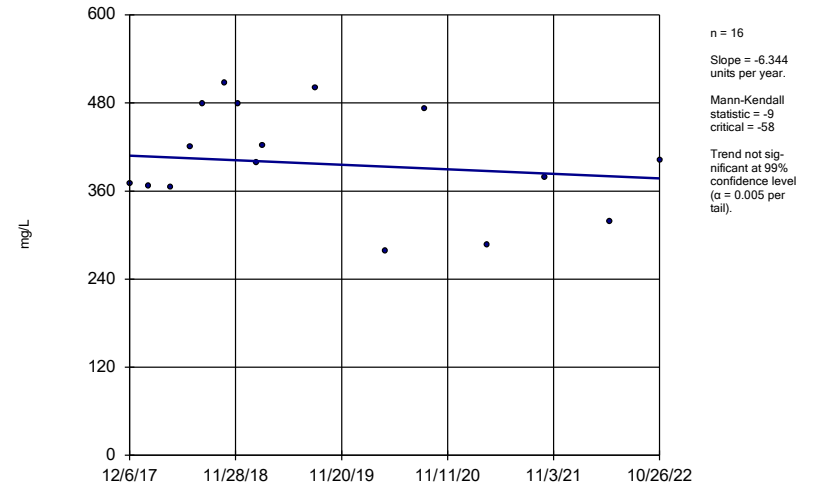
GSD-AP-MW-11



Constituent: Total Dissolved Solids Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

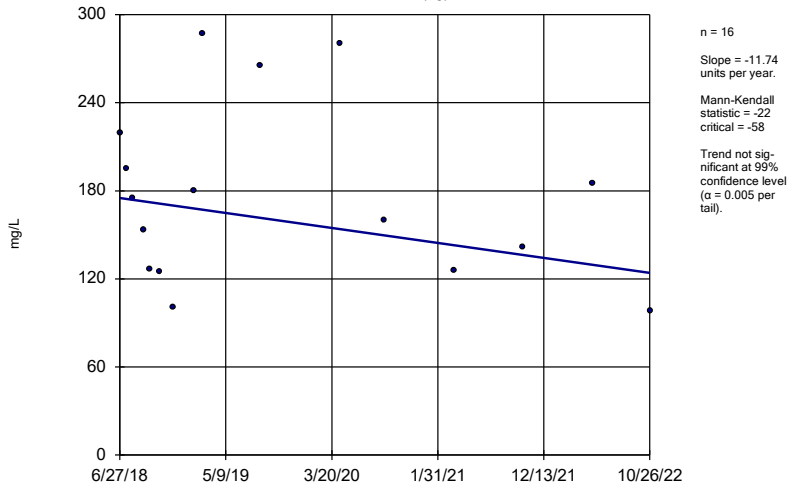
GSD-AP-MW-12



Constituent: Total Dissolved Solids Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

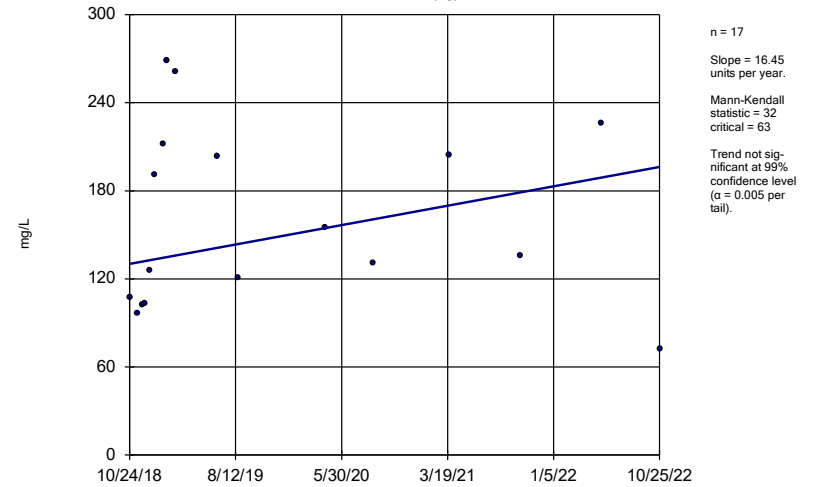
GSD-AP-MW-14 (bg)



Constituent: Total Dissolved Solids Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

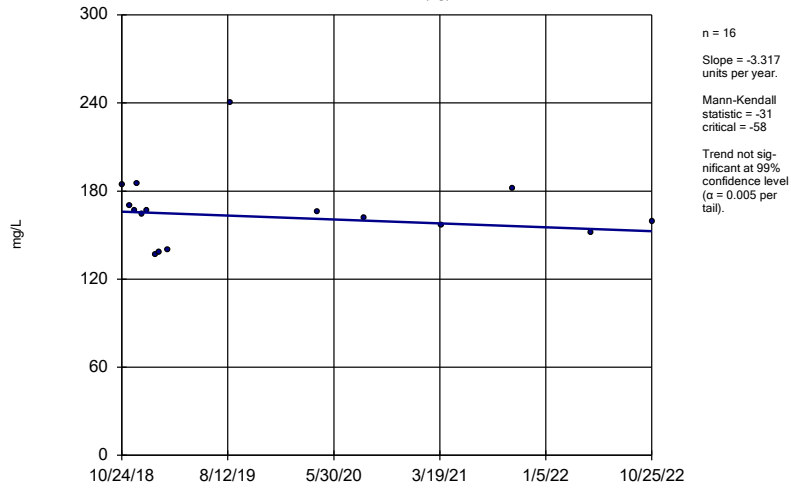
GSD-AP-MW-16 (bg)



Constituent: Total Dissolved Solids Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

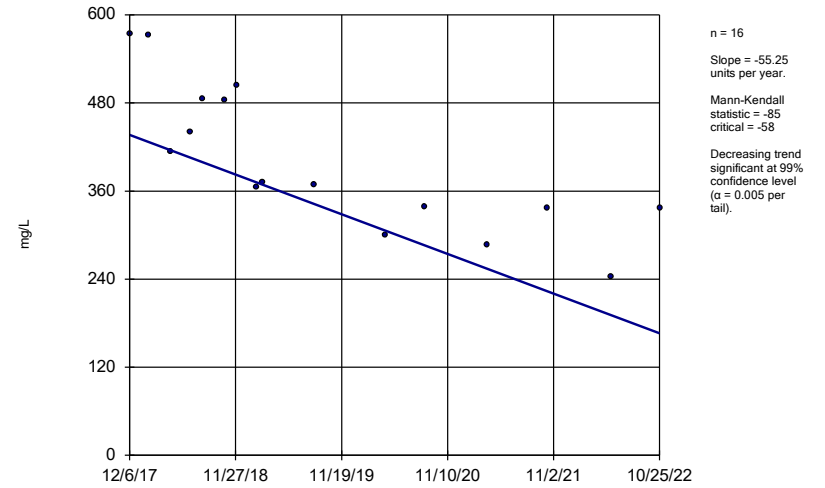
GSD-AP-MW-17 (bg)



Constituent: Total Dissolved Solids Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

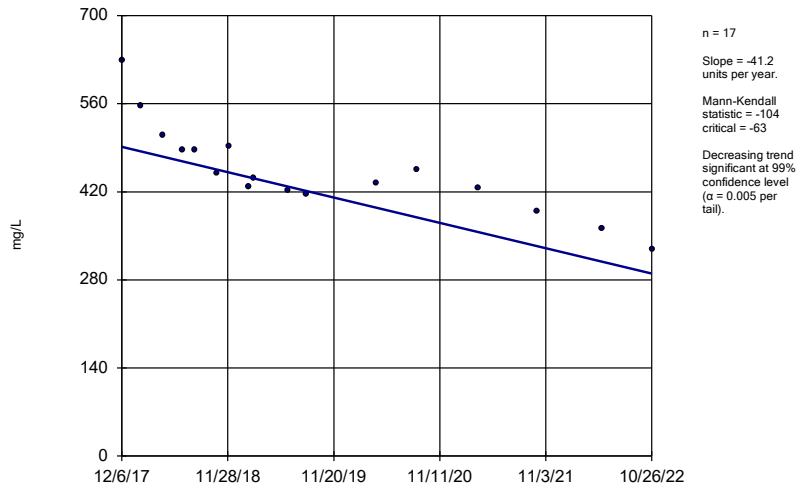
GSD-AP-MW-2



Constituent: Total Dissolved Solids Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Sen's Slope Estimator

GSD-AP-MW-3



Constituent: Total Dissolved Solids Analysis Run 12/27/2022 6:55 PM View: Appendix III - Trend Tests  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

FIGURE G.

# Upper Tolerance Limits - Appendix IV

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 1/13/2022, 3:11 PM

<u>Constituent</u>	<u>Upper Lim.</u>	<u>Lower Lim.</u>	<u>Date</u>	<u>Observ.</u>	<u>Sig.</u>	<u>Bg N</u>	<u>%NDs</u>	<u>Transform</u>	<u>Alpha</u>	<u>Method</u>
Antimony (mg/L)	0.00102	n/a	n/a	n/a	n/a	40	97.5	n/a	0.1285	NP Inter
Arsenic (mg/L)	0.00614	n/a	n/a	n/a	n/a	40	42.5	n/a	0.1285	NP Inter
Barium (mg/L)	0.312	n/a	n/a	n/a	n/a	40	0	n/a	0.1285	NP Inter
Beryllium (mg/L)	0.00157	n/a	n/a	n/a	n/a	40	47.5	n/a	0.1285	NP Inter
Cadmium (mg/L)	0.00101	n/a	n/a	n/a	n/a	40	32.5	n/a	0.1285	NP Inter
Chromium (mg/L)	0.01	n/a	n/a	n/a	n/a	40	80	n/a	0.1285	NP Inter
Cobalt (mg/L)	0.056	n/a	n/a	n/a	n/a	40	27.5	n/a	0.1285	NP Inter
Combined Radium 226 + 228 (pCi/L)	2.01	n/a	n/a	n/a	n/a	33	0	n/a	0.184	NP Inter
Fluoride (mg/L)	0.23	n/a	n/a	n/a	n/a	43	34.88	n/a	0.1102	NP Inter
Lead (mg/L)	0.00258	n/a	n/a	n/a	n/a	40	50	n/a	0.1285	NP Inter
Lithium (mg/L)	0.02	n/a	n/a	n/a	n/a	40	77.5	n/a	0.1285	NP Inter
Mercury (mg/L)	0.000775	n/a	n/a	n/a	n/a	39	66.67	n/a	0.1353	NP Inter
Molybdenum (mg/L)	0.00507	n/a	n/a	n/a	n/a	40	75	n/a	0.1285	NP Inter
Selenium (mg/L)	0.0134	n/a	n/a	n/a	n/a	40	55	n/a	0.1285	NP Inter
Thallium (mg/L)	0.0002	n/a	n/a	n/a	n/a	40	100	n/a	0.1285	NP Inter



FIGURE H.

<b>GADSDEN ASH POND GWPS</b>			
<b>Analyte</b>	<b>Units</b>	<b>Background</b>	<b>GWPS</b>
Antimony	mg/L	0.00102	0.006
Arsenic	mg/L	0.00614	0.01
Barium	mg/L	0.312	2
Beryllium	mg/L	0.00157	0.004
Cadmium	mg/L	0.00101	0.005
Chromium	mg/L	0.01	0.1
Cobalt	mg/L	0.056	0.056
Combined Radium-226/228	pCi/L	2.01	5
Fluoride	mg/L	0.23	4
Lead	mg/L	0.00258	0.015
Lithium	mg/L	0.02	0.04
Mercury	mg/L	0.000775	0.002
Molybdenum	mg/L	0.00507	0.1
Selenium	mg/L	0.0134	0.05
Thallium	mg/L	0.0002	0.002

Notes:

1. mg/L - Milligrams per liter
2. pCi/L - Picocuries per liter
3. The background limits were used as the groundwater protection standard (GWPS) when appropriate under 40 CFR §257.95(h), ADEM Rule 335-13-15-.06(h), and the ADEM Variance.
4. GWPS established during first semi-annual sampling event in 2021.

FIGURE I.

# Confidence Intervals - Significant Results

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR Printed 12/28/2022, 3:18 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Arsenic (mg/L)	GSD-AP-MW-2	0.7783	0.4812	0.01	Yes	8	0.6298	0.1401	0	None	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-4	0.01458	0.01132	0.01	Yes	8	0.01295	0.001538	0	None	No	0.01	Param.

# Confidence Intervals - All Results

Plant Gadsden    Client: Southern Company    Data: Plant Gadsden CCR    Printed 12/28/2022, 3:18 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Antimony (mg/L)	GSD-AP-MW-2	0.00102	0.000538	0.006	No	8	0.0009597	0.0001704	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	GSD-AP-PZ-5	0.00114	0.001015	0.006	No	8	0.001031	0.00004419	87.5	None	No	0.004	NP (NDs)
Antimony (mg/L)	GSD-AP-PZ-6	0.00181	0.001015	0.006	No	8	0.001114	0.0002811	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-MW-1	0.004211	0.002396	0.01	No	8	0.003304	0.000856	0	None	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-10	0.004336	0.002397	0.01	No	8	0.003366	0.0009146	0	None	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-11	0.002873	0.002317	0.01	No	8	0.002595	0.0002621	0	None	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-12	0.0002	0.000102	0.01	No	8	0.0001877	0.00003465	87.5	None	No	0.004	NP (NDs)
<b>Arsenic (mg/L)</b>	<b>GSD-AP-MW-2</b>	<b>0.7783</b>	<b>0.4812</b>	<b>0.01</b>	<b>Yes</b>	<b>8</b>	<b>0.6298</b>	<b>0.1401</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Arsenic (mg/L)	GSD-AP-MW-3	0.005	0.00016	0.01	No	8	0.00261	0.002555	50	None	No	0.004	NP (normality)
<b>Arsenic (mg/L)</b>	<b>GSD-AP-MW-4</b>	<b>0.01458</b>	<b>0.01132</b>	<b>0.01</b>	<b>Yes</b>	<b>8</b>	<b>0.01295</b>	<b>0.001538</b>	<b>0</b>	<b>None</b>	<b>No</b>	<b>0.01</b>	<b>Param.</b>
Arsenic (mg/L)	GSD-AP-MW-5	0.005	0.00008	0.01	No	8	0.002568	0.002601	50	None	No	0.004	NP (normality)
Arsenic (mg/L)	GSD-AP-MW-6	0.0002	0.000151	0.01	No	8	0.0001939	0.00001732	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-MW-7	0.0002	0.00007	0.01	No	8	0.0001719	0.00005291	75	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-MW-8	0.003252	0.002868	0.01	No	8	0.00306	0.0001814	0	None	No	0.01	Param.
Arsenic (mg/L)	GSD-AP-MW-9	0.005	0.00055	0.01	No	8	0.002327	0.002222	37.5	None	No	0.004	NP (normality)
Arsenic (mg/L)	GSD-AP-PZ-1	0.0002	0.000164	0.01	No	8	0.0001955	0.00001273	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-PZ-2	0.005	0.0000826	0.01	No	6	0.001743	0.002523	33.33	None	No	0.0155	NP (normality)
Arsenic (mg/L)	GSD-AP-PZ-5	0.000203	0.0000808	0.01	No	8	0.0001877	0.0000432	87.5	None	No	0.004	NP (NDs)
Arsenic (mg/L)	GSD-AP-PZ-6	0.0002	0.00015	0.01	No	8	0.0001937	0.00001768	87.5	None	No	0.004	NP (NDs)
Barium (mg/L)	GSD-AP-MW-1	0.03927	0.02788	2	No	8	0.03358	0.005372	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-10	0.3596	0.2709	2	No	8	0.3153	0.04183	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-11	0.2376	0.1334	2	No	8	0.1855	0.04918	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-12	0.04621	0.03084	2	No	8	0.03853	0.007246	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-2	0.09189	0.05478	2	No	8	0.07334	0.0175	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-3	0.03861	0.03082	2	No	8	0.03471	0.003674	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-4	0.2233	0.1624	2	No	8	0.1929	0.02872	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-5	0.2407	0.2186	2	No	8	0.2296	0.01042	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-6	0.07733	0.06139	2	No	8	0.06936	0.007518	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-7	0.08784	0.05781	2	No	8	0.07283	0.01417	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-8	0.281	0.1973	2	No	8	0.2391	0.0395	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-MW-9	0.1901	0.1392	2	No	8	0.1646	0.02401	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-PZ-1	0.08415	0.0508	2	No	8	0.06748	0.01573	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-PZ-2	0.1474	0.04275	2	No	6	0.09508	0.03809	0	None	No	0.01	Param.
Barium (mg/L)	GSD-AP-PZ-5	0.085	0.0474	2	No	8	0.05713	0.01203	0	None	No	0.004	NP (normality)
Barium (mg/L)	GSD-AP-PZ-6	0.03114	0.02849	2	No	8	0.02981	0.001251	0	None	No	0.01	Param.
Cadmium (mg/L)	GSD-AP-MW-1	0.001	0.0001	0.005	No	8	0.000569	0.0004622	50	None	No	0.004	NP (normality)
Cadmium (mg/L)	GSD-AP-MW-12	0.0006435	0.0003027	0.005	No	8	0.0004731	0.0001608	0	None	No	0.01	Param.
Cadmium (mg/L)	GSD-AP-MW-2	0.000203	0.0000688	0.005	No	8	0.0001862	0.00004745	87.5	None	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-MW-3	0.0004302	0.0001866	0.005	No	8	0.0005669	0.0003706	37.5	Kaplan-Meier	sqrt(x)	0.01	Param.
Cadmium (mg/L)	GSD-AP-MW-7	0.000203	0.000097	0.005	No	8	0.0001898	0.00003748	87.5	Kaplan-Meier	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-MW-8	0.000203	0.00007	0.005	No	8	0.0001714	0.00005862	75	Kaplan-Meier	No	0.004	NP (NDs)
Cadmium (mg/L)	GSD-AP-PZ-5	0.000203	0.00008	0.005	No	8	0.0001876	0.00004349	87.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-1	0.01	0.00023	0.1	No	8	0.005147	0.005188	50	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-10	0.01	0.000207	0.1	No	8	0.005142	0.005193	50	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-11	0.01	0.00027	0.1	No	8	0.005185	0.005148	50	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-12	0.01	0.000276	0.1	No	8	0.005182	0.005151	50	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-2	0.01	0.00022	0.1	No	8	0.005189	0.005144	50	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-3	0.01	0.00023	0.1	No	8	0.004242	0.004847	37.5	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-MW-4	0.001015	0.00023	0.1	No	8	0.0008304	0.0003428	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-5	0.001015	0.00028	0.1	No	8	0.0007853	0.0003241	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-6	0.00102	0.000222	0.1	No	8	0.0007387	0.0003895	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-7	0.001015	0.00025	0.1	No	8	0.0007476	0.0003721	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-8	0.001015	0.00022	0.1	No	8	0.0008263	0.0003502	75	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-MW-9	0.001015	0.00021	0.1	No	8	0.0007521	0.0003672	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-PZ-1	0.001015	0.00027	0.1	No	8	0.0007671	0.0003452	62.5	None	No	0.004	NP (NDs)
Chromium (mg/L)	GSD-AP-PZ-2	0.0008137	0.0003423	0.1	No	6	0.0007965	0.0002738	50	Kaplan-Meier	No	0.01	Param.
Chromium (mg/L)	GSD-AP-PZ-5	0.01	0.000251	0.1	No	8	0.005187	0.005146	50	None	No	0.004	NP (normality)
Chromium (mg/L)	GSD-AP-PZ-6	0.01	0.000224	0.1	No	8	0.00518	0.005154	50	None	No	0.004	NP (normality)
Cobalt (mg/L)	GSD-AP-MW-1	0.02357	0.01438	0.056	No	8	0.01898	0.004337	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-10	0.005	0.00037	0.056	No	8	0.002885	0.002268	50	None	No	0.004	NP (normality)
Cobalt (mg/L)	GSD-AP-MW-11	0.006803	-0.000708	0.056	No	8	0.004206	0.003442	25	Kaplan-Meier	No	0.01	Param.

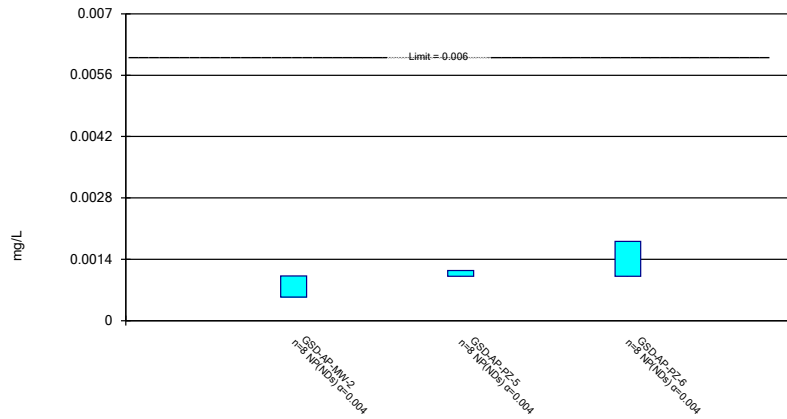
# Confidence Intervals - All Results

Plant Gadsden    Client: Southern Company    Data: Plant Gadsden CCR    Printed 12/28/2022, 3:18 PM

Constituent	Well	Upper Lim.	Lower Lim.	Compliance	Sig.	N	Mean	Std. Dev.	%NDs	ND Adj.	Transform	Alpha	Method
Cobalt (mg/L)	GSD-AP-MW-12	0.006068	0.00383	0.056	No	8	0.004949	0.001055	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-2	0.03678	0.02603	0.056	No	8	0.03124	0.00659	0	None	x^3	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-3	0.02439	0.01416	0.056	No	8	0.01928	0.004823	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-4	0.02907	0.024	0.056	No	8	0.02654	0.002391	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-5	0.002362	0.001017	0.056	No	8	0.001689	0.0006344	12.5	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-6	0.005	0.00102	0.056	No	8	0.00305	0.002085	50	None	No	0.004	NP (normality)
Cobalt (mg/L)	GSD-AP-MW-7	0.005	0.00016	0.056	No	8	0.00272	0.002452	50	None	No	0.004	NP (normality)
Cobalt (mg/L)	GSD-AP-MW-8	0.004091	0.002491	0.056	No	8	0.003291	0.000755	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-MW-9	0.005	0.000812	0.056	No	8	0.002985	0.002156	50	None	No	0.004	NP (normality)
Cobalt (mg/L)	GSD-AP-PZ-1	0.00044	0.00014	0.056	No	8	0.0002225	0.00009036	75	None	No	0.004	NP (NDs)
Cobalt (mg/L)	GSD-AP-PZ-2	0.007045	0.001389	0.056	No	6	0.004217	0.002059	0	None	No	0.01	Param.
Cobalt (mg/L)	GSD-AP-PZ-5	0.00225	0.00008	0.056	No	8	0.000458	0.0007291	50	None	No	0.004	NP (normality)
Cobalt (mg/L)	GSD-AP-PZ-6	0.005	0.000078	0.056	No	8	0.002556	0.002613	50	None	No	0.004	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-1	0.9381	0.4102	5	No	8	0.6741	0.249	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-10	2.772	0.00515	5	No	8	1.196	2.167	0	None	x^(1/3)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-11	1.247	0.6148	5	No	8	0.931	0.2983	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-12	1.189	0.08541	5	No	8	0.637	0.5204	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-2	1.546	0.2948	5	No	8	0.8934	0.6732	0	None	sqrt(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-3	1.369	0.1725	5	No	8	0.7925	1.014	0	None	ln(x)	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-4	1.258	0.1069	5	No	8	0.6822	0.5428	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-5	1.244	0.3515	5	No	8	0.7976	0.4209	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-6	1.36	-0.086	5	No	8	0.3806	0.4479	0	None	No	0.004	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-7	0.9371	0.1026	5	No	8	0.5199	0.3937	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-8	0.6291	0.3374	5	No	8	0.4833	0.1376	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-MW-9	1.168	0.1459	5	No	8	0.6569	0.4821	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-1	2.07	-0.129	5	No	8	0.5806	0.6697	0	None	No	0.004	NP (normality)
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-2	1.048	-0.01521	5	No	6	0.5163	0.3869	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-5	0.9116	0.1809	5	No	8	0.5463	0.3447	0	None	No	0.01	Param.
Combined Radium 226 + 228 (pCi/L)	GSD-AP-PZ-6	1.174	0.004111	5	No	8	0.4634	0.4946	0	None	x^(1/3)	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-1	0.125	0.0601	4	No	8	0.1169	0.02295	87.5	None	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-MW-10	0.201	0.0813	4	No	8	0.108	0.03884	0	None	No	0.004	NP (normality)
Fluoride (mg/L)	GSD-AP-MW-11	0.1109	0.07014	4	No	8	0.1058	0.02451	37.5	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-2	0.2816	0.2207	4	No	8	0.2514	0.03202	0	None	x^3	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-3	0.125	0.0592	4	No	8	0.1028	0.03088	62.5	None	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-MW-4	0.2652	0.1913	4	No	8	0.2283	0.03485	0	None	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-5	0.122	0.0567	4	No	8	0.07296	0.02167	0	None	No	0.004	NP (normality)
Fluoride (mg/L)	GSD-AP-MW-6	0.125	0.0816	4	No	8	0.1196	0.01534	87.5	None	No	0.004	NP (NDs)
Fluoride (mg/L)	GSD-AP-MW-7	0.1041	0.06229	4	No	8	0.08899	0.02101	25	Kaplan-Meier	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-8	0.108	0.06561	4	No	8	0.08679	0.01998	0	None	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-MW-9	0.1452	0.1084	4	No	8	0.1268	0.01737	0	None	No	0.01	Param.
Fluoride (mg/L)	GSD-AP-PZ-1	0.1078	0.07653	4	No	8	0.1045	0.02107	37.5	Kaplan-Meier	No	0.01	Param.
Lead (mg/L)	GSD-AP-MW-2	0.000203	0.00009	0.015	No	8	0.0001889	0.00003995	87.5	None	No	0.004	NP (NDs)
Lead (mg/L)	GSD-AP-PZ-2	0.000203	0.00012	0.015	No	6	0.0001833	0.00003238	50	None	No	0.0155	NP (normality)
Lead (mg/L)	GSD-AP-PZ-5	0.000203	0.00013	0.015	No	8	0.0001939	0.00002581	87.5	None	No	0.004	NP (NDs)
Lead (mg/L)	GSD-AP-PZ-6	0.000203	0.0000835	0.015	No	8	0.0001673	0.00005053	62.5	None	No	0.004	NP (NDs)
Lithium (mg/L)	GSD-AP-MW-2	0.05189	0.02466	0.04	No	8	0.03828	0.01284	0	None	No	0.01	Param.
Mercury (mg/L)	GSD-AP-PZ-6	0.00286	0.0005	0.002	No	8	0.000795	0.0008344	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-1	0.0002	0.000198	0.1	No	8	0.0001997	7.1e-7	87.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-10	0.01	0.000204	0.1	No	8	0.005195	0.005137	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	GSD-AP-MW-11	0.000203	0.00012	0.1	No	8	0.0001761	0.0000381	62.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-2	0.027	0.0164	0.1	No	8	0.02135	0.003692	0	None	No	0.004	NP (normality)
Molybdenum (mg/L)	GSD-AP-MW-4	0.01	0.00106	0.1	No	8	0.005571	0.004735	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	GSD-AP-MW-5	0.000371	0.00011	0.1	No	8	0.0002058	0.00007523	62.5	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-7	0.0002	0.0001	0.1	No	8	0.0001836	0.00003549	75	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-MW-8	0.01	0.00032	0.1	No	8	0.005187	0.005145	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	GSD-AP-MW-9	0.01	0.00018	0.1	No	8	0.005121	0.005216	50	None	No	0.004	NP (normality)
Molybdenum (mg/L)	GSD-AP-PZ-1	0.000203	0.00007	0.1	No	8	0.0001734	0.00005544	75	None	No	0.004	NP (NDs)
Molybdenum (mg/L)	GSD-AP-PZ-2	0.00028	0.0002	0.1	No	6	0.0002167	0.00003204	66.67	None	No	0.0155	NP (NDs)
Thallium (mg/L)	GSD-AP-MW-1	0.000203	0.000112	0.002	No	8	0.0001825	0.00003826	75	None	No	0.004	NP (NDs)
Thallium (mg/L)	GSD-AP-MW-2	0.0003855	0.000283	0.002	No	8	0.0003343	0.00004839	0	None	No	0.01	Param.
Thallium (mg/L)	GSD-AP-MW-3	0.001	0.00011	0.002	No	8	0.0005601	0.0004703	50	None	No	0.004	NP (normality)

### Non-Parametric Confidence Interval

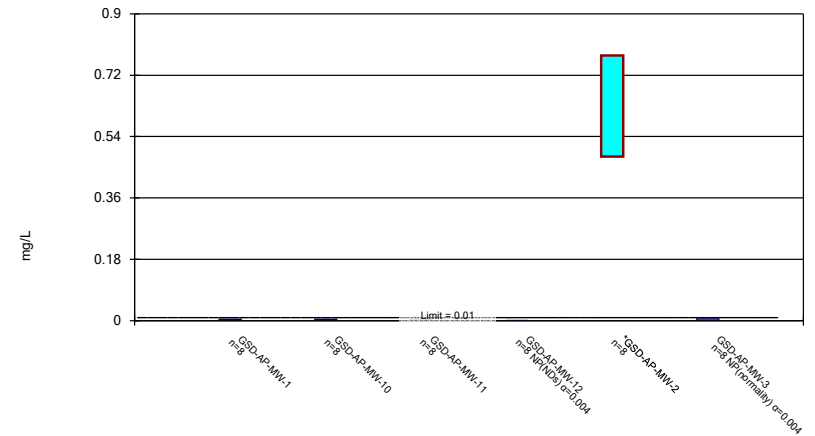
Compliance Limit is not exceeded.



Constituent: Antimony Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric and Non-Parametric (NP) Confidence Interval

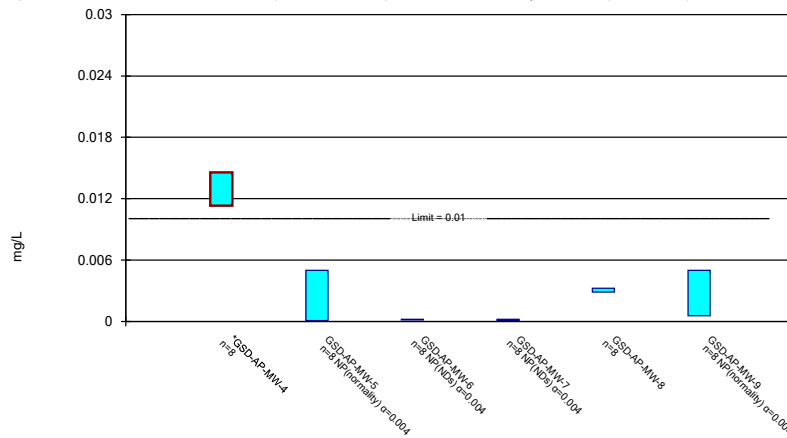
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on



Constituent: Arsenic Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric and Non-Parametric (NP) Confidence Interval

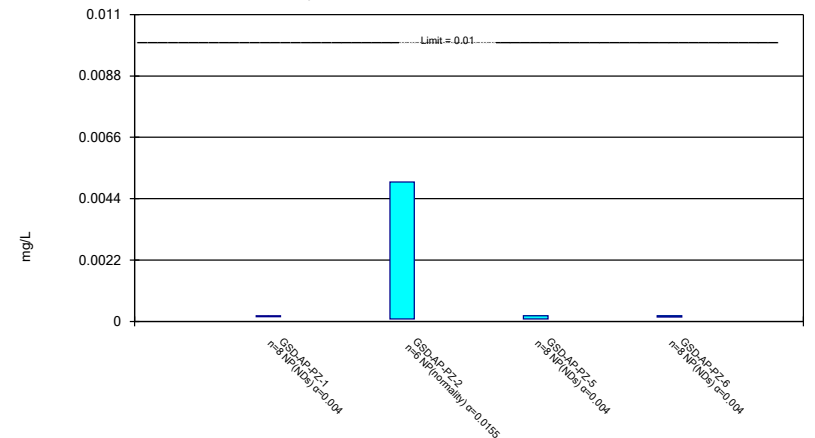
Compliance limit is exceeded.\* Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based on



Constituent: Arsenic Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Non-Parametric Confidence Interval

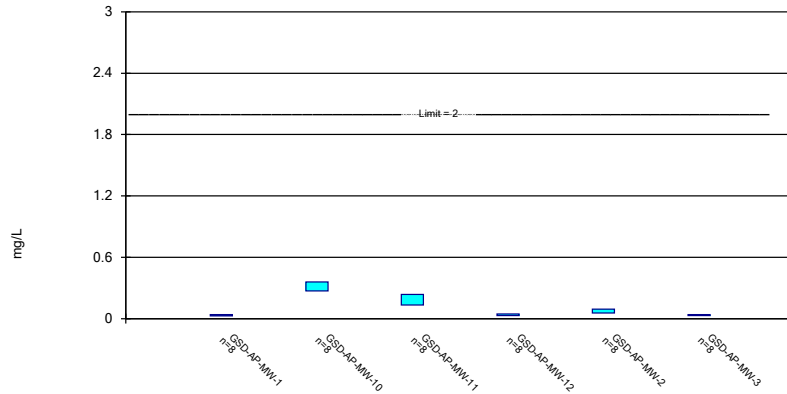
Compliance Limit is not exceeded.



Constituent: Arsenic Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric Confidence Interval

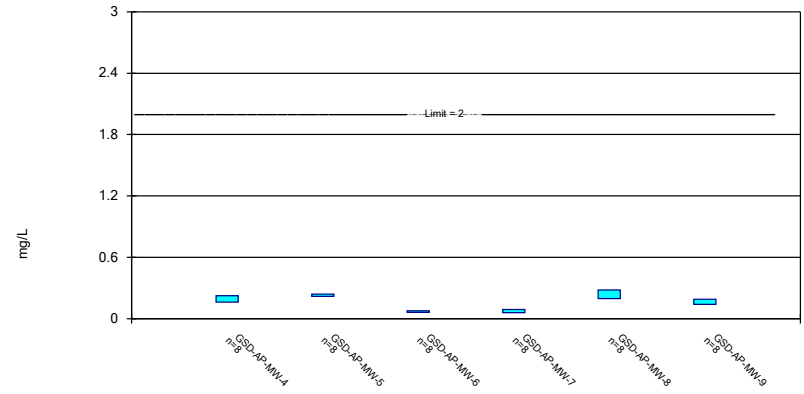
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric Confidence Interval

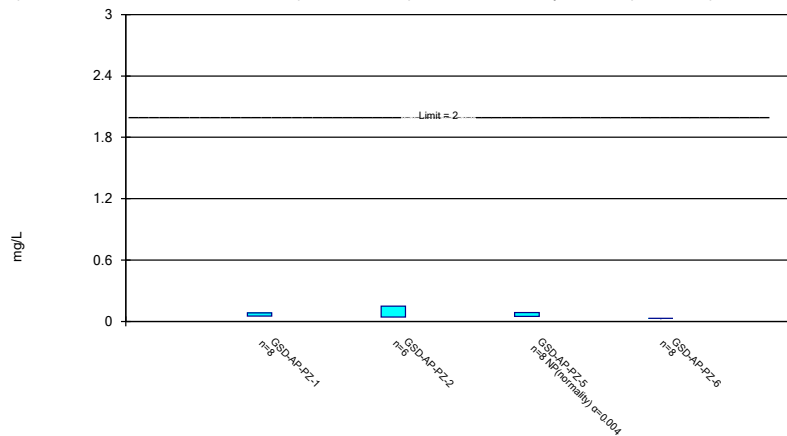
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Barium Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric and Non-Parametric (NP) Confidence Interval

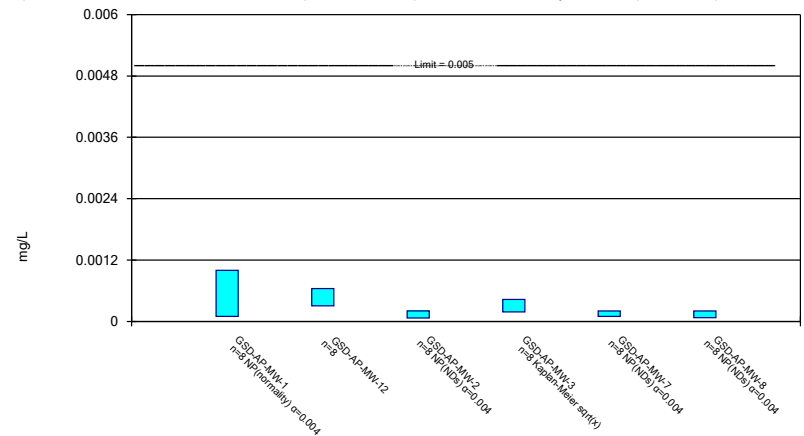
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based



Constituent: Barium Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### 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

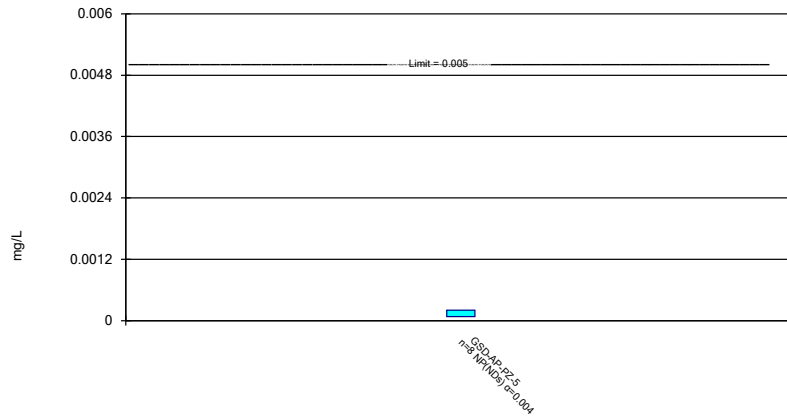


Constituent: Cadmium Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR



### Non-Parametric Confidence Interval

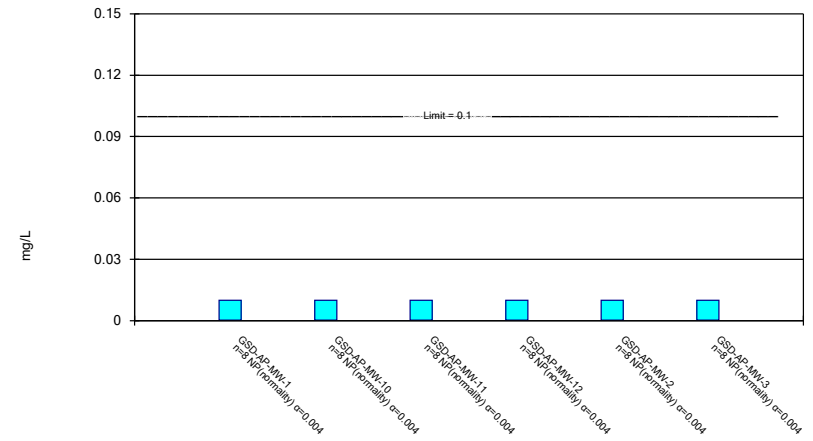
Compliance Limit is not exceeded.



Constituent: Cadmium Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Non-Parametric Confidence Interval

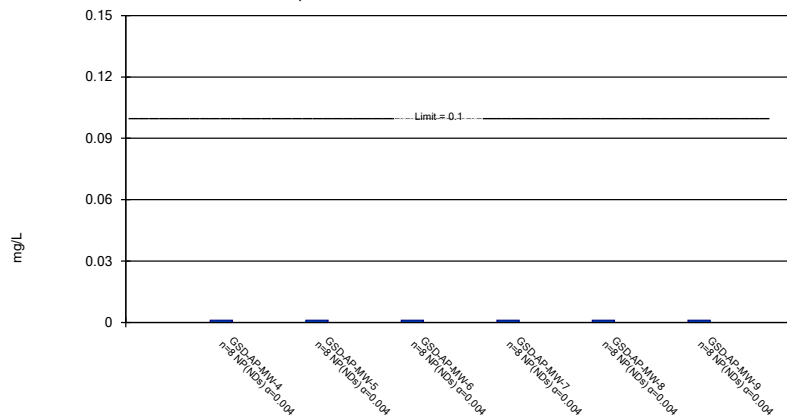
Compliance Limit is not exceeded.



Constituent: Chromium Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Non-Parametric Confidence Interval

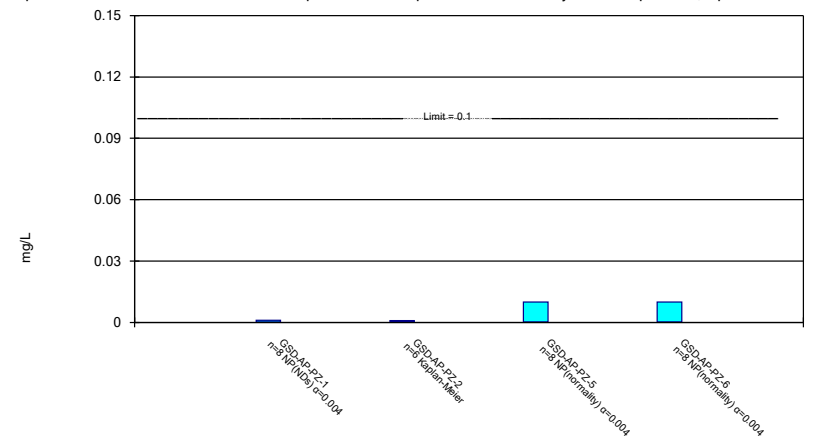
Compliance Limit is not exceeded.



Constituent: Chromium Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric and Non-Parametric (NP) Confidence Interval

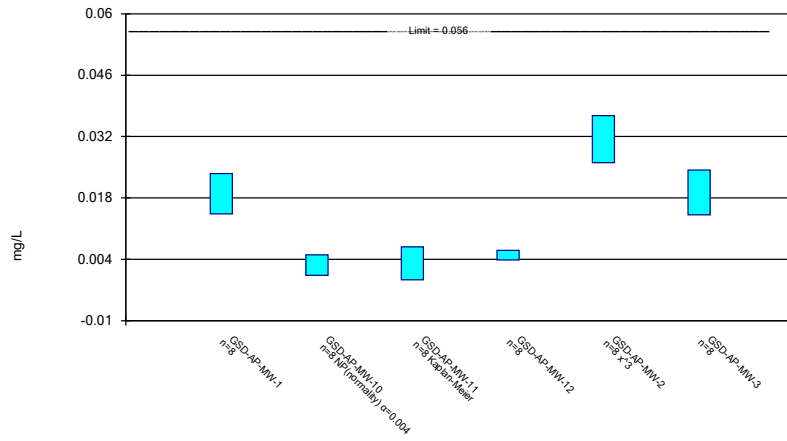
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based



Constituent: Chromium Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Parametric and Non-Parametric (NP) Confidence Interval

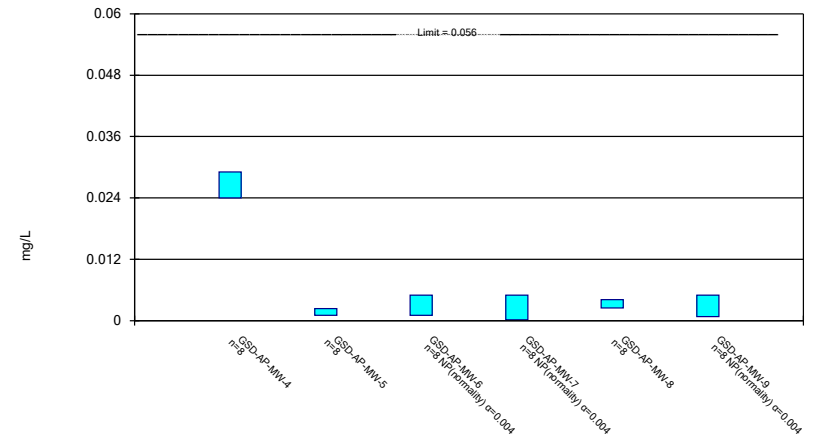
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based



Constituent: Cobalt Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Parametric and Non-Parametric (NP) Confidence Interval

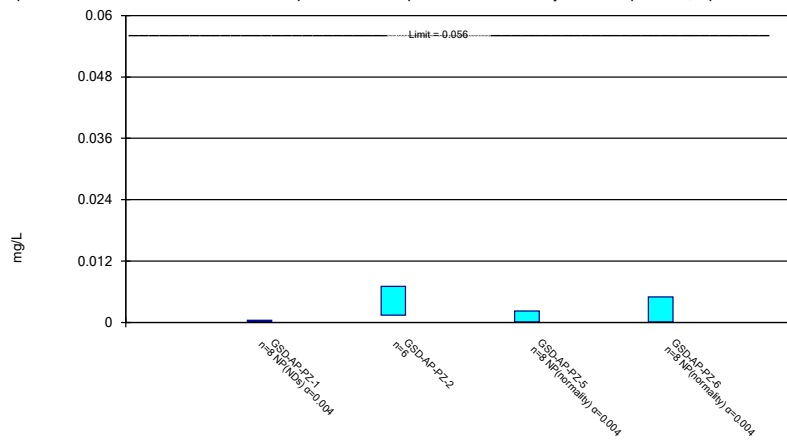
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based



Constituent: Cobalt Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Parametric and Non-Parametric (NP) Confidence Interval

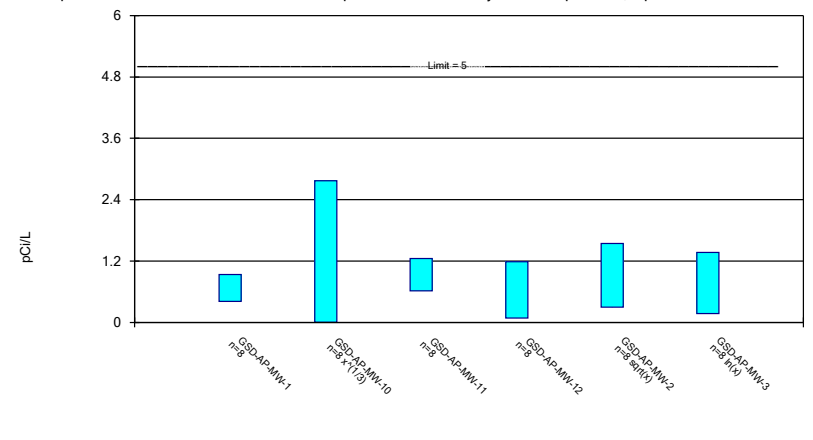
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based



Constituent: Cobalt Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

Parametric Confidence Interval

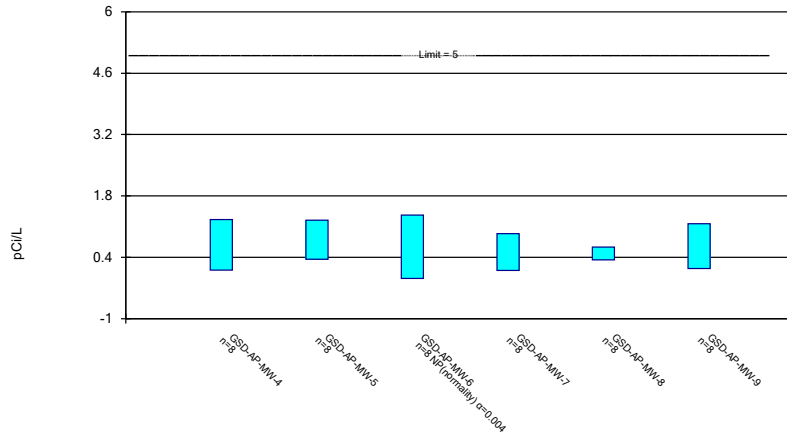
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Combined Radium 226 + 228 Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric and Non-Parametric (NP) Confidence Interval

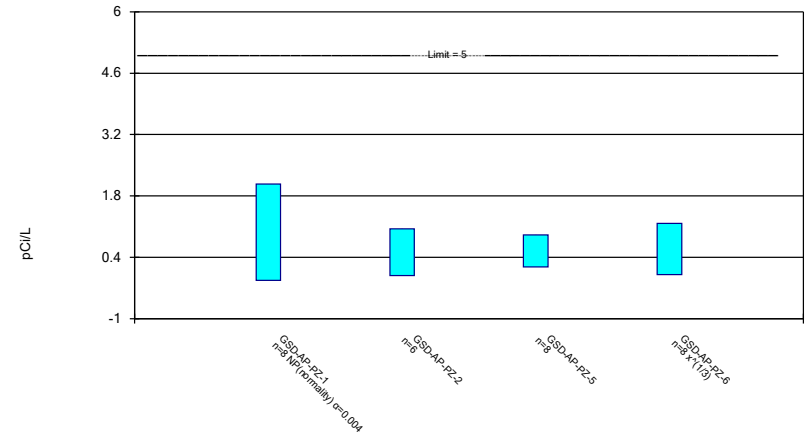
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based



Constituent: Combined Radium 226 + 228 Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric and Non-Parametric (NP) Confidence Interval

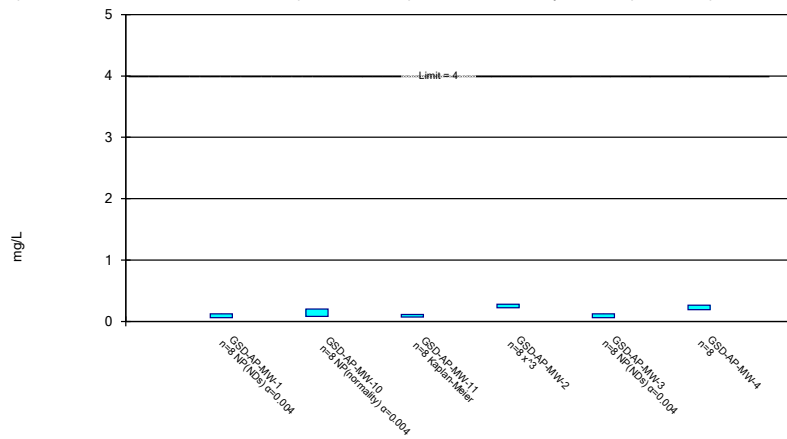
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based



Constituent: Combined Radium 226 + 228 Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric and Non-Parametric (NP) Confidence Interval

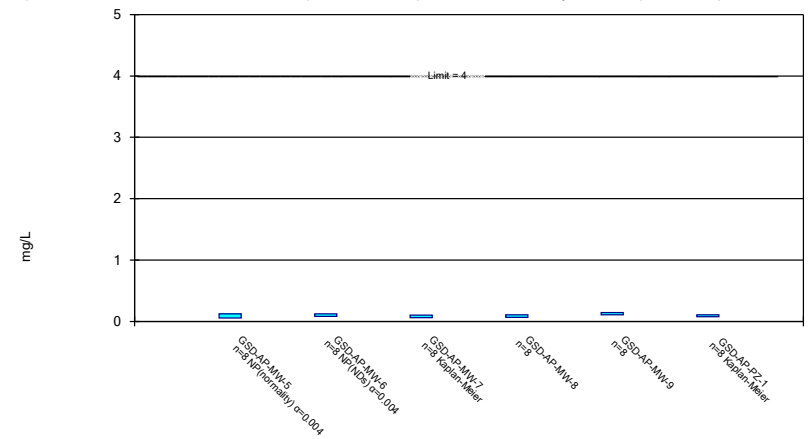
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based



Constituent: Fluoride Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric and Non-Parametric (NP) Confidence Interval

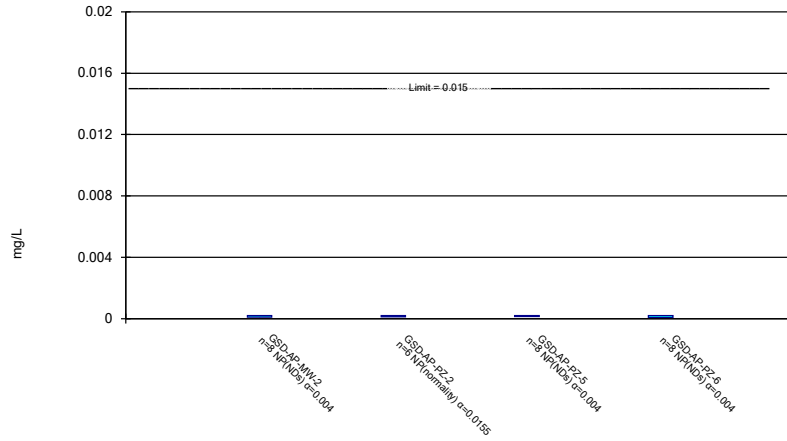
Compliance Limit is not exceeded. Per-well alpha = 0.01 except as noted. Normality Test: Shapiro Wilk, alpha based



Constituent: Fluoride Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Non-Parametric Confidence Interval

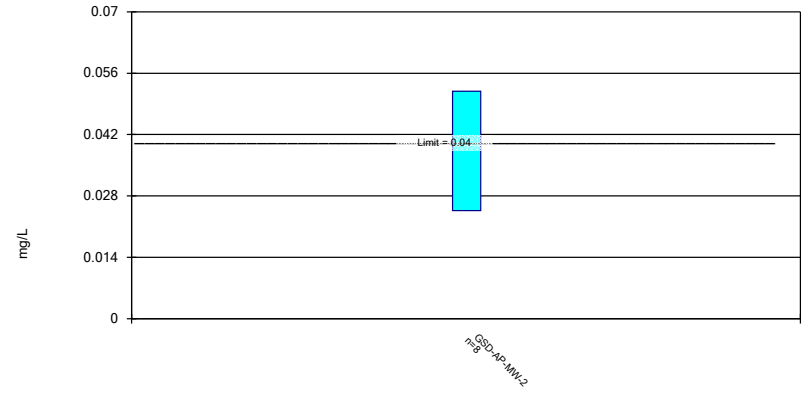
Compliance Limit is not exceeded.



Constituent: Lead Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Parametric Confidence Interval

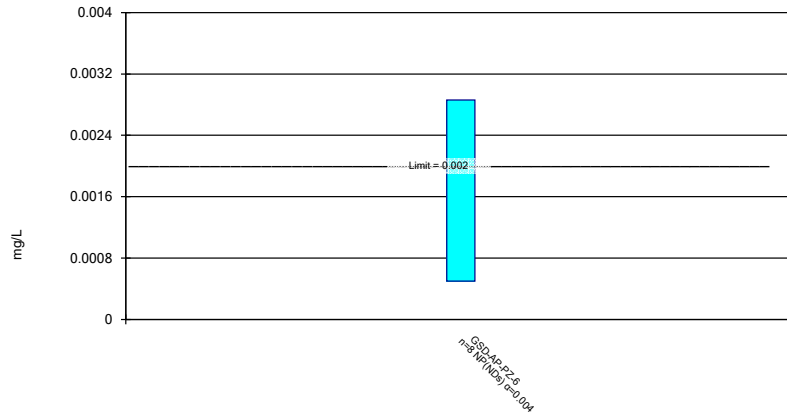
Compliance Limit is not exceeded. Per-well alpha = 0.01. Normality Test: Shapiro Wilk, alpha based on n.



Constituent: Lithium Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Non-Parametric Confidence Interval

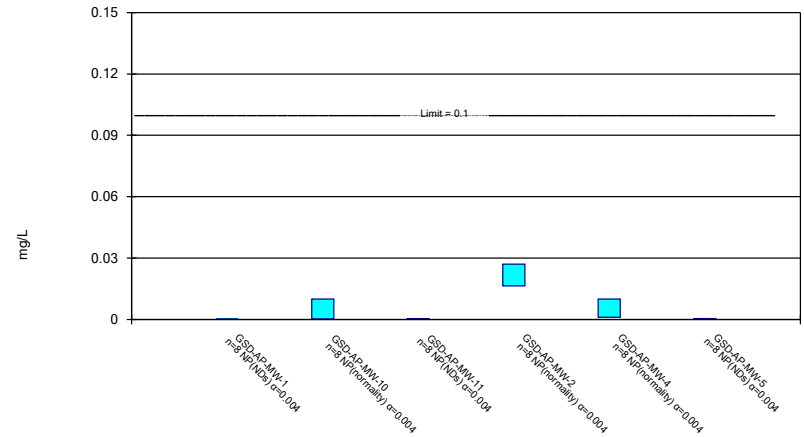
Compliance Limit is not exceeded.



Constituent: Mercury Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Non-Parametric Confidence Interval

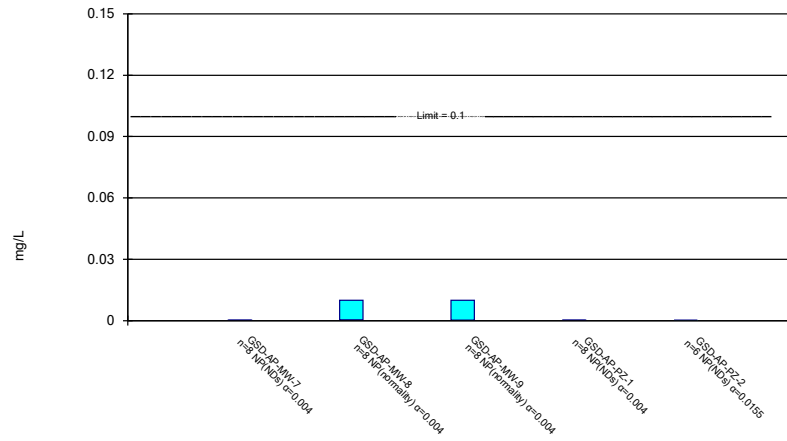
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Constituent: Molybdenum Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### Non-Parametric Confidence Interval

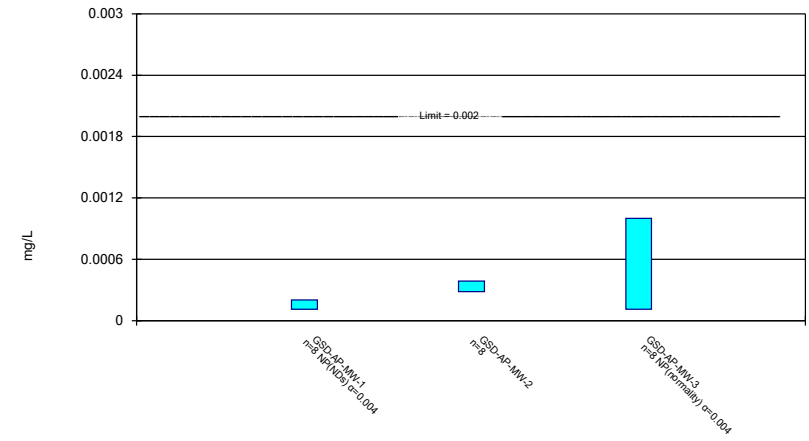
Compliance Limit is not exceeded.



Constituent: Molybdenum Analysis Run 12/28/2022 3:17 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

### 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



Constituent: Thallium Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

# Confidence Interval

Constituent: Antimony (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2	GSD-AP-PZ-5	GSD-AP-PZ-6
2/5/2019	<0.00102		
2/7/2019		0.00114 (J)	0.00181 (J)
8/20/2019	<0.00102		
8/21/2019		<0.001015	<0.001015
4/15/2020	<0.00102	<0.001015	<0.001015
8/24/2020		<0.001015	<0.001015
8/25/2020	<0.00102		
3/16/2021		<0.001015	<0.001015
3/24/2021	<0.00102		
10/11/2021	<0.00102		
10/12/2021		<0.001015	<0.001015
5/10/2022		<0.001015	<0.001015
5/16/2022	<0.00102		
10/25/2022	0.000538 (J)		
10/26/2022		<0.001015	<0.001015
Mean	0.0009597	0.001031	0.001114
Std. Dev.	0.0001704	4.419E-05	0.0002811
Upper Lim.	0.00102	0.00114	0.00181
Lower Lim.	0.000538	0.001015	0.001015

# Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-2	GSD-AP-MW-3
2/5/2019	0.00365 (J)				0.74	
2/6/2019		0.00333 (J)	0.00272 (J)	<0.0002		
6/18/2019						<0.005
8/20/2019					0.825	<0.005
8/21/2019	0.00444 (J)					
8/22/2019		0.00394 (J)	0.00229 (J)	<0.0002		
4/13/2020						<0.005
4/14/2020			0.00286 (J)	<0.0002		
4/15/2020	0.00309 (J)	0.00236 (J)			0.709	
8/25/2020	0.00435 (J)				0.727	
8/26/2020		0.00422 (J)	0.00246 (J)	<0.0002		<0.005
3/16/2021	0.0029					
3/22/2021						0.0002 (J)
3/23/2021		0.00163	0.00275	<0.0002		
3/24/2021					0.489	
10/5/2021	0.00356			<0.0002		0.00021
10/11/2021		0.0037			0.424	
10/12/2021			0.00272			
5/10/2022	0.00221	0.00361		<0.0002		0.00016 (J)
5/16/2022					0.569	
5/17/2022			0.00281			
10/25/2022					0.555	
10/26/2022	0.00223	0.00414	0.00215	0.000102 (J)		0.000311
Mean	0.003304	0.003366	0.002595	0.0001877	0.6298	0.00261
Std. Dev.	0.000856	0.0009146	0.0002621	3.465E-05	0.1401	0.002555
Upper Lim.	0.004211	0.004336	0.002873	0.0002	0.7783	0.005
Lower Lim.	0.002396	0.002397	0.002317	0.000102	0.4812	0.00016

# Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
2/5/2019	0.0107	<0.005	<0.0002			
2/6/2019				<0.0002	0.00325 (J)	<0.005
8/20/2019	0.0141	<0.005	<0.0002			
8/21/2019				<0.0002	0.00302 (J)	<0.005
4/13/2020		<0.005	<0.0002			
4/14/2020					0.00295 (J)	0.00118 (J)
4/15/2020	0.0121			<0.0002		
8/24/2020		<0.005				
8/26/2020	0.0133		<0.0002	<0.0002	0.00304 (J)	<0.005
3/16/2021		8.17E-05 (J)				
3/17/2021			<0.0002			
3/23/2021				<0.0002	0.00282	0.00063
3/24/2021	0.011					
10/5/2021	0.0147	0.00013 (J)	<0.0002	7E-05 (J)		
10/12/2021					0.00287	0.00064
5/9/2022		8E-05 (J)				
5/10/2022			<0.0002	<0.0002		
5/11/2022					0.00323	0.00055
5/16/2022	0.0132					
10/26/2022	0.0145	0.00025	0.000151 (J)	0.000105 (J)	0.0033	0.000618
Mean	0.01295	0.002568	0.0001939	0.0001719	0.00306	0.002327
Std. Dev.	0.001538	0.002601	1.732E-05	5.291E-05	0.0001814	0.002222
Upper Lim.	0.01458	0.005	0.0002	0.0002	0.003252	0.005
Lower Lim.	0.01132	8E-05	0.000151	7E-05	0.002868	0.00055



# Confidence Interval

Constituent: Arsenic (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
2/5/2019	<0.0002			
2/7/2019			<0.000203	<0.0002
8/20/2019	<0.0002			
8/21/2019			<0.000203	<0.0002
4/13/2020	<0.0002	<0.005		
4/15/2020			<0.000203	<0.0002
8/24/2020	<0.0002	<0.005	<0.000203	<0.0002
3/16/2021			8.08E-05 (J)	<0.0002
3/17/2021		8.26E-05 (J)		
3/24/2021	<0.0002			
10/5/2021	<0.0002	9E-05 (J)		
10/12/2021			<0.000203	<0.0002
5/9/2022	<0.0002	0.0001 (J)		
5/10/2022			<0.000203	<0.0002
10/26/2022	0.000164 (J)	0.000188 (J)	<0.000203	0.00015 (J)
Mean	0.0001955	0.001743	0.0001877	0.0001937
Std. Dev.	1.273E-05	0.002523	4.32E-05	1.768E-05
Upper Lim.	0.0002	0.005	0.000203	0.0002
Lower Lim.	0.000164	8.26E-05	8.08E-05	0.00015

# Confidence Interval

Constituent: Barium (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-2	GSD-AP-MW-3
2/5/2019	0.0439				0.0418	
2/6/2019		0.265	0.286	0.036		
6/18/2019						0.0369
8/20/2019					0.0685	0.0405
8/21/2019	0.037					
8/22/2019		0.302	0.214	0.0455		
4/13/2020						0.0349
4/14/2020			0.168	0.0279		
4/15/2020	0.0329	0.35			0.0607	
8/25/2020	0.0358				0.0812	
8/26/2020		0.322	0.165	0.0503		0.0363
3/16/2021	0.0331					
3/22/2021						0.0354
3/23/2021		0.395	0.169	0.0315		
3/24/2021					0.0676	
10/5/2021	0.0304			0.0417		0.0344
10/11/2021		0.292			0.0807	
10/12/2021			0.17			
5/10/2022	0.0275	0.318		0.0377		0.0287
5/16/2022					0.0974	
5/17/2022			0.195			
10/25/2022					0.0888	
10/26/2022	0.028	0.278	0.117	0.0376		0.0306
Mean	0.03358	0.3153	0.1855	0.03853	0.07334	0.03471
Std. Dev.	0.005372	0.04183	0.04918	0.007246	0.0175	0.003674
Upper Lim.	0.03927	0.3596	0.2376	0.04621	0.09189	0.03861
Lower Lim.	0.02788	0.2709	0.1334	0.03084	0.05478	0.03082

# Confidence Interval

Constituent: Barium (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
2/5/2019	0.173	0.215	0.0551			
2/6/2019				0.0685	0.226	0.128
8/20/2019	0.188	0.238	0.0731			
8/21/2019				0.0946	0.194	0.183
4/13/2020		0.241	0.0635			
4/14/2020					0.262	0.186
4/15/2020	0.159			0.0653		
8/24/2020		0.238				
8/26/2020	0.181		0.0771	0.0845	0.235	0.202
3/16/2021		0.217				
3/17/2021			0.0656			
3/23/2021				0.0602	0.249	0.157
3/24/2021	0.171					
10/5/2021	0.202	0.221	0.0741	0.0716		
10/12/2021					0.203	0.147
5/9/2022		0.236				
5/10/2022			0.0762	0.0527		
5/11/2022					0.32	0.16
5/16/2022	0.23					
10/26/2022	0.239	0.231	0.0702	0.0852	0.224	0.154
Mean	0.1929	0.2296	0.06936	0.07283	0.2391	0.1646
Std. Dev.	0.02872	0.01042	0.007518	0.01417	0.0395	0.02401
Upper Lim.	0.2233	0.2407	0.07733	0.08784	0.281	0.1901
Lower Lim.	0.1624	0.2186	0.06139	0.05781	0.1973	0.1392

# Confidence Interval

Constituent: Barium (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
2/5/2019	0.0578			
2/7/2019			0.0602	0.028
8/20/2019	0.097			
8/21/2019			0.085	0.0312
4/13/2020	0.0529	0.0832		
4/15/2020			0.0535	0.0296
8/24/2020	0.0733	0.132	0.0565	0.031
3/16/2021			0.0553	0.0293
3/17/2021		0.045		
3/24/2021	0.0525			
10/5/2021	0.0811	0.118		
10/12/2021			0.0494	0.0303
5/9/2022	0.057	0.0593		
5/10/2022			0.0497	0.0309
10/26/2022	0.0682	0.133	0.0474	0.0282
Mean	0.06748	0.09508	0.05713	0.02981
Std. Dev.	0.01573	0.03809	0.01203	0.001251
Upper Lim.	0.08415	0.1474	0.085	0.03114
Lower Lim.	0.0508	0.04275	0.0474	0.02849

# Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-12	GSD-AP-MW-2	GSD-AP-MW-3	GSD-AP-MW-7	GSD-AP-MW-8
2/5/2019	<0.001		<0.000203			
2/6/2019		0.000583 (J)			<0.000203	<0.000203
6/18/2019				<0.001		
8/20/2019			<0.000203	<0.001		
8/21/2019	<0.001				<0.000203	<0.000203
8/22/2019		0.000755 (J)				
4/13/2020				0.000438 (J)		
4/14/2020		0.000425 (J)				<0.000203
4/15/2020	<0.001		<0.000203		<0.000203	
8/25/2020	<0.001		<0.000203			
8/26/2020		0.000618 (J)		<0.001	<0.000203	<0.000203
3/16/2021	0.000102 (J)					
3/22/2021				0.00039		
3/23/2021		0.000405			9.7E-05 (J)	8.32E-05 (J)
3/24/2021			6.88E-05 (J)			
10/5/2021	0.0001 (J)	0.00037		0.00021	<0.000203	
10/11/2021			<0.000203			
10/12/2021						<0.000203
5/10/2022	0.00022	0.00033		0.00035	<0.000203	
5/11/2022						7E-05 (J)
5/16/2022			<0.000203			
10/25/2022			<0.000203			
10/26/2022	0.00013 (J)	0.000299		0.000147 (J)	<0.000203	<0.000203
Mean	0.000569	0.0004731	0.0001862	0.0005669	0.0001898	0.0001714
Std. Dev.	0.0004622	0.0001608	4.745E-05	0.0003706	3.748E-05	5.862E-05
Upper Lim.	0.001	0.0006435	0.000203	0.0004302	0.000203	0.000203
Lower Lim.	0.0001	0.0003027	6.88E-05	0.0001866	9.7E-05	7E-05

# Confidence Interval

Constituent: Cadmium (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-PZ-5
2/7/2019	<0.000203
8/21/2019	<0.000203
4/15/2020	<0.000203
8/24/2020	<0.000203
3/16/2021	<0.000203
10/12/2021	8E-05 (J)
5/10/2022	<0.000203
10/26/2022	<0.000203
Mean	0.0001876
Std. Dev.	4.349E-05
Upper Lim.	0.000203
Lower Lim.	8E-05

# Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-2	GSD-AP-MW-3
2/5/2019	<0.01				<0.01	
2/6/2019		<0.01	<0.01	<0.01		
6/18/2019						0.00285 (J)
8/20/2019					<0.01	<0.01
8/21/2019	<0.01					
8/22/2019		<0.01	<0.01	<0.01		
4/13/2020						<0.01
4/14/2020			<0.01	<0.01		
4/15/2020	<0.01	<0.01			<0.01	
8/25/2020	<0.01				<0.01	
8/26/2020		<0.01	<0.01	<0.01		<0.01
3/16/2021	0.000376 (J)					
3/22/2021						0.000293 (J)
3/23/2021		0.00035 (J)	0.000513 (J)	0.000431 (J)		
3/24/2021					0.00047 (J)	
10/5/2021	0.00023 (J)			0.00034 (J)		0.00023 (J)
10/11/2021		0.00028 (J)			0.00048 (J)	
10/12/2021			0.00027 (J)			
5/10/2022	0.00025 (J)	0.0003 (J)		0.00041 (J)		0.00029 (J)
5/16/2022					0.00034 (J)	
5/17/2022			0.00038 (J)			
10/25/2022					0.00022 (J)	
10/26/2022	0.000321 (J)	0.000207 (J)	0.000318 (J)	0.000276 (J)		0.000276 (J)
Mean	0.005147	0.005142	0.005185	0.005182	0.005189	0.004242
Std. Dev.	0.005188	0.005193	0.005148	0.005151	0.005144	0.004847
Upper Lim.	0.01	0.01	0.01	0.01	0.01	0.01
Lower Lim.	0.00023	0.000207	0.00027	0.000276	0.00022	0.00023

# Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
2/5/2019	<0.001015	<0.001015	<0.00102			
2/6/2019				<0.001015	<0.001015	<0.001015
8/20/2019	<0.001015	<0.001015	<0.00102			
8/21/2019				<0.001015	<0.001015	<0.001015
4/13/2020		<0.001015	<0.00102			
4/14/2020					<0.001015	<0.001015
4/15/2020	<0.001015			<0.001015		
8/24/2020		<0.001015				
8/26/2020	<0.001015		<0.00102	<0.001015	<0.001015	<0.001015
3/16/2021		0.000397 (J)				
3/17/2021			0.000338 (J)			
3/23/2021				0.000406 (J)	0.0003 (J)	0.000422 (J)
3/24/2021	0.000323 (J)					
10/5/2021	<0.001015	0.00028 (J)	0.00025 (J)	0.00025 (J)		
10/12/2021					<0.001015	0.00031 (J)
5/9/2022		0.00053 (J)				
5/10/2022			<0.00102	0.00025 (J)		
5/11/2022					0.00022 (J)	0.00021 (J)
5/16/2022	0.00023 (J)					
10/26/2022	<0.001015	<0.001015	0.000222 (J)	<0.001015	<0.001015	<0.001015
Mean	0.0008304	0.0007853	0.0007387	0.0007476	0.0008263	0.0007521
Std. Dev.	0.0003428	0.0003241	0.0003895	0.0003721	0.0003502	0.0003672
Upper Lim.	0.001015	0.001015	0.00102	0.001015	0.001015	0.001015
Lower Lim.	0.00023	0.00028	0.000222	0.00025	0.00022	0.00021



# Confidence Interval

Constituent: Chromium (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals  
 Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
2/5/2019	<0.001015			
2/7/2019			<0.01	<0.01
8/20/2019	<0.001015			
8/21/2019			<0.01	<0.01
4/13/2020	<0.001015	<0.001015		
4/15/2020			<0.01	<0.01
8/24/2020	<0.001015	<0.001015	<0.01	<0.01
3/16/2021			0.000534 (J)	0.000534 (J)
3/17/2021		0.000764 (J)		
3/24/2021	0.000442 (J)			
10/5/2021	0.00035 (J)	0.00035 (J)		
10/12/2021			0.00034 (J)	0.00031 (J)
5/9/2022	0.00027 (J)	0.00062 (J)		
5/10/2022			0.00037 (J)	0.00037 (J)
10/26/2022	<0.001015	<0.001015	0.000251 (J)	0.000224 (J)
Mean	0.0007671	0.0007965	0.005187	0.00518
Std. Dev.	0.0003452	0.0002738	0.005146	0.005154
Upper Lim.	0.001015	0.0008137	0.01	0.01
Lower Lim.	0.00027	0.0003423	0.000251	0.000224

# Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-2	GSD-AP-MW-3
2/5/2019	0.0264				0.0362	
2/6/2019		<0.005	<0.005	0.00485 (J)		
6/18/2019						0.0263
8/20/2019					0.0366	0.0257
8/21/2019	0.0242					
8/22/2019		<0.005	0.00756	0.00658		
4/13/2020						0.0209
4/14/2020			<0.005	0.0035 (J)		
4/15/2020	0.0178	<0.005			0.0324	
8/25/2020	0.0193				0.0298	
8/26/2020		<0.005	0.00599	0.00547		0.0191
3/16/2021	0.0184					
3/22/2021						0.0183
3/23/2021		0.00037	0.000388	0.00378		
3/24/2021					0.0316	
10/5/2021	0.0169			0.00448		0.016
10/11/2021		0.00089			0.0165	
10/12/2021			0.00027			
5/10/2022	0.0136	0.00091		0.0049		0.0147
5/16/2022					0.0366	
5/17/2022			0.00044			
10/25/2022					0.0302	
10/26/2022	0.0152	0.000907	0.009	0.00603		0.0132
Mean	0.01898	0.002885	0.004206	0.004949	0.03124	0.01928
Std. Dev.	0.004337	0.002268	0.003442	0.001055	0.00659	0.004823
Upper Lim.	0.02357	0.005	0.006803	0.006068	0.03678	0.02439
Lower Lim.	0.01438	0.00037	-0.000708	0.00383	0.02603	0.01416

# Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
2/5/2019	0.0263	0.0021 (J)	<0.005			
2/6/2019				<0.005	0.00232 (J)	<0.005
8/20/2019	0.0293	0.00223 (J)	<0.005			
8/21/2019				<0.005	0.00303 (J)	<0.005
4/13/2020		<0.005	<0.005			
4/14/2020					0.00385 (J)	<0.005
4/15/2020	0.0252			<0.005		
8/24/2020		0.00222 (J)				
8/26/2020	0.0231		<0.005	<0.005	0.00388 (J)	<0.005
3/16/2021		0.00136				
3/17/2021			0.00102			
3/23/2021				0.00102	0.003	0.00103
3/24/2021	0.0268					
10/5/2021	0.0238	0.00116	0.00104	0.00018 (J)		
10/12/2021					0.00298	0.00113
5/9/2022		0.00101				
5/10/2022			0.00114	0.0004		
5/11/2022					0.00461	0.00091
5/16/2022	0.0289					
10/26/2022	0.0289	0.000936	0.0012	0.00016 (J)	0.00266	0.000812
Mean	0.02654	0.001689	0.00305	0.00272	0.003291	0.002985
Std. Dev.	0.002391	0.0006344	0.002085	0.002452	0.000755	0.002156
Upper Lim.	0.02907	0.002362	0.005	0.005	0.004091	0.005
Lower Lim.	0.024	0.001017	0.00102	0.00016	0.002491	0.000812

# Confidence Interval

Constituent: Cobalt (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
2/5/2019	<0.0002			
2/7/2019			<0.0002	<0.005
8/20/2019	<0.0002			
8/21/2019			0.00225 (J)	<0.005
4/13/2020	<0.0002	0.00489 (J)		
4/15/2020			<0.0002	<0.005
8/24/2020	<0.0002	0.00237 (J)	<0.0002	<0.005
3/16/2021			0.000384	0.000108 (J)
3/17/2021		0.00616		
3/24/2021	<0.0002			
10/5/2021	0.00044	0.00287		
10/12/2021			8E-05 (J)	0.00014 (J)
5/9/2022	0.00014 (J)	0.00691		
5/10/2022			0.00015 (J)	0.00012 (J)
10/26/2022	<0.0002	0.0021	<0.0002	7.8E-05 (J)
Mean	0.0002225	0.004217	0.000458	0.002556
Std. Dev.	9.036E-05	0.002059	0.0007291	0.002613
Upper Lim.	0.00044	0.007045	0.00225	0.005
Lower Lim.	0.00014	0.001389	8E-05	7.8E-05

# Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-12	GSD-AP-MW-2	GSD-AP-MW-3
2/5/2019	0.637				1.09	0.299 (U)
2/6/2019		0.537	0.779	-0.0241 (U)		
8/20/2019					0.553 (U)	0.709 (U)
8/21/2019	0.643 (U)					
8/22/2019		-0.021 (U)	1.34 (U)	0.145 (U)		
4/13/2020						0.942 (U)
4/14/2020			0.922 (U)	0.643 (U)		
4/15/2020	0.538 (U)	0.64 (U)			0.182 (U)	
8/25/2020	0.502 (U)				0.43 (U)	
8/26/2020		0.221 (U)	1.28	1.31		0.177 (U)
3/16/2021	0.722 (U)					
3/22/2021						0.263 (U)
3/23/2021		0.83 (U)	0.592 (U)	0.565 (U)		
3/24/2021					0.769 (U)	
10/5/2021	1.21			1.48		3.21
10/11/2021		6.52			2.38	
10/12/2021			1.02 (U)			
5/10/2022	0.761 (U)	0.421 (U)		0.531 (U)		0.189 (U)
5/16/2022					1.06	
5/17/2022			1.01 (U)			
10/25/2022					0.683 (U)	
10/26/2022	0.38 (U)	0.42 (U)	0.505 (U)	0.446 (U)		0.551 (U)
Mean	0.6741	1.196	0.931	0.637	0.8934	0.7925
Std. Dev.	0.249	2.167	0.2983	0.5204	0.6732	1.014
Upper Lim.	0.9381	2.772	1.247	1.189	1.546	1.369
Lower Lim.	0.4102	0.00515	0.6148	0.08541	0.2948	0.1725

# Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-4	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9
2/5/2019	0.467 (U)	0.551 (U)	0.196 (U)			
2/6/2019				0.0774 (U)	0.378 (U)	0.244 (U)
8/20/2019	0.814	0.206 (U)	-0.086 (U)			
8/21/2019				-0.0134 (U)	0.552 (U)	1.53 (U)
4/13/2020		1.19	0.0901 (U)			
4/14/2020					0.641 (U)	0.119 (U)
4/15/2020	-0.0841 (U)			0.526 (U)		
8/24/2020		0.482 (U)				
8/26/2020	0.26 (U)		0.416 (U)	0.691 (U)	0.339 (U)	1.18
3/16/2021		0.709 (U)				
3/17/2021			0.539 (U)			
3/23/2021				0.45 (U)	0.662 (U)	0.694 (U)
3/24/2021	0.664 (U)					
10/5/2021	1.75	1.44	1.36	1.27		
10/12/2021					0.291 (U)	0.311 (U)
5/9/2022		1.16				
5/10/2022			0.0979 (U)	0.599 (U)		
5/11/2022					0.475 (U)	0.605 (U)
5/16/2022	0.978					
10/26/2022	0.609 (U)	0.643 (U)	0.432 (U)	0.559 (U)	0.528 (U)	0.572 (U)
Mean	0.6822	0.7976	0.3806	0.5199	0.4833	0.6569
Std. Dev.	0.5428	0.4209	0.4479	0.3937	0.1376	0.4821
Upper Lim.	1.258	1.244	1.36	0.9371	0.6291	1.168
Lower Lim.	0.1069	0.3515	-0.086	0.1026	0.3374	0.1459

# Confidence Interval

Constituent: Combined Radium 226 + 228 (pCi/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-PZ-1	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
2/5/2019	0.274 (U)			
2/7/2019			0.0202 (U)	0.395 (U)
8/20/2019	0.663			
8/21/2019			0.442 (U)	-0.00256 (U)
4/13/2020	-0.129 (U)	0.472 (U)		
4/15/2020			0.432 (U)	0.000738 (U)
8/24/2020	0.177 (U)	-0.00312 (U)	0.454 (U)	0.404 (U)
3/16/2021			0.32 (U)	0.589 (U)
3/17/2021		0.756 (U)		
3/24/2021	0.245 (U)			
10/5/2021	2.07	1.13		
10/12/2021			0.963 (U)	1.57
5/9/2022	0.784 (U)	0.352 (U)		
5/10/2022			0.659 (U)	0.468 (U)
10/26/2022	0.561 (U)	0.391 (U)	1.08	0.283 (U)
Mean	0.5806	0.5163	0.5463	0.4634
Std. Dev.	0.6697	0.3869	0.3447	0.4946
Upper Lim.	2.07	1.048	0.9116	1.174
Lower Lim.	-0.129	-0.01521	0.1809	0.004111

# Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-2	GSD-AP-MW-3	GSD-AP-MW-4
2/26/2019	<0.125	0.0813 (J)		0.264		0.246
2/27/2019			0.0985 (J)			
6/18/2019					0.0664 (J)	
8/20/2019				0.252	0.0592 (J)	0.197
8/21/2019	<0.125					
8/22/2019		0.084 (J)	<0.125			
4/13/2020					<0.125	
4/14/2020			0.0878 (J)			
4/15/2020	<0.125	0.112		0.21		0.238
8/25/2020	<0.125			0.273		
8/26/2020		0.0997 (J)	<0.125		<0.125	0.251
3/16/2021	<0.125					
3/22/2021					<0.125	
3/23/2021		0.101	0.0819 (J)			
3/24/2021				0.194		0.227
10/5/2021	0.0601 (J)				<0.125	0.214
10/11/2021		0.201		0.283		
10/12/2021			0.134			
5/10/2022	<0.125	0.0918 (J)			0.0714 (J)	
5/16/2022				0.264		0.17
5/17/2022			<0.125			
10/25/2022				0.271		
10/26/2022	<0.125	0.0929 (J)	0.069 (J)		<0.125	0.283
Mean	0.1169	0.108	0.1058	0.2514	0.1028	0.2283
Std. Dev.	0.02295	0.03884	0.02451	0.03202	0.03088	0.03485
Upper Lim.	0.125	0.201	0.1109	0.2816	0.125	0.2652
Lower Lim.	0.0601	0.0813	0.07014	0.2207	0.0592	0.1913



# Confidence Interval

Constituent: Fluoride (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-5	GSD-AP-MW-6	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1
2/25/2019						<0.125
2/26/2019		0.0816 (J)				
2/27/2019	0.0578 (J)		0.0824 (J)	0.108	0.147	
8/20/2019	0.0567 (J)	<0.125				0.0889 (J)
8/21/2019			0.068 (J)	0.0648 (J)	0.0984 (J)	
4/13/2020	0.0688 (J)	<0.125				0.103
4/14/2020				0.0845 (J)	0.133	
4/15/2020			0.0775 (J)			
8/24/2020	0.0607 (J)					0.114
8/26/2020		<0.125	<0.1	0.0732 (J)	0.13	
3/16/2021	0.065 (J)					
3/17/2021		<0.125				
3/23/2021			<0.1	0.0802 (J)	0.132	
3/24/2021						0.0725 (J)
10/5/2021	0.122	<0.125	0.0933 (J)			<0.125
10/12/2021				0.123	0.147	
5/9/2022	0.0682 (J)					0.0824 (J)
5/10/2022		<0.125	0.0627 (J)			
5/11/2022				0.0695 (J)	0.108 (J)	
10/26/2022	0.0845 (J)	<0.125	0.128	0.0911 (J)	0.119 (J)	<0.125
Mean	0.07296	0.1196	0.08899	0.08679	0.1268	0.1045
Std. Dev.	0.02167	0.01534	0.02101	0.01998	0.01737	0.02107
Upper Lim.	0.122	0.125	0.1041	0.108	0.1452	0.1078
Lower Lim.	0.0567	0.0816	0.06229	0.06561	0.1084	0.07653

# Confidence Interval

Constituent: Lead (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-2	GSD-AP-PZ-2	GSD-AP-PZ-5	GSD-AP-PZ-6
2/5/2019	<0.000203			
2/7/2019			<0.000203	<0.000203
8/20/2019	<0.000203			
8/21/2019			<0.000203	<0.000203
4/13/2020		<0.000203		
4/15/2020	<0.000203		<0.000203	<0.000203
8/24/2020		<0.000203	<0.000203	<0.000203
8/25/2020	<0.000203			
3/16/2021			0.00013 (J)	8.35E-05 (J)
3/17/2021		0.000191 (J)		
3/24/2021	<0.000203			
10/5/2021		0.00012 (J)		
10/11/2021	9E-05 (J)			
10/12/2021			<0.000203	0.00012 (J)
5/9/2022		0.00018 (J)		
5/10/2022			<0.000203	0.00012 (J)
5/16/2022	<0.000203			
10/25/2022	<0.000203			
10/26/2022		<0.000203	<0.000203	<0.000203
Mean	0.0001889	0.0001833	0.0001939	0.0001673
Std. Dev.	3.995E-05	3.238E-05	2.581E-05	5.053E-05
Upper Lim.	0.000203	0.000203	0.000203	0.000203
Lower Lim.	9E-05	0.00012	0.00013	8.35E-05

# Confidence Interval

Constituent: Lithium (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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GSD-AP-MW-2

2/5/2019	0.0545
8/20/2019	0.0583
4/15/2020	0.0406
8/25/2020	0.041
3/24/2021	0.0318
10/11/2021	0.0225
5/16/2022	0.0271
10/25/2022	0.0304
Mean	0.03828
Std. Dev.	0.01284
Upper Lim.	0.05189
Lower Lim.	0.02466

# Confidence Interval

Constituent: Mercury (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

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	GSD-AP-PZ-6
2/7/2019	<0.0005
8/21/2019	<0.0005
4/15/2020	<0.0005
8/24/2020	<0.0005
3/16/2021	<0.0005
10/12/2021	<0.0005
5/10/2022	0.00286
10/26/2022	<0.0005
Mean	0.000795
Std. Dev.	0.0008344
Upper Lim.	0.00286
Lower Lim.	0.0005

# Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-10	GSD-AP-MW-11	GSD-AP-MW-2	GSD-AP-MW-4	GSD-AP-MW-5
2/5/2019	<0.0002			0.0196	<0.01	<0.000203
2/6/2019		<0.01	<0.000203			
8/20/2019				0.027	<0.01	<0.000203
8/21/2019	<0.0002					
8/22/2019		<0.01	<0.000203			
4/13/2020						<0.000203
4/14/2020			<0.000203			
4/15/2020	<0.0002	<0.01		0.0202	<0.01	
8/24/2020						<0.000203
8/25/2020	<0.0002			0.0269		
8/26/2020		<0.01	<0.000203		<0.01	
3/16/2021	<0.0002					<0.000203
3/23/2021		0.000204	0.000124 (J)			
3/24/2021				0.0164	0.00118	
10/5/2021	<0.0002				0.00111	0.00015 (J)
10/11/2021		0.00045		0.0204		
10/12/2021			0.00015 (J)			
5/9/2022						0.00011 (J)
5/10/2022	<0.0002	0.00047				
5/16/2022				0.0201	0.00122	
5/17/2022			0.00012 (J)			
10/25/2022				0.0202		
10/26/2022	0.000198 (J)	0.000438	<0.000203		0.00106	0.000371
Mean	0.0001997	0.005195	0.0001761	0.02135	0.005571	0.0002058
Std. Dev.	7.1E-07	0.005137	3.81E-05	0.003692	0.004735	7.523E-05
Upper Lim.	0.0002	0.01	0.000203	0.027	0.01	0.000371
Lower Lim.	0.000198	0.000204	0.00012	0.0164	0.00106	0.00011

# Confidence Interval

Constituent: Molybdenum (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals

Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-7	GSD-AP-MW-8	GSD-AP-MW-9	GSD-AP-PZ-1	GSD-AP-PZ-2
2/5/2019				<0.000203	
2/6/2019	<0.0002	<0.01	<0.01		
8/20/2019				<0.000203	
8/21/2019	<0.0002	<0.01	<0.01		
4/13/2020				<0.000203	<0.0002
4/14/2020		<0.01	<0.01		
4/15/2020	<0.0002				
8/24/2020				<0.000203	<0.0002
8/26/2020	<0.0002	<0.01	<0.01		
3/17/2021					<0.0002
3/23/2021	<0.0002	0.000357	0.00027		
3/24/2021				9.88E-05 (J)	
10/5/2021	0.0001 (J)			7E-05 (J)	0.00028
10/12/2021		0.00032	0.00018 (J)		
5/9/2022				<0.000203	<0.0002
5/10/2022	<0.0002				
5/11/2022		0.0004	0.00024		
10/26/2022	0.000169 (J)	0.000422	0.000276	<0.000203	0.00022
Mean	0.0001836	0.005187	0.005121	0.0001734	0.0002167
Std. Dev.	3.549E-05	0.005145	0.005216	5.544E-05	3.204E-05
Upper Lim.	0.0002	0.01	0.01	0.000203	0.00028
Lower Lim.	0.0001	0.00032	0.00018	7E-05	0.0002

# Confidence Interval

Constituent: Thallium (mg/L) Analysis Run 12/28/2022 3:18 PM View: Confidence Intervals  
Plant Gadsden Client: Southern Company Data: Plant Gadsden CCR

	GSD-AP-MW-1	GSD-AP-MW-2	GSD-AP-MW-3
2/5/2019	<0.000203	0.000256 (J)	
6/18/2019			<0.001
8/20/2019		0.000322 (J)	<0.001
8/21/2019	<0.000203		
4/13/2020			<0.001
4/15/2020	<0.000203	0.000318 (J)	
8/25/2020	<0.000203	0.000347 (J)	
8/26/2020			<0.001
3/16/2021	0.000112 (J)		
3/22/2021			0.000121 (J)
3/24/2021		0.00037	
10/5/2021	<0.000203		0.00014 (J)
10/11/2021		0.00029	
5/10/2022	0.00013 (J)		0.00011 (J)
5/16/2022		0.00041	
10/25/2022		0.000361	
10/26/2022	<0.000203		0.00011 (J)
Mean	0.0001825	0.0003343	0.0005601
Std. Dev.	3.826E-05	4.839E-05	0.0004703
Upper Lim.	0.000203	0.0003855	0.001
Lower Lim.	0.000112	0.000283	0.00011

# Appendix F





April 2022  
Plant Gadsden



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# Laboratory Treatability Study Work Plan

Prepared for Alabama Power Company

April 2022  
Plant Gadsden

# Laboratory Treatability Study Work Plan

**Prepared for**  
Alabama Power Company  
600 18th Street North  
Birmingham, Alabama 35203

**Prepared by**  
Anchor QEA, LLC  
6720 South Macadam Avenue, Suite 125  
Portland, Oregon 97219

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## TABLES

Table 1	Groundwater Characterization Parameters and Laboratory Analytical Methods
Table 2	Constituents and Analytical Methods
Table 3	Sequential Extraction Procedure

## FIGURE

Figure 1	Proposed Pilot Test Boring Locations
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## ABBREVIATIONS

µm	micrometers
ADEM	Alabama Department of Environmental Management
APC	Alabama Power Company
CCR	coal combustion residuals
COI	constituent of interest
DO	dissolved oxygen
EGL	Anchor QEA Environmental Geochemistry Laboratory
MNA	monitored natural attenuation
ORP	oxidation-reduction potential
Plant Gadsden	Gadsden Electric Generating Plant
SC	specific conductivity
SCS	Southern Company Services
Site	Plant Gadsden ash pond
SSE	selective sequential extraction
USEPA	U.S. Environmental Protection Agency
ZVI	zero-valent iron

# 1 Introduction

This work plan describes laboratory treatability studies for arsenic and lithium in groundwater at the Gadsden Electric Generating Plant (Plant Gadsden) ash pond (Site), located in Etowah County, Alabama. Plant Gadsden is owned and operated by Alabama Power Company (APC). This work builds on work previously performed for the Site by Anchor QEA.

As of April 15, 2019, the Site ceased receipt of all coal combustion residuals (CCR) and non-CCR waste streams. APC has been monitoring groundwater at the Site in accordance with the U.S. Environmental Protection Agency (USEPA) CCR Rule and the Alabama Department of Environmental Management (ADEM) rule since 2016. Constituents of interest (COIs) for the Site include arsenic and lithium.

In 2020 and 2021, corrective measures for groundwater were evaluated for the Site. In situ groundwater treatment via injection was selected as one viable option, particularly for areas with higher concentrations of COIs in groundwater (hot spots). Therefore, pilot tests at two locations were proposed in the *Groundwater Remedy Selection Report* (Anchor QEA 2021a). The necessary steps to implement an injection treatment pilot test include laboratory treatability studies, selection of the most effective treatment reagent(s), and preparation of an underground injection control application.

The treatability studies proposed herein will evaluate reagent selection, dosing, and injection sequencing for in situ groundwater treatment as described in the following subsections. Background information, including Site-specific findings from monitored natural attenuation (MNA) studies and reagents to be tested in the treatability studies, is summarized in Section 2. Initial characterization of groundwater and aquifer solids (i.e., soil) is discussed in Section 3 followed by an overview of the treatability study approach including batch testing (Section 4), column studies (Section 5), and selective sequential extraction (SSE; Section 6). Analysis of the treatability study data and reporting are discussed in Section 7 and the project schedule is presented in Section 8.

## 2 Selection of Reagents

Selection and formulation of reagent solutions that can be injected to sequester Site-specific COIs will be based on Site-specific soil and groundwater geochemistry, previous Site work, and experience from successful treatability studies performed by Anchor QEA for the same COIs at other sites. The MNA demonstration (Anchor QEA 2021a) documented key geochemical attenuation mechanisms occurring at the Site, including:

- Sorption on and/or coprecipitation with iron and manganese oxides (for arsenic and lithium)
- Ion exchange on clays (for lithium)
- Precipitation of barium arsenate (for arsenic)

Iron oxides are strong sorbents for many metals and metalloids including arsenic, and Eh-pH conditions in the subsurface at the Site are generally favorable for formation of iron oxides. Lithium has an affinity for manganese and iron-manganese oxides. Therefore, the treatability studies are focused on reagents (or mixtures) with the potential to increase the abundance and the stability of iron and/or manganese oxides and hydroxides in the subsurface. Barium chloride was added to the reagent list, as geochemical modeling predicted that barium arsenate could precipitate from groundwater if sufficient barium were present in the system. Based on Site conditions and previous treatability studies for other CCR sites (e.g., EPRI 2021), the following reagents were selected for treatability testing:

1. Ferrous sulfate
2. Ferric chloride
3. CleanER (injectable zero-valent iron [ZVI])
4. Ferroblack (injectable iron sulfide)
5. Permanganate
6. Ferrous sulfate with permanganate
7. Ferric chloride with permanganate and manganese chloride
8. Barium chloride
9. Aeration
10. Hydrotalcite
11. Dolomite fines
12. Magnesium chloride plus sodium aluminate

These 12 potential treatments (or mixtures thereof) will be screened and evaluated through batch testing as described in Section 4. The most promising reagents (or mixtures) will be selected for column studies (see Section 5).

## 3 Sampling and Initial Characterization

Aquifer solids (i.e., soil) and groundwater will be collected from the Site for treatability testing to be conducted at the Anchor QEA Environmental Geochemistry Laboratory (EGL). Site aquifer solids (soil) and groundwater will be collected in accordance with the *Aquifer Solids and Groundwater Sampling Scope of Work for Treatability Studies* (Anchor QEA 2021b) memorandum.

### 3.1 Groundwater

Groundwater samples will be collected by Alabama Power with support from Anchor QEA from wells<sup>1</sup> GSD-AP-MW-2, GSD-AP-MW-2VA, GSD-AP-MW-2VB, and GSD-AP-MW-4. Five gallons of Site groundwater from each selected well will be required to complete the batch treatability tests (described in Section 4). An additional 10 gallons of Site groundwater from each selected well will be required to complete the column testing (described in Section 5) and will be collected after the batch testing is completed. As detailed in the sampling plan, the groundwater provided to the EGL will be collected, transported, and handled to minimize exposure to oxygen. Groundwater samples will be field-filtered with a 0.45-micron inline filter.

Groundwater samples will be analyzed for COIs (arsenic and lithium), as well as other Appendix III/IV parameters, and additional MNA parameters by Alabama Power (Table 1). Supplemental analyses will be performed for COIs and select parameters including pH, oxidation-reduction potential [ORP], dissolved oxygen [DO], total and dissolved iron and manganese on as-received samples prior to commencing treatability testing. Groundwater characterization data will guide the treatability study design and the evaluation of results.

### 3.2 Aquifer Solids

Aquifer solids were collected from two pilot test borings (GSD-AP-PT-1 and -2) as described in the *Aquifer Solids and Groundwater Sampling Scope of Work for Treatability Studies* (Anchor QEA 2021b) memorandum and as appear in Figure 1. Initial characterization of aquifer solids (soil) will include the analyses listed in Table 2.

### 3.3 Reagents

Prior to initiating the column studies (described in Section 5), a sample of each of the selected reagents will be analyzed for Appendix III/ IV parameters to characterize impurity levels of these constituents.

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<sup>1</sup> Groundwater will be collected from one upgradient well (GSD-AP-MW-14, GSD-AP-MW-16, or GSD-AP-MW-17) for column tests only.

## 4 Batch Tests

Screening batch tests will be performed to assess the effectiveness of injectable reagents (see list of reagents in Section 2) in reducing COI concentrations in Site groundwater and groundwater-soil slurries.

The approach for screening batch tests is as follows<sup>2</sup>:

- Step 1: Test jars will be set up with groundwater or groundwater/aquifer solid slurries.
- Step 2: Reagents or reagent mixtures will be added to the test jars at a pre-determined dose based on groundwater chemistry and prior experience. Test jars will also include controls with no reagents added. Test jars will be sealed and placed on a shaker table for 7 days.
- Step 3: Samples of the treated groundwater solutions will be collected and analyzed for dissolved arsenic and lithium (per the analytical laboratory methods specified in Table 1). pH, ORP, and specific conductivity (SC) will be measured in the EGL.
- Step 4: The solids from each batch reactor will be recovered and archived for possible future analysis.

Arsenic and lithium removal efficiency will be evaluated by comparing the initial concentrations in the groundwater samples and controls to the concentrations in the treated groundwater solutions.

Following the initial screening batch tests, additional focused batch testing may be conducted to optimize COI removal. For example, these optimization batch tests may involve adjusting the dose of a reagent or adjusting the pH to increase COI removal. Following completion of the batch testing, up to two reagents (or reagent mixtures) that achieve successful removal of arsenic and lithium will be selected for column studies.

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<sup>2</sup> Batch tests will be conducted in accordance with modified versions of ASTM International Methods D2035-19 (Practice for Coagulation-Flocculation Jar Test of Water) and D4646-03 (Test Method for 24-h Batch-Type Measurement of Contaminant Sorption by Soils and Sediments).



## 5 Column Studies

Column studies will be conducted to simulate injection applications of the selected reagents (or reagent mixtures). The results of the column studies will be used to confirm arsenic and lithium removal efficiency and determine uptake capacity of injection-treated aquifer soil to support pilot test design. Results from column studies will also be used to confirm that treatments will not inadvertently increase concentrations of other constituents above groundwater quality standards, for example, due to release from the aquifer matrix.

The approach for column studies is as follows (Westerhoff et al. 2005):

- Step 1: Aquifer solids will be treated with the selected reagent or reagent mixture by treating a pre-weighed homogenized mass of aquifer solids with a predetermined amount of the selected reagent(s; based on the batch test results) in solution. The soil-reagent mixture will be placed on a shaker table and allowed to react for three days.
- Step 2: The treated aquifer solids will be packed into 4.2-centimeter diameter by 22-centimeter length polycarbonate column assemblies. Site groundwater containing COIs will be introduced into column influents at a constant flow rate.
- Step 3: Columns will be operated for a total of 4 weeks or approximately 100 pore volumes.
- Step 4: Column influent and effluent solutions will be sampled periodically and pH, ORP, and SC will be measured. The cumulative flow volume will also be recorded at the time of sampling and used to calculate the total number of pore volumes treated.
- Step 5: Samples will be filtered (0.45 micrometers [ $\mu\text{m}$ ]) and analyzed for dissolved arsenic and lithium, and treatment reagent constituent concentrations. Select Appendix III and IV constituents (Table 1) may also be analyzed based on soil concentrations.
- Step 6: Following completion of this phase of the column test, the column influent will be switched to background groundwater to assess the stability of the treatment. The column will continue to run at a constant flow rate for approximately 10 pore volumes. Column influents and effluents will be sampled at approximately 5 and 10 pore volumes of flow. Samples will be analyzed for dissolved COIs, constituents of the treatment reagents used (e.g., iron, manganese, barium, chloride, sulfate), and select Appendix III/ IV constituents.

Arsenic and lithium removal efficiency (and mass uptake from groundwater) will be evaluated by comparing the respective concentrations in the column influent to the concentrations in the effluent. COI removal capacity per unit reagent dose will be estimated from column breakthrough curves and mass balance calculations. The removal capacity will provide data to support design of pilot tests, including injection volumes and reagent mass. At the end of the column tests, column solids will be recovered for SSE to further document COI sequestration strength by the reagent-treated soil matrix and to assess the stability of the treatment.

## 6 Selective Sequential Extraction of Treated Soil

Following completion of the column tests, the column media will be recovered and tested using a five-step SSE procedure. The extraction procedure is designed to fractionate the COIs in a solid sample by subjecting the sample to a sequence of chemical treatments that target specific chemical forms. Concentrations and relative proportions of arsenic and lithium present in the operationally defined fractions shown in Table 3 will be determined on a total sample dry weight basis. Sequential extraction will be performed in accordance with the EGL standard operating procedure.

SSE will provide information on the stability of COIs removed by precipitates formed in situ via reagent injection under conditions representative of Site application. These data will support a more thorough understanding of the permanence (stability) of COI removal by the treatment.

## 7 Data Analysis and Reporting

Anchor QEA will analyze the data from the batch tests, column tests, and SSE results and make recommendations regarding the reagents or reagents mixtures to be used for pilot testing at the Site. Results from the column tests will also be used to support pilot test design. The recommended reagent or mix will be tailored to the COIs present and geochemical conditions at each pilot location.

Anchor QEA will meet with the client to review the results of the batch tests and discuss the recommended reagent(s) prior to initiating the column studies. After the column studies and SSE are complete, Anchor QEA will present findings and recommendations to the client in advance of preparing the draft treatability study report. This report will document the treatability studies, present the data obtained through these studies, and discuss recommendations for pilot studies of the most promising treatment(s).

## 8 References

Anchor QEA, 2021a. *Groundwater Remedy Selection Report*. Plant Gadsden. Prepared for Alabama Power Company. October 2021.

Anchor QEA, 2021b. Memorandum to: Greg Dyer, Southern Company Services, Inc. Regarding: Aquifer Solids and Groundwater Sampling Scope of Work for Treatability Studies. December 23, 2021.

Westerhoff, P., D. Highfield, M. Badruzzaman, and Y. Yoon, 2005. "Rapid Small-Scale Column Tests for Arsenate Removal in Iron Oxide Packed Bed Columns." *Journal of Environmental Engineering* 131(2):262–271.

# Tables

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**Table 1**  
**Groundwater Characterization Parameters and Laboratory Analytical Methods**

Parameter	Analytical Method	Detection Limit
<b>Appendix III Parameters</b>		
Boron	EPA 200.8/6020	10.0 µg/L
Calcium	EPA 200.8/6020	600 µg/L
Chloride	300.0/9056A	1.00 mg/L
Fluoride	SM 4500 F_C	0.100 mg/L
pH	None	--
Sulfate	300.0/9056A	1.00 mg/L
Total dissolved solids	SM 2540C	5.00 mg/L
<b>Appendix IV Parameters</b>		
Antimony	EPA 200.8/6020	1.00 µg/L
Arsenic	EPA 200.8/6020	1.00 µg/L
Barium	EPA 200.8/6020	2.00 µg/L
Beryllium	EPA 200.8/6020	0.200 µg/L
Cadmium	EPA 200.8/6020	0.200 µg/L
Chromium	EPA 200.8/6020	2.00 µg/L
Cobalt	EPA 200.8/6020	1.00 µg/L
Fluoride	SM 4500 F_C	0.100 mg/L
Lead	EPA 200.8/6020	0.200 µg/L
Lithium	EPA 200.8/6020	5.00 µg/L
Mercury	EPA 1631	0.000100 mg/L
Molybdenum	EPA 200.8/6020	1.00 µg/L
Selenium	EPA 200.8/6020	1.00 µg/L
Thallium	EPA 200.8/6020	0.200 µg/L
<b>MNA-Specific Parameters</b>		
Alkalinity (total as CaCO <sub>3</sub> )	SM 2320 B	20.0 mg/L
Aluminum (total and dissolved)	EPA 200.8/6020	50.0 µg/L
Bicarbonate alkalinity (calculated)	SM 4500CO2 D	20.0 mg/L
Carbonate alkalinity (calculated)	SM 4500CO2 D	20.0 mg/L
Iron (total and dissolved)	EPA 200.8/6020	50.0 µg/L
Magnesium (dissolved)	EPA 200.8/6020	150.0 µg/L
Manganese (total and dissolved)	EPA 200.8/6020	1.00 µg/L
Nitrogen nitrate/nitrite	EPA 353.2	0.0200 mg/L
Potassium (dissolved)	EPA 200.8/6020	100 µg/L
Silica (dissolved)	SM 4500-SiO <sub>2</sub>	0.500 mg/L
Sodium (dissolved)	EPA 200.8/6020	100.0 µg/L
Sulfide	SM 4500-S <sub>2</sub>	Subcontracted
Total organic carbon	SM 5310 C	1.00 mg/L

Notes:

The following field parameters will be measured for each monitoring well sample: depth to water, total depth, pH, temperature, ORP, DO, turbidity, and SC.

µg/L: micrograms per liter

ORP: oxidation reduction potential

DO: dissolved oxygen

SC: specific conductance

EPA: U.S. Environmental Protection Agency

SM: Standard Method

mg/L: milligrams per liter

**Table 2**  
**Constituents and Analytical Methods**

<b>Constituent</b>	<b>Analytical Method</b>	<b>Detection Limit</b>
Arsenic	EPA Method 6020B	0.5 mg/kg
Cobalt	EPA Method 6020B	0.5 mg/kg
Lithium	EPA Method 6020B	2.5 mg/kg
Iron	EPA Method 6020B	1 mg/kg
Manganese	EPA Method 6020B	1 mg/kg
Cation exchange capacity	EGL SOP/6020B	--
Extractable iron, aluminum, and manganese oxides	EGL SOP/6020B	1 mg/kg
Sulfide	SM4500-S2	1 mg/kg
Total organic carbon	EPA Method 9060A	200 mg/kg
<b>Appendix IV Parameters</b>		
Antimony	EPA 200.8/6020	0.5 mg/kg
Barium	EPA 200.8/6020	0.5 mg/kg
Beryllium	EPA 200.8/6020	0.5 mg/kg
Cadmium	EPA 200.8/6020	0.5 mg/kg
Chromium	EPA 200.8/6020	0.5 mg/kg
Fluoride	SM 4500 F_C	1 mg/kg
Lead	EPA 200.8/6020	0.5 mg/kg
Mercury	EPA 1631	0.5 mg/kg
Molybdenum	EPA 200.8/6020	0.5 mg/kg
Selenium	EPA 200.8/6020	0.5 mg/kg
Thallium	EPA 200.8/6020	0.5 mg/kg

Notes:

Solids will be digested by EPA Method 3050B prior to analysis.

EPA: U.S. Environmental Protection Agency

mg/kg: milligrams per kilogram

SOP: standard operating procedure

SM: standard method

**Table 3**  
**Sequential Extraction Procedure**

<b>Fraction</b>	<b>Name</b>	<b>Targeted COI Phase</b>	<b>Extraction Fluid</b>
F1	Soluble	Dissolved and loosely bound	Magnesium chloride
F2	Exchangeable	Clay mineral exchange sites and weakly bound to oxides	Ammonium phosphate
F3	Reducible	Amorphous iron oxide bound	Hydroxylamine hydrochloride
F4	Strong Acid/Oxidizable	Crystalline oxides, sulfides and/or organic matter bound	Nitric acid
F5	Residual	Silicates and other insoluble phases	Aqua regia



Figure

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**Figure 1**  
**Proposed Pilot Test Boring Locations**  
 Laboratory Treatability Study Work Plan  
 Plant Gadsden